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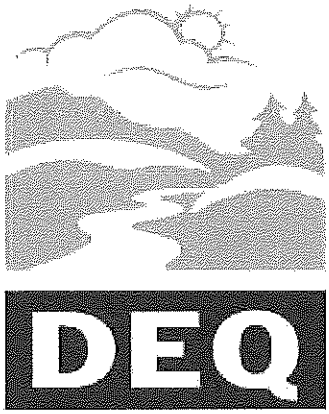
OREGON
ENVIRONMENTAL QUALITY
COMMISSION MEETING
MATERIALS 03/07/2002



State of Oregon
Department of Environmental Quality

Environmental Quality Commission Meeting
March 7-8, 2002

Heathman Hotel, Freemont/Morrison rooms (combined)
1001 SW Broadway at Salmon, Portland, Oregon 97205

1 APE #

Thursday, March 7 – EQC/DEQ Summit

Commissioners and members of DEQ's Executive Management Team (EMT) will spend the day discussing major programs initiatives, policy decisions and agency plans, building on work from the last EQC/DEQ Summit held in November 2000.

1A

11:00 Setting the Stage - 11:04A
To set the context for this day, Commissioners and EMT members will review results of the 2000 Summit and discuss what has been accomplished. The group will then review purpose of this Summit and discuss desired outcomes.

1, 2A

11:30 Initiatives in Communications and Outreach - 11:16A
Nina DeConcini, Office of Communications and Outreach Manager, will describe current and upcoming activities designed to engage Oregonians in environmental problem solving. Nina will solicit feedback from Commissioners on a number of specific initiatives.

12:15 Lunch break, continue meeting

2A, 3A

12:30 Air Quality Program Overview - 12:32P
Andy Ginsburg, Air Quality Administrator, will give a short presentation of major programs and initiatives and present a visual overview of the regulations that guide air quality work. Most of this time will be reserved for discussion.

3, 4A

1:30 Water Quality Program Overview - 1:36P
Mike Llewelyn, Water Quality Administrator, will give a short presentation of major programs and initiatives and present a visual overview of the regulations that guide water quality work. Most of this time will be reserved for discussion.

2:30 Break

4, 5, 6A

2:45 Agenda for the 2003 Legislative Session - 2:37P
Director Hallock will reiterate her agenda and vision for DEQ, building on the agency's *Strategic Directions* for the next four years. Lauri Aunan, Office of Community and Government Relations Manager, will then share ideas DEQ is considering for the 2003 Legislative Session. During discussion, Director Hallock and EMT members will ask Commissioners for ideas and feedback on potential legislative proposals.

6A

4:30 Review and Next Steps - 3:30P
Commissioners and EMT members will discuss the results of the day and next steps, including future program overviews by the Land Quality and Management Services Divisions.

5:00 Adjourn for the day - 3:43P

TAPE #

Friday, March 8 – Beginning at 8:30 a.m.

The Commission will hold an executive session at 8:00 a.m. to consult with counsel concerning legal rights and duties regarding current and potential litigation against the Department. Executive session is held pursuant to ORS 192.660(1)(h). Only representatives of the media may attend, but will not be allowed to report on any deliberations during the session.

1B **A. Approval of Minutes** - 8:41A

CoB **B. Action Item: Pollution Control Facility Tax Credit Requests** – 1:48P
The Legislature established the Pollution Control Facility Tax Credit in 1967 to help businesses meet environmental requirements. The credit was later expanded to encourage businesses to invest in technologies and processes that prevent, control or reduce significant amounts of pollution. In 1999, nonpoint source pollution control facilities (such as wood chippers) were made eligible for the program. At this meeting, the Commission will consider over 150 tax credit applications for facilities that control air and water pollution, recycle solid and hazardous waste, reclaim plastic products, provide alternatives to open burning, and control pollution from underground storage tanks.

1B, 2B **C. Director's Dialogue** – 8:53A
Director Hallock and Commissioners will discuss current events and issues involving the Department, as well as the Commission's plan for the April 23-25, 2002, meeting in Burns.

2B, 3B **D. Action Item: Request from U.S. Army Corps of Engineers and U.S. Fish and Wildlife Service for a Waiver to the Total Dissolved Gas Water Quality Standard on the Columbia River**
This item will begin at approximately 9:30 a.m.
The Commission will consider a request from the U.S. Army Corps of Engineers for a variance to Oregon's total dissolved gas water quality standard so that water can be spilled over Lower Columbia River dams to assist salmon smolts migrating to the ocean. The Corps has requested similar waivers to assist fish passage in previous years. – 9:27A

3B, 4B, 5B, CoB **E. Action Item: Permit Modification for Umatilla Chemical Agent Disposal Facility (UMCDF)**
In September 2001, the Commission asked DEQ to modify the UMCDF permit to specify the approval process for starting-up disposal of chemical weapons at the facility. DEQ is proposing a change to the permit that will require Department approval for starting surrogate trial disposal (scheduled to start in May 2002) and Commission approval for starting chemical agent operations (scheduled for February 2003). Significant comments were received from the permittees, interested stakeholders and citizens on this proposal. The Commission plans to make a decision on the proposed permit change at this meeting. – 10:53A

CoB, 7B **F. *Rule Adoption: Air Contaminant Discharge Permit (ACDP) Fee Increase** – 2:02P
DEQ is proposing an across-the-board, 30 percent increase to ACDP fees as approved by the 2001 Legislature. This increase replaces General Funds that are no longer available to support the permit program. The proposed rules also adjust ACDP fees to more accurately reflect the amount of work that is involved with issue different types of permits. Small businesses and other low-complexity sources would experience a smaller percent increase than larger, more complex sources based on these rules. The Commission will consider rule adoption at this meeting.

TAPE #

7B, 8B **G. Information Item: Improvements for DEQ's Rulemaking Process** – 2:31 p

Over the past year, DEQ has identified ways to improve its internal rulemaking process. These improvements aim to strengthen coordination between agency programs, ensure smooth implementation of new rules on the ground, enable better planning of staff resources and workloads, and gain efficiencies overall. Another goal is to provide more opportunity for Commissioners to be involved early-on in our rulemaking process. DEQ will present and discuss these improvements with Commissioners at this meeting.

8B **H. Discussion Item: Schedule for Evaluating Director's Performance** – 2:51 p

In January 2002, the Commission approved a formal process for evaluating the DEQ Director's performance, including measures, criteria and an evaluation procedure. At this meeting, Commissioners will discuss a schedule for reviewing the Director's performance in late 2002.

1B **I. Commissioners' Reports** – 3:40 p

Adjourn

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* Hearings have been held on Rule Adoption items and public comment periods have closed. In accordance with ORS 183.335(13), no comments may be presented by any party to either the Commission or Department on these items at any time during this meeting.

Public Forum: The Commission will break the meeting at approximately 11:30 a.m. on Friday, March 8, for public forum if people are signed up to speak. Public forum is an opportunity for citizens to speak to the Commission on environmental issues and concerns not part of the agenda for this meeting. Individual presentations will be limited to five minutes. The Commission may discontinue public forum after a reasonable time if a large number of speakers wish to appear. Public comment periods for Rule Adoption items have closed and, in accordance with ORS 183.335(13), no comments may be presented to the Commission on those agenda items.

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The next Commission meeting is scheduled for April 23-25, 2002.

Copies of staff reports for individual agenda items are available by contacting Emma Djodjic in the Director's Office of the Department of Environmental Quality, 811 SW Sixth Avenue, Portland, Oregon 97204; telephone 503-229-5990, toll-free 1-800-452-4011, or 503-229-6993 (TTY). Please specify the agenda item letter when requesting reports. If special physical, language or other accommodations are needed for this meeting, please advise Emma Djodjic as soon as possible, but at least 48 hours in advance of the meeting.

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For more information, contact DEQ at:

Headquarters/Portland-Metro	(503) 229-5696
Headquarters (toll free)	(800) 452-4011
Headquarters—TTY	(503) 229-6993

We'll determine which DEQ or local government office can assist you.

You can also visit DEQ's home page at *www.deq.state.or.us* and click on "Consumer Corner".

DEQ

State of Oregon
Department of
Environmental
Quality

Headquarters
811 SW Sixth Ave.
Portland, OR 97204
Phone: (503) 229-5279
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(800) 452-4011
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www.deq.state.or.us

3/02

Preventing septic system problems

A properly constructed and maintained system can last a long time. Here are things you can do to avoid problems:

DO

- Keep indoor plumbing in good working order.
- Conserve water to avoid overloading the system.
- Use substitutes for household hazardous waste.
- Learn the location of your septic tank and drain field. Keep a sketch of it handy with your maintenance record for service visits.
- Cover the drain field with a grass cover to prevent erosion and remove excess water.
- Keep your septic tank cover accessible for inspections and pumpings. Install risers if necessary.

DO NOT

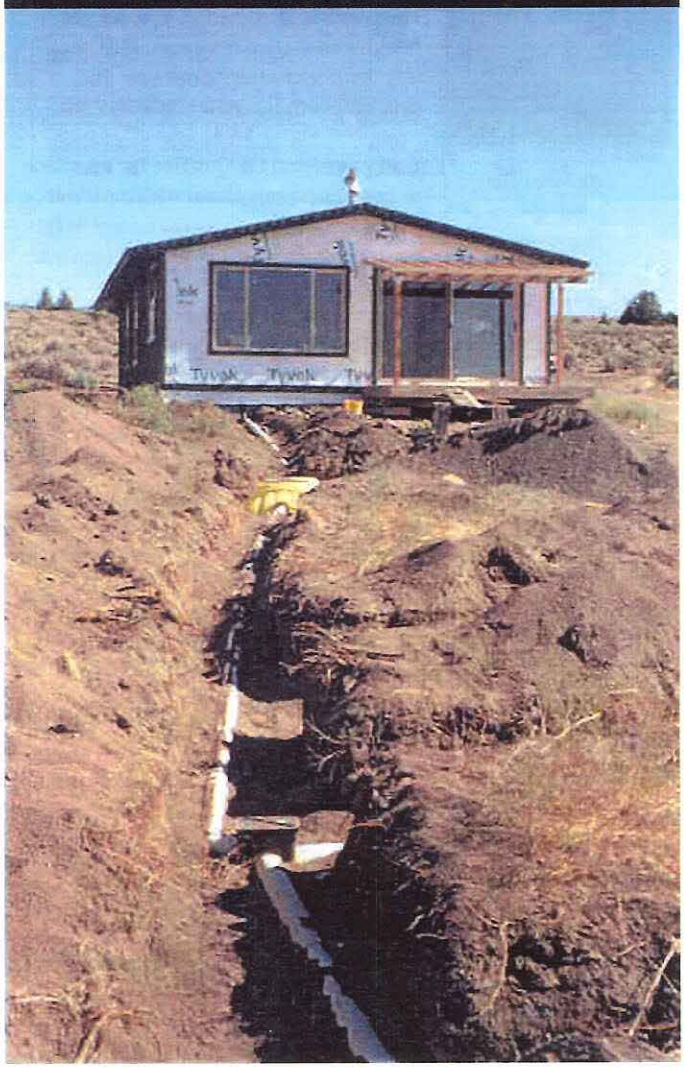
- Flush material that will not easily decompose such as hair, diapers, cigarette butts, matches, or feminine hygiene products.
- Wash or flush medicines or hazardous chemicals like paint, paint thinner or bleach into the system. They kill the bacteria needed to decompose wastes in the septic tank and in the drain field.
- Drive over septic tank or drain lines.
- Build over septic tanks or drain fields.

Consumer Corner: Septic Systems

DEQ

State of Oregon
Department of
Environmental
Quality

PROTECTING OREGON'S ENVIRONMENT



Consumer Corner: Septic Systems

Be sure your septic system is in a proper place on your property.

You need a Department of Environmental Quality (DEQ) permit to install, replace or make changes to a septic system. The permitting process ensures that septic systems are properly sited and constructed to protect our health and the environment. DEQ can also help you understand how to properly care for your septic system.

Call your local DEQ office for answers to your questions about which permit you may need and who to contact in the county where your property is located.

A septic system is used to treat and dispose of sewage from homes that are not on a public sewer line. A septic system consists of a septic tank, where solids settle and decompose, and a drain field where bacteria do the final treatment.

A properly functioning septic system treats sewage so that ground and surface waters are not contaminated. A poorly designed or malfunctioning system is a health hazard to your family and neighbors and can cause odors and water pollution.

Before you buy

Before you buy undeveloped property, call your local DEQ office to check if the property has been evaluated for a septic system. If not, have DEQ evaluate and approve the property for a septic system before purchase.

When checking an existing septic system in a home you might want to buy, DEQ advises that you hire a qualified inspector to check out the system. Gather information about the septic system and its location. Here are the main things to investigate:

- Is it DEQ permitted and installed?
- How old is the system and is maintenance required?
- When was the septic tank last pumped?
- Have there been any problems in the past?
- How many people previously lived in the house?
- Is the ground spongy or is there sewage on the surface?

Installing a new system

Getting a new septic system installed is a two step process. The first step is to apply for a site evaluation. A septic system specialist will evaluate your property and identify the type of septic system needed and the best location for it. The second step is to apply for a septic system construction permit. Call your local DEQ office for application forms. There is a fee for a site evaluation as well as for the permit.

Diapers, paint, feminine hygiene products, bleach and medicines are things that should not be flushed in septic systems.

Maintaining septic systems

To avoid costly repairs, do yearly inspections of a septic tank for solids accumulation. When the solids accumulation is greater than 40 percent, have your septic tank pumped by a DEQ licensed pumper. DEQ can give you a list of licensed and bonded pumpers in your area, and can answer questions on how to inspect your septic tank.

Signs of septic system failure

- Pools of water or damp spots, foul odors, and/or dark gray or black soils in the area of your drain field.
- Water that surfaces over the drain field during heavy rain or when doing laundry.
- Sewage backs up into the lowest drains in the house.
- Gurgling of drains, slow drainage (check for clogs first).
- Soggy soil overlying the drain field.

Be sure your septic system is installed and inspected by licensed inspectors or a local government contract agent..

State of Oregon

Department of Environmental Quality Memorandum

Date: March 7, 2002

To: Environmental Quality Commission

From: Lauri Aunan, Government Relations Manager

Subject: DEQ Legislative Concepts
Overview of Issues for DEQ's 2003-2005 Budget Request

DEQ is discussing ideas for legislation with interested and affected parties. No decisions have been made on any of these proposals, and it is possible that additional proposals might be added to this list. DEQ's goal is to work with interested and affected parties to reach agreement before the 2003 Legislative Session.

In developing legislative concepts, DEQ must follow requirements of the Department of Administrative Services (DAS). DAS is releasing 2003-2005 budget and legislative concept instructions to agencies at a meeting in Salem on Friday, March 8.

DEQ must submit legislative concepts to DAS by mid-April 2002. If the Governor approves DEQ's legislative concepts, the Governor files the concepts with the Legislature by mid-December 2002. Legislative Counsel then drafts bills for consideration by the Legislature in 2003.

DEQ's Water Quality, Land Quality, and Air Quality programs have developed ideas for legislative concepts. No final decisions have been made on whether these concepts will be filed with DAS. We are exploring these ideas with stakeholders, with a goal of gaining agreement before the legislative session. It is possible that we will decide not to move forward on some of these ideas.

Water Quality

Placeholder for recommendations from review of onsite septic system program. DEQ is broadly reviewing the onsite septic system program. Mike Llewelyn is heading up a work group to look at the requirements for approval of alternative onsite technology. The work group may make recommendations about how this should occur in Oregon. In addition, Mike will establish an advisory committee to review DEQ's onsite rules. We are holding a placeholder in case we determine that statutes must be revised to accomplish the recommendations arising from these efforts.

Low-interest loans for landowner projects to protect salmon and water quality. The Clean Water State Revolving Fund, administered by DEQ, provides direct loans to public entities for sewage treatment and stormwater control improvements. This concept provides a mechanism for low-interest loans to private landowners for non-point source pollution control projects. DEQ

introduced this legislation in 2001, but there was not enough interest or understanding, and it died without a hearing. DEQ is talking with stakeholder groups to determine if there is any increased support.

Land Quality

Methane at old landfills. DEQ has limited authority under existing statutes and rules to require investigation and, if necessary, management of methane generated by old solid waste landfills. During our involvement with two of these sites (Cobbs Quarry and Bethyl-Danebo), we realized that there are gaps in existing DEQ authority, making it hard for DEQ to require methane at old landfills to be managed safely. Lack of effective regulatory authority could result in potential fire or explosive hazards to residents and workers in the vicinity of these sites, and poor customer service to neighbors and developers. We are working with a stakeholder group and with DEQ's environmental cleanup and solid waste advisory committees to determine the best long-term solutions.

Placeholder for recommendations from Hazardous Waste Workgroup. The 2003-2005 revenue supporting DEQ's hazardous waste work is projected to be substantially less than what is needed to maintain existing services. Revenues may be from $1.5 to $3 million short. The Director has appointed a work group of key stakeholders to discuss what hazardous waste work the Department must or should continue to do, and how to pay for that work. The work group has met once, is engaged, and will shape its recommendations over the next few months. From there, a budget package and a legislative concept, if needed, can be finalized.

Air Quality

Clean diesel. DEQ is exploring ideas for legislative proposals that would promote the use of cleaner diesel fuel in Oregon and encourage retrofits of cleaner diesel engines. DEQ is working with stakeholders to understand which ideas might have the best on-the-ground results and which package of ideas has the most support.

Funding for community-based air toxics work. This proposal is intended as a vehicle to seek funding for air toxics work. The Air Quality Program has been working with an advisory committee to develop rules for a community-based air toxics program to protect people's health. The program would be based on sound data that shows areas in the state where air toxics exceed health benchmarks. Once these areas are identified, DEQ would work with citizens, businesses and local governments to develop local plans to reduce air toxics emissions. Air Quality has shifted some existing resources to this work, and continues to seek federal funding for additional work. However, we do not have sufficient resources to carry out all of the work at the level needed. This concept would allow funds from foundations, local governments, community groups or businesses to be pooled to supplement DEQ's toxics work. Examples of supplemental work include local ambient monitoring and emission inventory studies.

Placeholder for Authority to implement Regional Haze required by Clean Air Act. In 1999, the Environmental Protection Agency (EPA) adopted Regional Haze regulations to address visibility problems caused by air pollution transported over long distances across many states into national

parks and wilderness areas. Federal regulations will require Oregon to develop and implement strategies to reduce regional haze and improve visibility. We are exploring whether additional statutory authority is needed to authorize DEQ to implement regional haze strategies that may be adopted on a regional, multistate basis.

Placeholder for Regulatory Streamlining

Responding to questions asked by the Legislature and the Governor, the Department of Administrative Services established an Agency Head Workgroup on Regulatory Streamlining to explore issues and opportunities around streamlining regulatory processes. This is a placeholder for any recommendations that the Workgroup might develop.

Overview of Issues for DEQ's 2003-2005 Budget Request

- National trends on funding cleanup of contaminated sites; use of State General Funds for bonding and debt service for orphan site cleanup
- Revenue shortfalls in the Land Quality Division
- Adequately staffed wastewater permitting program
- Completion and implementation of Willamette Basin TMDL and Water Quality Improvement Plans
- DEQ Laboratory
- Community Solutions Team

State of Oregon
Department of Environmental Quality

Memorandum

Date: March 6, 2002

To: Environmental Quality Commission

From: Stephanie Hallock, Director

Subject: ADDENDUM to Agenda Item B, Action Item: Tax Credit Application Consideration
March 8, 2002 EQC Meeting

Purpose of Addendum

This addendum includes corrections to Review Reports presented in Attachment B of the Staff Report. The corrections are in response to the Department's request that applicants verify staff's interpretation of illegible or ambiguous information presented on the applications. There are no changes to the Department's recommended facility cost, the percentage of that cost allocable to pollution control or the maximum tax credit.

NPS: Wood Chippers

Application Number 5896 - Change the facility zip code from 97633 as presented on Thomas & Susan Petterson's report to 9763**2.**

Application Number 5910 - Change the applicant from Richard O'Brien to **Robert** O'Brien.

Application Number 5933 - Change applicant from John & Carol Singleton to **Fred** & Carol Singleton. Change the model number from P24A-4950099 to P24A-495**D**099.

Application Number 6007 - Change the facility zip code from 97814 as presented on Nicholas M. Mausen's report to 97**301.**

Application Number 6011 - Change the facility zip code from 97051 as presented on Anya N. Malbin's report to 9705**4.**

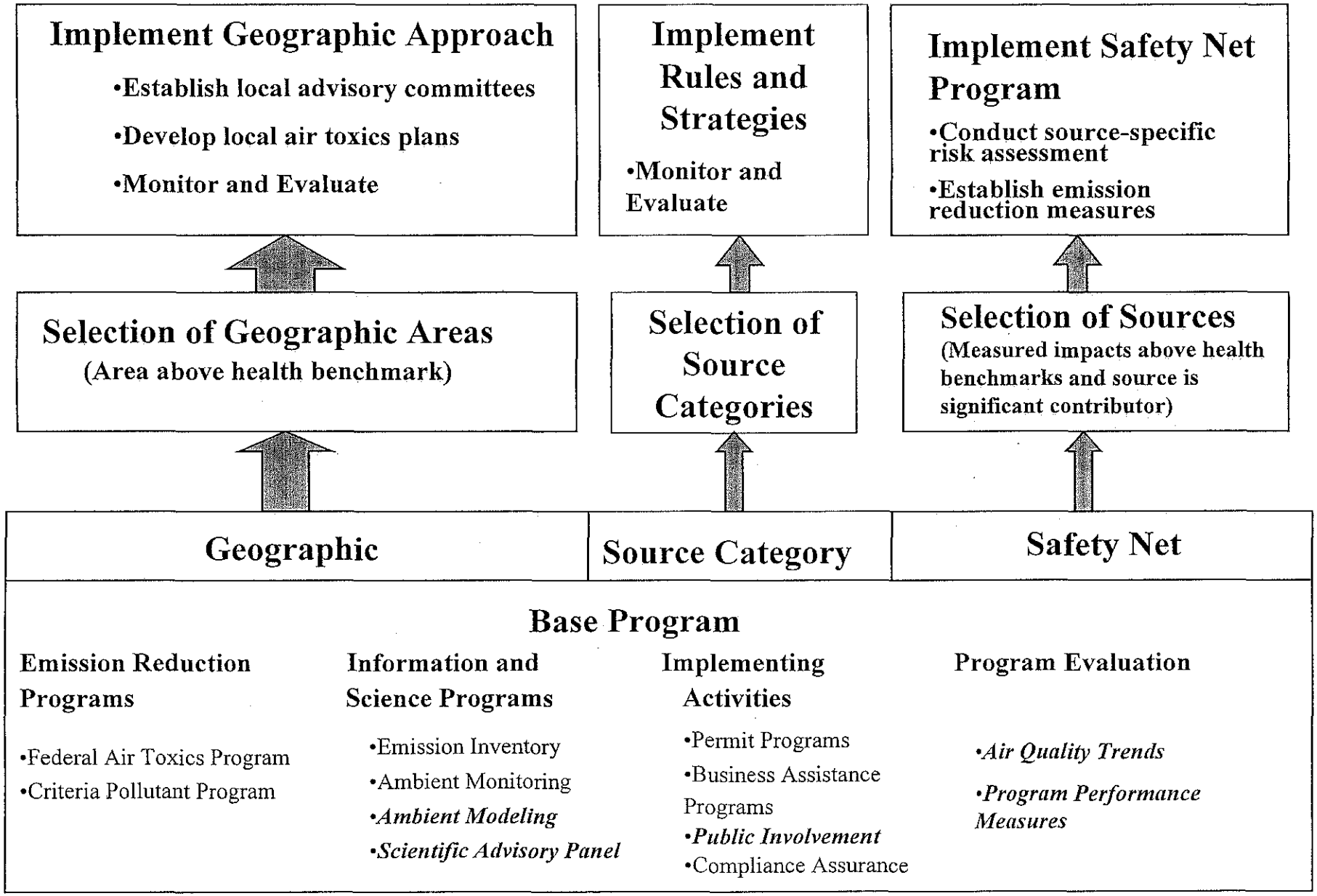
Reclaimed Plastic Products

Application Number 5948 - Change the serial number on Denton Plastics, Inc.'s Toyota forklift from 7fFGU8-62036 to **7FGU18-62306.**

Approved:
Section:
Division:

Report Prepared By: Maggie Vandehey
Phone: 503-229-6878

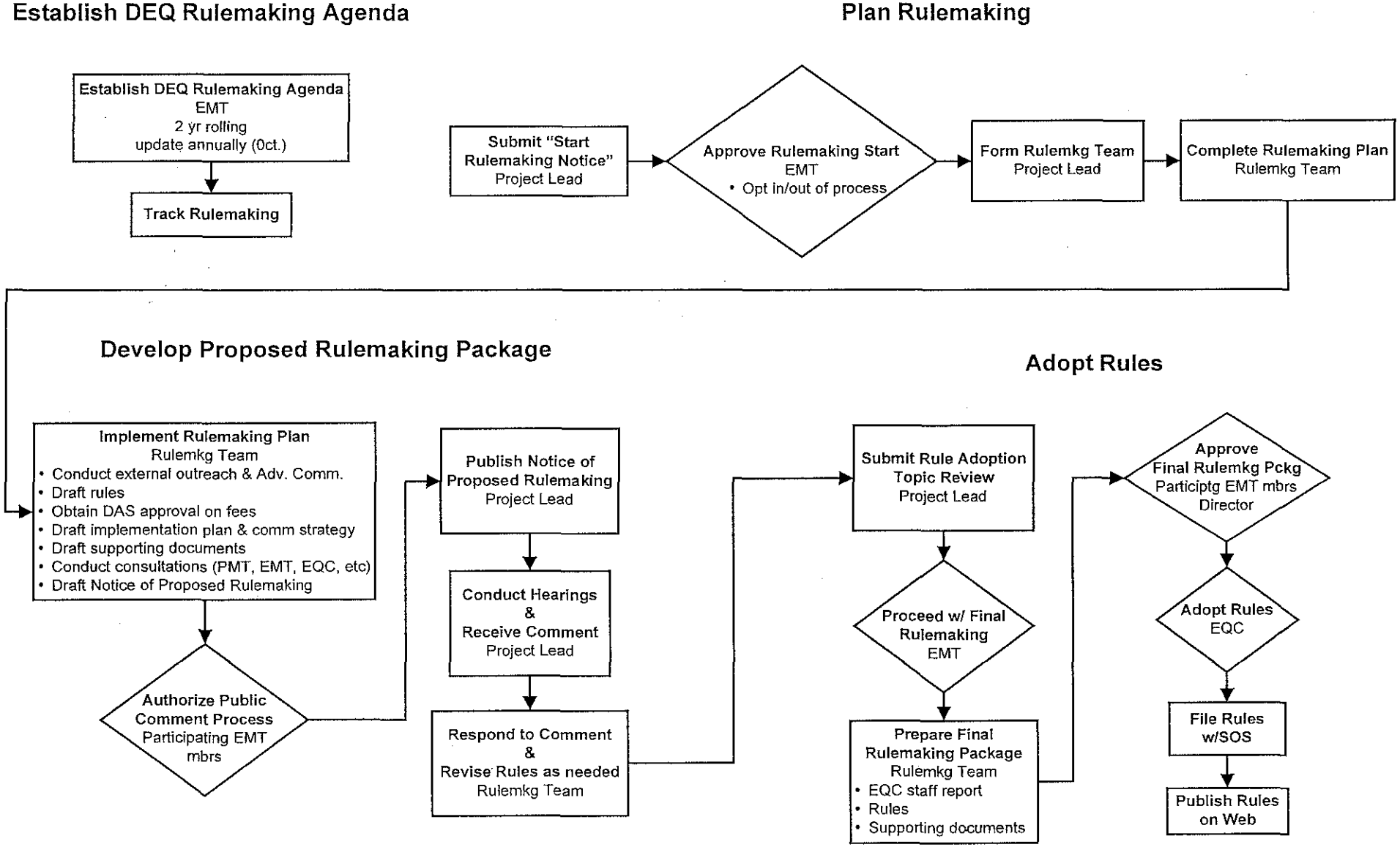
Oregon Air Toxics Program Structure



Handout 3/8/02 EQC, Item G

Agenda Item G, Informational Item:
Improvements for DEQ's Rulemaking Process
March 8, 2002, EQC Meeting

PROPOSED DEQ RULEMAKING PROCESS



WATER QUALITY PROGRAM: STATUTORY OVERVIEW

	Federal Requirements	State Delegation Action	EQC Rule Adoptions
Surface Water	**Clean Water Act**		
Water Quality Standards	• EPA Recommends Water Quality Criteria ("Gold Book") *(Section 303)*	• State Adopts Water Quality Standards	• OAR Division 41
Wastewater Permits	• EPA Establishes Technology Limits *(Section 301)*	• State Issues NPDES Permits with technology or water quality based limits	• OAR Division 45
Stormwater Permits	• EPA Establishes Coverage Requirements for Industry and Municipalities *(Section 402)*	• State Issues NPDES Stormwater Permits for "Phase I and Phase II" municipalities, certain industries and construction activities	• OAR Division 45
Nonpoint Source	• EPA Establishes Programatic Direction *(Section 319)*	• State Administers Program and "pass through" grants	• None
Funding	• EPA Establishes Program Direction and Provides Capitalization of the the Clean Water State Revolving Fund *(Title V)*	• State Administers Loan Program	•OAR Division 81
Water Quality Certification	• Federal Agencies Issue Licenses or Permits *(Section 401)*	• State Certifies that License or Permit will meet water quality standards	• OAR Division 48
Groundwater			
Groundwater Quality Standards	• None	• State Adopts Groundwater Quality Standards	• OAR Division 40
Wastewater Permits	• None	• WPCF Permits for land application of wastewater and some onsite systems	• OAR Division 45 • OAR Division 50
Onsite Sewage	• Large systems may be UIC's under Federal Safe Drinking Water Act	• Construction Permit required or WPCF for larger systems	• OAR Division 71
Groundwater Management Act	• None	• State Establishes Groundwater Management Areas	• OAR Division 40
Drinking Water	**Federal Safe Drinking Water Act**		
	• Sourcewater Protection Program	• DEQ Develops Plans in conjuntion with DOH	• None
	• Wellhead Protection Program	• Same as above	• OAR Division 40
	• Underground Injection Control	• State registers or permits UIC's	• OAR Division 44

Glossary of Environmental Terms

Abatement: The reduction in degree or intensity of pollution.

Acid rain: Precipitation which has a pH of less than 5.6.

Acute toxicity: Any poisonous effect produced within a short period of time, resulting in severe biological harm and often death.

Agricultural pollution: The liquid and solid wastes from farming, including: runoff and infiltration of pesticides, fertilizers, and animal waste; erosion and dust from plowing; animal manure and carcasses.

Air pollution: The presence of contaminant substances in the air that do not disperse properly and interfere with human health.

Air shed: The limited space above a particular area defined by natural features as well as by political or legal boundaries.

Algae: Simple rootless plants that grow in bodies of water in relative proportion to the amounts of nutrients available. Algae blooms reduce the amount of dissolved oxygen in lakes and rivers and can result in fish kills.

Ambient air: Any unconfined portion of the atmosphere; the outside air.

Anadromous: Migratory fish that ascend rivers from the sea to spawn, like salmon.

Aquifer: A layer of sediment or rack that is capable of yielding water to wells or springs, and may include fill material that is saturated. The depth of these layers can vary from a few feet to several hundred feet below the ground.

Abestos: A mineral (magnesium silicate) that has been processed so it is used to fire proof buildings, insulate electrical wires, and make brake linings in cars. Asbestos can cause cancer if inhaled or ingested.

Atmosphere: The layer of air surrounding the earth.

Bioassay: Using living organisms to measure the effect of a substance, factor or condition.

Biochemical oxygen demand (BOD): The dissolved oxygen required to decompose organic matter in water. It is a measure of pollution since heavy waste loads have a high demand for oxygen.

Biodegradable: Able to be broken down into simpler products by microscopic plants and animals.

Carbon monoxide (C0): A colorless, odorless, highly toxic by-product of incomplete fossil fuel combustion. It is one of the major air pollutants. Cars give off a lot of carbon monoxide.

Carcinogenic: Capable of causing cancer.

Chlorophyll: Green pigment found in plant cells.

Conservation: Not wasting, and renewing when possible, the human and natural resources of the world.

Contaminate: To pollute something, or make it dirty.

Dissolved oxygen (DO): A measure of the amount of oxygen available for biochemical activity in a given amount of water. Low DO levels are generally due to inadequate waste treatment.

Dissolved solids: The total amount of dissolved organic and inorganic material contained in a sample of water.

Ecological integrity: The summation of chemical, physical and biological integrity capable of supporting and maintaining a balanced, integrated adaptive community of organisms having a species composition, diversity, and functional organization comparable to that of the natural habitat of the region.

Ecology: The study of relationships between living things and their surroundings.

Ecosystem: A community of living things interacting with one another and with their physical environment, such as a rain forest, pond or estuary.

Effluent: Liquid waste material discharged into the environment, it can be treated or untreated. Typically refers to a wastewater discharge from, a sewer system or factory.

Emission: Waste substances discharged into the air.

Erosion: The wearing away of land surface by wind or water. Erosion occurs naturally from weather or run-off but can be intensified by land-clearing practices.

Estuary: Special environments at the mouth of coastal rivers where fresh water meets sea water. These brackish water ecosystems shelter and feed marine life, birds and wildlife.

Evapotranspiration: Water loss from soil through evaporation and transpiration from the surfaces of plants.

Fossil fuels: Fuels such as oil, natural gas, and coal that are made from decayed plants and animals that lived millions of years ago. These fuels are made of hydrogen and carbon (hydrocarbons).

Groundwater: The water under ground that fills empty spaces in material such as sand, gravel or rock.

Hazardous waste: Waste materials that are inherently dangerous in contact, handling and disposal. They may be toxic, explosive, caustic, or ignitable. Substances classified as hazardous under state or federal law are subject to special handling, shipping, storage, and disposal requirements. Radioactive materials and some biological wastes are also considered hazardous.

Heavy metals: Elements with high molecular weights which are generally toxic in low concentrations to plant and animal life. Examples include mercury, chromium, cadmium, arsenic, and lead.

Hydrocarbons: Compounds found in fossil fuels that contain carbon and hydrogen in various combinations. Some are carcinogenic. They are major air pollutants and can cause significant groundwater contamination. Fossil fuels, glues, paints, and solvents contain hydrocarbons. Most people use the terms "hydrocarbon" and "volatile organic compounds" (or VOCs) to mean the same thing.

Hydrologic cycle: The cyclical movement of water from the ocean to the atmosphere by evaporation through rain to the earth's surface, through runoff and groundwater to streams, and back to the sea.

Inversion: An atmospheric condition occurring when a layer of cool air is trapped by a layer of warm air and is unable to rise. Inversions spread polluted air horizontally rather than vertically so that contaminating substances cannot be dispersed.

Leachate: Liquid that has percolated through solid waste or other matter, extracting dissolved or suspended materials from it.

Mobile source: A moving source of pollution, such as a car or truck.

Nitrogen oxides: Gases that form when the nitrogen and oxygen in the atmosphere are burned with fossil fuels at high temperatures.

Non-point source: Contaminants from diffuse land use practices, rather than from discrete sources such as a pipe or ditch. Contaminants of non-point source pollution can be the same as from point source pollution and can include; sediment, nutrients, pesticides, metal, and petroleum products. Sources of non-point source pollution can include; construction sites, agricultural areas, forests, stream banks, roads, urban and residential areas.

Nutrients: Essential elements or compounds in the development of living things. Oxygen, nitrogen and phosphorous are examples. When present in excess, nutrients can be pollutants that cause environmental problems related to excessive plant growth.

Organic chemicals: Chemical compounds containing carbon. Historically organic compounds were obtained from vegetable or animal sources. Today, many organic chemicals are synthesized in a laboratory.

Outfall: The outlet of a sewer, drain or conduit where effluent is discharged into receiving waters.

Ozone: Pungent, colorless, toxic gas that is the major component of smog. It is formed when sunlight triggers chemical reactions involving hydrocarbons and oxides of nitrogen.

Particulates: Fine particles such as dust, smoke, fumes, or smog found in emissions and the air.

PCBs: Polychlorinated biphenyls. Found in transformers and capacitors, these organic compounds are very persistent in the environment where they accumulate over time.

Pesticides: Chemicals used to destroy or control insects, weeds or unwanted growths.

Plume: In water terms, the extent or boundary of the spread of underground soil or water contamination. In air, a visible emission from a flue or chimney.

Point source: A stationary location where pollutants are discharged.

Pollutant: A contaminant that adversely alters the physical, chemical, or biological properties of the environment.

Pollute: To make the land, water, or air dirty and unhealthy.

Pretreatment: Processes used to reduce the amount of pollution in water before it enters the sewers or treatment plant.

Radon: Colorless, odorless radioactive gas formed by the decay of radium.

React: To act in response to something. For example, a chemical can change, or react, if added to another chemical.

Remedial action: Work done at a hazardous waste site to clean up or control the contamination found at the site.

Respiratory system: A body's system for breathing, including the nose, throat, and lungs.

Resource recovery: The process of obtaining materials or energy, particularly from solid waste.

River basin: The land area drained by a river and its tributaries.

Runoff: Water from precipitation or irrigation that flows over the ground surface and returns to streams. It can collect pollutants from the air or land and carry them to the receiving waters.

Sediment: Solid Material that has dropped out of suspension in air or water. Examples include sand and gravel.

Septic tank: An enclosure that stores and processes wastes where no sewer system exists. Bacteria decompose the organic matter into sludge, which is pumped off periodically.

Sludge: A product of the treatment process as particles in waste are converted to solids.

Solid waste: Useless, unwanted or discarded material with insufficient liquid content to be free flowing. It may be agricultural, commercial, industrial, institutional, municipal, or residential in nature.

Solvent: A substance used to dissolve another substance.

Stagnation: Lack of motion in a mass of air or water, which tends to hold pollutants.

Stationary source: A non-moving source of pollution, such as a factory smokestack.

Stratosphere: The layer of air that extends from about 10 to 30 mile above the surface of the earth.

Sulfur dioxide: A colorless gas that can that can bother the lungs. It is formed when fossil fuels that contain sulfur are burned. It is also given off when volcanoes erupt.

Total dissolved solids: The total amount of organic and inorganic material dissolved in a sample of water.

Toxic: Describes something that can be poisonous or deadly if it is eaten touched, or inhaled in large enough amounts.

Toxicity: The quality or degree of being poisonous or harmful to plant or animal life.

Turbidity: Hazy air due to the presence of particles and pollutants; a similar cloudy condition in water due to suspended silt or organic matter.

Urban runoff: Storm water from city streets, usually carrying litter and organic wastes.

Ventilation: Atmospheric air circulation determined by wind speed and mixing height. The degree of ventilation is an indication of how well air pollution will be dispersed.

Volatile: Any substance that evaporates at low temperature.

Volatile organic compounds: VOCs are made of carbon, oxygen, hydrogen, chlorine, and other atoms that can form gases easily. They are found in nature as well as in some glue, paint, solvents, and other products. They help form

ozone near the ground, which may harm our health and even cause cancer.

Water pollution: The addition of enough harmful or objectionable material to damage water quality.

Watershed: The area drained by a given stream.

Water table: The upper level of groundwater.

Wetlands: Areas such as tidal flats or swamps covered by shallow water, or where the water table is at or near the surface.

General Environmental Acronyms and Terms

ACDP	Air Contaminant Discharge Permit
AOI	Associated Oregon Industries
API	Air Pollution Index
AQ	Air Quality
AQI	Air Quality Index
AQMA	Air Quality Management Area
AQMD	Air Quality Management District
BACM	Best Available Control Measure
BACT	Best Available Control Technology
BAT	Best Available Technology economically available
BCT	Best Conventional Pollutant Control Technology
BDAT	Best Demonstrated Available Technology
BOD	Biochemicall Oxygen Demand
BMP	Best Management Practices
BPT	Best Practicable Control Technology
BS	Biosolids
BSMP	Biosolids Management Plan
CAA	Clean Air Act (Federal)
CAFO	Confined Animal Feeding Operation
CCMP	Comprehensive Conservation and Management Plan
CD	Consent Decree
CDC	Center for Disease Control
CEPP	Chemical Emergency Preparedness Program
CERCLA	Comprehensive Environmental Response, Compensation Liability Act (Superfund) of 1980
CFR	Code of Federal Regulations
COD	Chemical Oxygen Demand
COE	U.S. Army Corps of Engineers
CSO	Combined Sewer Overflow OR Combined Sewer Outfall
CST	Community Solutions Team
CWA	Clean Water Act
DAS	Department of Administrative Services (Oregon)
DEQ	Department of Environmental Quality (Oregon)
DHS	Department of Human Services (Oregon)
DLCD	Department of Land Conservation and Development (Oregon)
DO	Dissolved Oxygen
DOD	Department of Defense (Federal)
DOE	Department of Ecology (Washington State)
DOE	Department of Energy (Federal)
DOGAMI	Department of Geology and Mineral Industries (Oregon)
DOI	Department of Interior (Federal)
DOJ	Department of Justice (Oregon)

DSL	Division of State Lands (Oregon)
ECD	Environmental Cleanup Division (part of DEQ Land Quality Division)
ECOS	Environmental Council of the States (National)
EDF	Environmental Defense Fund
EIA	Economic Impact Assessment
EIS	Environmental Impact Statement
EPA	United States Environmental Protection Agency
EQC	Environmental Quality Commission
ER	Eastern Region (DEQ)
FFCA	Federal Facility Compliance Act
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FOIA	Freedom of Information Act
FPA	Forest Practices Act (Oregon)
FS	Feasibility Study
FTE	Fulltime Equivalent
FWPCA	Federal Water Pollution Control Act
GPS	Groundwater Protection Strategy OR Global Positioning System
GW	Groundwater
GWMA	Groundwater Management Area
GWMP	Groundwater Management Plan
HAP	Hazardous Air Pollutant
HB	House Bill
HLW	High-Level Radioactive Waste
HW	Hazardous Waste
IAG	Interagency Agreement
IBI	Index of Biological Integrity
LCDC	Land Conservation and Development Commission (Oregon)
LEV	Low Emission Vehicle
LQ	Land Quality Division (DEQ)
LRAPA	Lane Regional Air Pollution Authority
LUBA	Land Use Board of Appeals (Oregon)
LUCS	Land Use Compatibility Statement
LUST	Leaking Underground Storage Tank
MACT	Maximum Achievable Control Technology
MAO	Mutual Agreement and Order
MCL	Maximum Containment Level OR Maximum Contaminant Level (Safe Drinking Water Act Term)
METRO	Metropolitan Service District (Portland Region)
MOU	Memorandum Of Understanding
MSD	Management Services Division (DEQ)
NAAQS	National Ambient Air Quality Standards
NAFTA	North American Free Trade Agreement
NARSTO	North American Research Strategy for Tropospheric Ozone
NCP	National Contingency Plan

NELAP	National Environmental Laboratory Accreditation Program
NEP	National Estuary Program
NESHAPS	National Emission Standard for Hazardous Air Pollutants
NMFS	National Marine Fisheries Service (Federal)
NO	Nitrogen Oxide
NO_2	Nitrogen Dioxide
NO_X	Oxides of Nitrogen
NOAA	National Oceanic Atmospheric Administration
NPDES	National Pollution Discharge Elimination System
NPS	Nonpoint Source
NRCS	USDA Natural Resource Conservation Service (Federal)
NRDC	Natural Resource Defense Council
NSPS	New Source Performance Standards
NSR	New Source Review
NWR	Northwest Regional Office (DEQ)
O_3	Ozone
OAR	Oregon Administrative Rules
OCE	Office of Compliance and Enforcement (DEQ)
OCO	Office of Communication and Outreach (DEQ)
OD	Office of the Director (DEQ)
ODA	Oregon Department of Agriculture
ODF	Oregon Department of Forestry
ODFW	Oregon Department of Fish and Wildlife
ODOE	Oregon Department of Energy
ODOT	Oregon Department of Transportation
OEC	Oregon Environmental Council
OERR	Office of Emergency and Remedial Response
ODP&R	Oregon Department of Parks and Recreation
OPA 90	Oil Pollution Act of 1990
ORELAP	Oregon Environmental Laboratory Accreditation Program
ORS	Oregon Revised Statutes
OSC	On-Scene Coordinator
OSHA	Occupational Safety and Health Administration
PA	Preliminary Assessment
PA/SI	Preliminary Assessment / Site Investigation
PBT	Persistent, Bio-accumulative, and Toxic Pollutant
pH	Measure acidity
$PM_{2.5}$	Particulate Matter less than 205 microns in diameter
PM_{10}	Particulate Matter less than 10 microns in diameter
PMT	Program Management Team (DEQ)
POTW	Publicly Owned Treatment Works
PPA	Performance Partnership Agreement
ppb	Parts per billion
ppm	Parts per million

PRP	Potentially Responsible Party
PSD	Prevention of Significant Deterioration
PSEL	Plant Site Emission Limits
PUC	Public Utility Commission
QA	Quality Assurance
QC	Quality Control
R and D	Research and Development
RA	Remedial Action
RA	Risk Assessment
RACT	Reasonably Available Control Technology
RCRA	Resource Conservation and Recovery Act of 1976
RD	Remedial Design
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
RI	Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
RP	Responsible Party
RQ	Reportable Quantity
SARA	Superfund Amendments and Reauthorization Act of 1986
SB	Senate Bill
SDWA	Safe Drinking Water Act of 1974
SF	Superfund
SFM	State Fire Marshall (Oregon)
SI	Site Inspection
SIP	State Implementation Plan
SMCRA	Surface Mining Control and Reclamation Act
SMP	Site Management Plan
SRLF	State Revolving Loan Fund
SSO	Sewer System Overflow
STEP	Septic Tank Effluent Pump
STP	Sewage Treatment Plant
SW	Solid Waste
SWCAA	Southwest Washington Clean Air Agency
SWCD	Soil and Water Conservation District
SWDA	Solid Waste Disposal Act
SWMG	State Water Management Group
TA	Technical Assistance
TAC	Technical Advisory Committee
TACT	Typically Achievable Control Technology
TDS	Total Dissolved Solids
Title III	Title III of the Clean Air Act Amendments of 1990 (CAAA90)
Title V	Title V of the CAAA90
TMDL	Total Maximum Daily Load

TMP	Temperature Management Plan
TPY	Tons Per Year
TRI	Toxic Chemical Release Inventory
TSCA	Toxic Substance Control Act
TSDF	Treatment, Storage and Disposal Facility
TSP	Total Suspended Particulates
TSS	Total Suspended Solids
UGB	Urban Growth Boundary
UIC	Underground Implementation Control OR Underground Injection Control
USCG	U.S. Coast Guard
USGS	U.S. Geological Survey
UST	Underground Storage Tank
VIO	Vehicle Inspection Office
VOCs	Volatile Organic Compounds
VSI	Visual Site Inspection
WHP	Wellhead Protection
WPCF	Water Pollution Control Facilities
WQ	Water Quality
WQC	Water Quality Criteria
WQL	Water Quality Limited
WQS	Water Quality Standard
WR	Western Region (DEQ)
WRAP	Waste Reduction Assistance Program OR Western Regional Air Partnership
WRC	Water Resource Commission (Oregon)
WRD	Water Resource Division (Oregon)
WWTF	Wastewater Treatment Facility
WWTP	Wastewater Treatment Plant

Environmental Quality Commission Meeting
March 7-8, 2002

Heathman Hotel, Freemont/Morrison rooms (combined)
1001 SW Broadway at Salmon, Portland, Oregon 97205

Thursday, March 7 – EQC/DEQ Summit

Commissioners and members of DEQ's Executive Management Team (EMT) will spend the day discussing major programs initiatives, policy decisions and agency plans, building on work from the last EQC/DEQ Summit held in November 2000.

11:00 Setting the Stage
To set the context for this day, Commissioners and EMT members will review results of the 2000 Summit and discuss what has been accomplished. The group will then review purpose of this Summit and discuss desired outcomes.

11:30 Initiatives in Communications and Outreach
Nina DeConcini, Office of Communications and Outreach Manager, will describe current and upcoming activities designed to engage Oregonians in environmental problem solving. Nina will solicit feedback from Commissioners on a number of specific initiatives.

12:15 Lunch break, continue meeting

12:30 Air Quality Program Overview
Andy Ginsburg, Air Quality Administrator, will give a short presentation of major programs and initiatives and present a visual overview of the regulations that guide air quality work. Most of this time will be reserved for discussion.

1:30 Water Quality Program Overview
Mike Llewelyn, Water Quality Administrator, will give a short presentation of major programs and initiatives and present a visual overview of the regulations that guide water quality work. Most of this time will be reserved for discussion.

2:30 Break

2:45 Agenda for the 2003 Legislative Session
Director Hallock will reiterate her agenda and vision for DEQ, building on the agency's *Strategic Directions* for the next four years. Lauri Aunan, Office of Community and Government Relations Manager, will then share ideas DEQ is considering for the 2003 Legislative Session. During discussion, Director Hallock and EMT members will ask Commissioners for ideas and feedback on potential legislative proposals.

4:30 Review and Next Steps
Commissioners and EMT members will discuss the results of the day and next steps, including future program overviews by the Land Quality and Management Services Divisions.

5:00 Adjourn for the day

Friday, March 8 – Beginning at 8:30 a.m.

The Commission will hold an executive session at 8:00 a.m. to consult with counsel concerning legal rights and duties regarding current and potential litigation against the Department. Executive session is held pursuant to ORS 192.660(1)(h). Only representatives of the media may attend, but will not be allowed to report on any deliberations during the session.

A. Approval of Minutes

B. Action Item: Pollution Control Facility Tax Credit Requests
The Legislature established the Pollution Control Facility Tax Credit in 1967 to help businesses meet environmental requirements. The credit was later expanded to encourage businesses to invest in technologies and processes that prevent, control or reduce significant amounts of pollution. In 1999, nonpoint source pollution control facilities (such as wood chippers) were made eligible for the program. At this meeting, the Commission will consider over 150 tax credit applications for facilities that control air and water pollution, recycle solid and hazardous waste, reclaim plastic products, provide alternatives to open burning, and control pollution from underground storage tanks.

C. Director's Dialogue
Director Hallock and Commissioners will discuss current events and issues involving the Department, as well as the Commission's plan for the April 23-25, 2002, meeting in Burns.

D. Action Item: Request from U.S. Army Corps of Engineers and U.S. Fish and Wildlife Service for a Waiver to the Total Dissolved Gas Water Quality Standard on the Columbia River
This item will begin at approximately 9:30 a.m.
The Commission will consider a request from the U.S. Army Corps of Engineers for a variance to Oregon's total dissolved gas water quality standard so that water can be spilled over Lower Columbia River dams to assist salmon smolts migrating to the ocean. The Corps has requested similar waivers to assist fish passage in previous years.

E. Action Item: Permit Modification for Umatilla Chemical Agent Disposal Facility (UMCDF)
In September 2001, the Commission asked DEQ to modify the UMCDF permit to specify the approval process for starting-up disposal of chemical weapons at the facility. DEQ is proposing a change to the permit that will require Department approval for starting surrogate trial disposal (scheduled to start in May 2002) and Commission approval for starting chemical agent operations (scheduled for February 2003). Significant comments were received from the permittees, interested stakeholders and citizens on this proposal. The Commission plans to make a decision on the proposed permit change at this meeting.

F. *Rule Adoption: Air Contaminant Discharge Permit (ACDP) Fee Increase
DEQ is proposing an across-the-board, 30 percent increase to ACDP fees as approved by the 2001 Legislature. This increase replaces General Funds that are no longer available to support the permit program. The proposed rules also adjust ACDP fees to more accurately reflect the amount of work that is involved with issue different types of permits. Small businesses and other low-complexity sources would experience a smaller percent increase than larger, more complex sources based on these rules. The Commission will consider rule adoption at this meeting.

G. Information Item: Improvements for DEQ's Rulemaking Process

Over the past year, DEQ has identified ways to improve its internal rulemaking process. These improvements aim to strengthen coordination between agency programs, ensure smooth implementation of new rules on the ground, enable better planning of staff resources and workloads, and gain efficiencies overall. Another goal is to provide more opportunity for Commissioners to be involved early-on in our rulemaking process. DEQ will present and discuss these improvements with Commissioners at this meeting.

H. Discussion Item: Schedule for Evaluating Director's Performance

In January 2002, the Commission approved a formal process for evaluating the DEQ Director's performance, including measures, criteria and an evaluation procedure. At this meeting, Commissioners will discuss a schedule for reviewing the Director's performance in late 2002.

I. Commissioners' Reports

Adjourn

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* Hearings have been held on Rule Adoption items and public comment periods have closed. In accordance with ORS 183.335(13), no comments may be presented by any party to either the Commission or Department on these items at any time during this meeting.

Public Forum: The Commission will break the meeting at approximately 11:30 a.m. on Friday, March 8, for public forum if people are signed up to speak. Public forum is an opportunity for citizens to speak to the Commission on environmental issues and concerns not part of the agenda for this meeting. Individual presentations will be limited to five minutes. The Commission may discontinue public forum after a reasonable time if a large number of speakers wish to appear. Public comment periods for Rule Adoption items have closed and, in accordance with ORS 183.335(13), no comments may be presented to the Commission on those agenda items.

Note: Because of the uncertain length of time needed for each agenda item, the Commission may hear any item at any time during the meeting. If a specific time is indicated for an agenda item, an effort will be made to consider that item as close to that time as possible. However, scheduled times may be modified if participants agree. Those wishing to hear discussion of an item should arrive at the beginning of the meeting to avoid missing the item.

The next Commission meeting is scheduled for April 23-25, 2002.

Copies of staff reports for individual agenda items are available by contacting Emma Djodjic in the Director's Office of the Department of Environmental Quality, 811 SW Sixth Avenue, Portland, Oregon 97204; telephone 503-229-5990, toll-free 1-800-452-4011, or 503-229-6993 (TTY). Please specify the agenda item letter when requesting reports. If special physical, language or other accommodations are needed for this meeting, please advise Emma Djodjic as soon as possible, but at least 48 hours in advance of the meeting.

State of Oregon

Department of Environmental Quality Memorandum

To: Environmental Quality Commission **Date:** February 13, 2002

From: Mikell O'Mealy

Subject: March 7 EQC/DEQ Summit

Greetings! We are looking forward to a productive day of discussion with you on March 7, building on the first EQC/DEQ Summit held in November 2000. The goals of this year's summit are to engender substantive dialogue on a number of current agency initiatives and challenges.

After revisiting outcomes of the November 2000 Summit, Commissioners will hear short presentations from:

- Nina DeConcini, on agency plans for involving Oregonians in solving environmental problems,
- Andy Ginsburg, on Air Quality program structure, opportunities and issues associated with improving air quality, and
- Mike Llewelyn, on Water Quality program structure, opportunities and issues for improving water quality.

Following each presentation, we will solicit your feedback and ideas and talk about how to move forward in these programs.

In the afternoon, we will spend two hours discussing legislative concepts and potential proposals for the 2003 Legislative Session, building on DEQ's Strategic Directions for 2001 thought 2005. Director Hallock and Lauri Aunan will initiate this discussion.

Background information for the Summit follows. Please feel free to contact me or any member of the Executive Management Team if you have questions or would like to discuss these items before the meeting. Again, we look forward to seeing you soon.

Outcomes Report from
Environmental Quality Commission (EQC) /
Department of Environmental Quality (DEQ) Summit
29 November 2000
Updated February 2002 with Status of Assignments

Purposes: The purpose of this Outcomes Report is to summarize main themes and assignments from the EQC / DEQ Summit meeting. The Summit outlined issue areas and priority actions for DEQ staff to research and present to the EQC over the next 6-8 months.

Present:
Melinda Eden (chair-EQC),
Didi Malarkey (EQC)
Mark Reeve (EQC)
Tony Van Vliet (EQC)
Lauri Aunan (DEQ Legislative Liaison)
Sarah Bott (DEQ Public Affairs)
Marianne Fitzgerald (DEQ Pollution Prevention)
Rick Gates (DEQ Lab)
Andy Ginsburg (DEQ Air Quality Division)
Stephanie Hallock (DEQ Director)
Joni Hammond (DEQ Eastern Region)
Mike Llewelyn (DEQ Water Quality Division)
Helen Lottridge (DEQ Management Services Division)
Neil Mullane (DEQ Northwest Region)
Kerri Nelson (DEQ Western Region)
Sally Puent (DEQ Waste Prevention and Management)
Kitty Purser (DEQ Executive Assistant to the Director)
Paul Slyman (DEQ Environmental Cleanup Division)
Lydia Taylor (DEQ Deputy Director)
Jennifer Yocum (Facilitator)

Issue Areas: Commissioners and DEQ staff discussed several items. The following issues areas generated the most significant discussion and are listed below. (Note: the listing order only reflects order of discussion, not a prioritized ranking.) Summaries on each topic and assignments follow this list.

1. Environmental information and data management
2. Cooperation among natural resource and other state and federal agencies
3. Role of DEQ as a regulatory agency and as a progressive innovator / Point Source and Non Point Source environmental strategies
4. Balance and fairness in enforcement, concerns about East/West, Urban/Rural splits
5. Connections between water quality and water quantity / Harmonizing needs for environmental protection, economic advancement and energy
6. Suggestions for improving EQC and DEQ interactions (process issues)

1. Environmental Information and Data Management

Concerns: Right now, a great deal of environmental information is collected and managed by several public entities throughout the state and region. Much of the data in these systems is unavailable due to technical and cultural barriers. There is also a great deal of concern about data quality and resiliency (the ability to use data collected for one purpose in another application.) While commissioners and DEQ staff agree that more data, and a more effective use of data, is necessary for developing policy and making science-based decisions, significant time and money are needed to realize this desire. Thus far the Legislature has not been very supportive of single-agency information system efforts, although multi-agency efforts may be more successful. Statewide leadership is needed.

Assignments: **Helen Lottridge** will develop a proposal that will look at current plans around state agency information exchange and develop options for DEQ's role in improving data access and use for the environment. This proposal will include potential projects outlined for scope and resource needs. The proposal will be communicated to the EQC as a part of the Director's report at the January meeting. Additionally, **Andy Ginsburg** will present a draft of DEQ's Environmental Results Management System (ERMS) initiative for EQC input/brainstorming in May.

Status: We have launched a comprehensive Information Management Assessment Project (IMAP) to evaluate and recommend how we can use DEQ's information management resources for the highest return in environmental benefit, customer service and efficiency. Helen Lottridge is leading a steering committee and a series of task forces to produce this assessment by September 1, 2002.

The EMT is developing a set of executive performance measures tied to the four strategic priorities and the key implementing actions. The EQC had a thorough discussion about the strategic priorities at their meeting on August 10, 2001, in Enterprise. The measures are in various stages of development, with the most work needed on the toxics priority.

2. Cooperation among natural resource and other state and federal agencies

Concerns: Related to problems with information exchange referenced above, the many lines drawn between and among state and federal agencies charged with aspects of looking after the environment often get in the way of effective and efficient environmental management. Relationships between these entities are often tense and several examples of attacks on credibility (mostly related to science) were described. While the Community Solutions Team model has been successful, outside of a few integrated efforts on the Oregon Plan for Salmon and Steelhead, no coordinated effort exists to address conflicts in rules, permits or other policy issues.

Assignment: **Mike Llewelyn** will develop a proposal to look at how to improve cooperation and credibility with different natural resource agencies through targeted interactions with other boards, commissions and directors. These discussions will look at mission, philosophy and administration. The proposal will be communicated to the EQC as a part of the Director's report at the January meeting.

Status: Mike prepared a report recommending a series of meetings between the EQC and other boards, commissions and directors. In early 2001, the Commission discussed these recommendations, decided to aim for two joint meetings per year, and prioritized a list of other boards and commissions to meet with through 2003. The Commission met with OWEB in September 2001, and will meet with WRC and OECDC in June and December 2002, respectively. The Commission identified joint meetings with LCDC and Board of Education (possibly) as priority meetings for 2003.

3. Role of DEQ as a regulatory agency and as a progressive innovator / Point Source and Non Point Source environmental strategies

Concerns: DEQ's policy and revenue structures are mostly drawn on its role as a permit-issuer and enforcer of environmental laws. However, due to the changing nature of the sources of pollution and a desire to see what environmental gains can be achieved through strategies other than prescribed regulation, DEQ has taken on several other roles including partner, educator, etc. The multiplication of roles diverts already thin resources and may cause confusion among staff and the public as to where our priorities lie. Still, our effectiveness and credibility depend on playing all of these roles to some extent.

Assignment: **Stephanie Hallock** will convene the DA group to examine the priorities listed under the strategic planning theme centered on engaging all Oregonians in protecting and enhancing the environment in their communities. The group will look at how they plan to update the agency's Strategic Plan, and how they might select one specific area for engaging Oregonians (along the lines of recycling) before the next EQC meeting.

Status: The EMT selected a set of behaviors to focus on under the theme of engaging Oregonians. These are: alternatives to gas engines; yard debris management (alternatives to burning and pesticides); woodstoves (burn smart and clean); driveways (protecting water quality); home/consumer products; and recycling. Nina DeConcini has lead on this effort. We are developing a survey to measure baseline attitudes and behaviors for the targeted actions.

4. Balance and fairness in enforcement, concerns about East/West, Urban/Rural splits

Concerns: Our current enforcement penalty matrix has generated concerns about fairness and effectiveness in its application. Different programs use different enforcement tools and philosophies. Some differences may occur across regions. Violators have different levels of access to attorneys and consultants. Fines may not always be the most effective approach in poorer areas.

Assignments: **Neil Mullane** will put together a proposal to evaluate fairness in our enforcement matrix sometime before the May EQC meeting. He will also send out a white paper report on PGE and share information on enforcement trends in Oregon. **Kerri Nelson** and **Joni Hammond** will look at developing differential policy implementation strategies that may be appropriate, also for the May meeting.

Status: We have launched a thorough review of Division 12 to address equity and fairness issues. EQC received an initial briefing on this review from Anne Price on

January 17, 2002. The schedule calls for an advisory committee to begin in March 2002, public hearings in September 2002, and presentation to the EQC in January 2003. A status report to the EQC will be given in mid-2002.

We have also initiated a process to review how DEQ rules, permits and other programs affect small businesses and individual Oregonians. Lauri Aunan is leading the effort to define this issue during February and March, 2002. The Program Management teams are expected to use innovative approaches to reduce the burden on small businesses and individuals while still protecting the environment.

5. Connections between water quality and water quantity / Harmonizing needs for environmental protection, economic advancement and energy

Concerns: There is no coordinated effort to look at balances between water quality and water quantity. Some trade off choices are emerging. Trade offs are also a common theme in the discussion about environmental protection, economic advancement and energy needs. While generally we want to find win-win solutions, doing so requires a great deal of conversation and early involvement.

Assignment: None. EQC will be exploring barriers and opportunities associated with coordinated water quality and water quantity management during a joint meeting with WRC in June 2002.

6. Suggestions for improving EQC and DEQ interactions

Concerns: We want to make sure that the EQC has enough information and enough time to make good decisions. Information can be presented more clearly and regular program "check-ins" were proposed.

Assignments: **Paul Slyman** will revise the report forms used for review by the EQC. LFO has a model, also look at Secretary of State's calendar for rule postings. New forms will be used for the May meeting. A template will be reviewed in March. **Sarah Bott** will help. **Stephanie Hallock** will send an email to staff letting them know that EQC members may be contacting them for more information. Stephanie will make sure that EQC members get materials at least two weeks in advance and will create a schedule for program check-ins. Stephanie will also meet with Harvey Bennett to review outcomes from this meeting.

Status: Initial improvements have been made to forms and templates used for EQC reports, and the schedule has been revised to provide for 2 week review. We are updating our internal review process to identify policy issues earlier, some of which may lead to information/discussion items for EQC. Loretta Pickerell will brief the EQC on emerging changes in our internal rulemaking process on March 8, 2002. Commissioner Reeve attended the February 19, 2002, EMT meeting to observe our rulemaking planning and review process.

State of Oregon

Department of Environmental Quality Memorandum

To: Environmental Quality Commission **Date:** 2/14/02

From: Nina DeConcini
Manager, Communication and Outreach

Subject: Upcoming March meeting

Greetings to each of you!

While it may appear that I have been a "stealth" Public Affairs director for the past 6 months since I accepted the position, I assure you I have been working hard acquainting myself with my staff as well as the rest of the agency, especially the regional offices. In this era of shrinking budgets and resources, it is especially challenging to find effective methods to tell the "DEQ story."

I presently supervise 10 staff, two of whom are the central agency receptionists, Lee McPherson and BJ Funk. I have five Public Information Representatives who provide media, education and outreach services to the regions and programs. Brian White serves Land Quality and Compliance and Enforcement, William Knight serves both Air and Water Quality, and Frank Reed serves the Vehicle Inspection Program and the Lab. The regional staff, Jennifer Boudin (Western region), Phil Hodgen (Eastern region) and Marcia Danab (Northwest region) provide similar services as described above within their geographic territory. Jeni Cram is DEQ's Web master and Trina Ritchey provides administrative support to our section.

In anticipation of our meeting on March 7th and 8th, I would like to propose a few topics for discussion so we can make the best use of our short time together. Here's what I plan to cover and I welcome your input!

- My background and history with the agency (see attached C.V.)
- My philosophy in regard to the "Involve Oregonians" in solving environmental problems portion of DEQ's strategic plan
- Recent involvement in key activities: Strategic Directions document, Customer Service initiative for on-site, identifying the voluntary actions that Oregonians can take to protect the environment (see attached draft list)
- Recommendations from the Office of Communication and Outreach on other communication priorities that may "compete" with our "Involve Oregonians" effort
- Demonstration (this will be interactive) of a recently completed communication "product" for the on-site program which includes radio, web and print components

I look forward to our discussion on March 7th. As of this writing, I have had the opportunity to speak by phone with several of you to formally introduce myself. I would be happy to discuss any communication topic prior to our meeting on the 7th, so please don't hesitate to contact me at 503.229.6271 if you have any questions or concerns.

Nina Maria DeConcini

4850 SW Centerwood Street, Lake Oswego, OR 97035 H: (503) 624-1711; O: (503) 229-6271

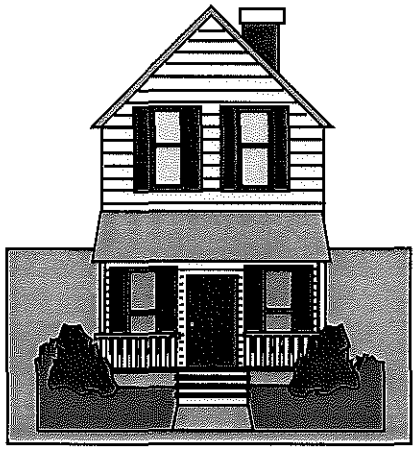
EMPLOYMENT

June 2000	Awarded **German Marshall Fund Environmental Fellowship** to research European examples of public/private partnerships that achieve environmental benefits.
November 1995 to July 2001	**Air Quality Public Education Project Manager, Oregon Department of Environmental Quality (DEQ),** Portland, Oregon. Responsible for developing strategies and implementing programs to educate elected officials, business and community leaders, agency staff, local, state and federal governments and special interest groups within Oregon and nationally regarding air quality issues. Responsibilities include initiation and implementation of voluntary joint venture private sector projects with Portland General Electric, PacifiCorp, Walmart, Fred Meyer and Chevron, evaluating emission reductions, managing consultant contracts, applying for and administering grant funding and acting as a liaison with EPA, STAPPA, ECOs and other state and local natural resource entities.
January 1993 to November 1995	**Environmental Specialist (DEQ),** Portland, Oregon. Administered Congestion Mitigation Air Quality (CMAQ) projects for DEQ and directed activities of advisory committee responsible for development of the Employee Commute Options (ECO) Rule.
July 1989 to August 1992	**Senior Environmental Administrator**, The Walt Disney Company, Burbank California. Managed three full-time professional staff and initiated and managed environmental activities Corporate-wide for Disney such as the company-wide "Environmentality" program, in-house communications, preparation and management of budgets, media relations, regulatory compliance issues, liaison activities with air districts and special projects.
March 1990 to August 1992	**President, Glendale Transportation Management Association (GTMA),** Glendale, California. Directed non-profit organization's activities associated with establishing and monitoring Transportation Demand Management programs, advocacy for transportation funding and regulatory compliance, initiating pilot programs such as "cash-out" parking, managing facilities, property and equipment, and drafting resolutions, policies and procedures for over 30 member companies in the third largest city in Los Angeles County.
December 1988 to July 1989	**Employee Transportation Coordinator, City of Burbank,** Burbank, California. Coordinator of Commuter Assistance Program for municipal employees in conjunction with transportation planning for City of Burbank.
April 1988 to July 1988	**Public Involvement Specialist, Regional Public Transportation Authority,** Phoenix, Arizona. Organized and conducted weekly public participation meetings in seven regional planning districts to solicit input regarding the Maricopa County Arizona Draft Transit Plan and integrated Plan with regional rideshare, transit and van pool programs.

November 1986 to March 1988	**Regional Coordinator, Babbitt for President Campaign,** Iowa City, Iowa. Solely responsible for surrogate speaking, advocacy with special interest groups, scheduling campaign appearances, media, advance work, conducting supporter group meetings and phone banks, training caucus participants, and writing correspondence in fourteen Iowa counties.
Summers 1984-85	**Intern, Arizona Department of Revenue**, Phoenix, Arizona. Designed and implemented special projects for the Director's Office.
Summer 1982	**Intern, Office of Economic Planning and Development, Arizona Energy Office,** Phoenix, Arizona. Coordinated energy workshops state-wide dealing with energy conservation, recycling and solar energy. Prepared manual combining these subjects.
EDUCATION	Colorado College Colorado Springs, Colorado Degree: B.A., Religion/Political Science, 1985 Arts of Florence, Italy: Associated Colleges of the Midwest **ACTIVITIES AND HONORS at Colorado College** Senior Commencement Address, June 3, 1985 (elected by Administration, Faculty and Students); Distinction in the Italian Language; Awarded Madre Merrill Scholarship for semester abroad; Kappa Kappa Gamma Sorority; Student Alumni Association.
CIVIC AND VOLUNTEER ACTIVITY	Board member, City of Lake Oswego Transportation Board, Lake Oswego, OR (1994 to 1999); National Alumni Council, Colorado College, (1993 to present); Vice President, Bryant Elementary school PTA (1999); Volunteer activity leader, Greenridge Estates assisted living facility, Lake Oswego, OR, (1997 to present).
OTHER INTERESTS/ LANGUAGES	Fitness/Aerobics Instructor for over twenty years; Fluent in Italian; Reading and oral knowledge of French.

Environmental Quality Begins At Home!

State of Oregon
Department of Environmental Quality



Alternatives to Gas Engines
Encourage the use of electric or manual lawn and garden equipment

Yard Debris Management-Protecting Air Quality
Alternatives to burning

Yard Debris Management-Protecting Water Quality
Alternatives and less use of fertilizers and pesticides

Wood Stoves
Burn smart and clean (use dry wood, don't bank fires)

Driveways
Wash car on lawn, go to carwashes that recycle water, sweep instead of hose down

Home/Consumer Products
Use non-hazardous cleaners; get rid of household hazardous waste properly

Recycling 201
Discuss with solid waste staff and offer to better promote existing efforts

State of Oregon
Department of Environmental Quality Memorandum

Date: February 11, 2002

To: Environmental Quality Commission

From: Andy Ginsburg, Air Quality Administrator

Subject: March 7, 2002 EQC/DEQ Summit: Air Quality Program Overview

Attached are two tables for our discussion about the Air Quality Program at the summit on March 7th. This memo describes the tables, and lays out some possible discussion items for the air quality session.

Federal/State Partnership

The first table is labeled "Air Quality Program: Statutory Overview." The table shows the federal/state partnership in addressing the major air quality challenges: ambient standards, increments, visibility, air toxics, asbestos, acid rain, stratospheric ozone and climate change. The federal Clean Air Act has provisions that address these air quality challenges. State statutes, EQC rules and DEQ programs also address many of these challenges. The purpose of the table is to illustrate how these various requirements fit together.

The *federal lead* column shows the major programs that EPA implements at a national level for the most part (there are some exceptions that I'll describe during our discussion). The *federal delegated* column shows programs that EPA implements until delegated to a state or local agency. The *EPA approved* column shows programs that state and local agencies adopt to meet performance standards set by EPA. All of these programs are designed to meet Clean Air Act requirements, although they may serve other purposes as well. In contrast, the state initiative column shows programs that do not have a Clean Air Act connection and, so, do not have EPA oversight.

The key distinction in these categories is that we have increasing discretion as we move from left to right on the page. With the federal delegated programs, our basic choice is take it or leave it. For the most part, we adopt these programs by reference, although we can adopt alternative rules and demonstrate equivalency. With EPA approved programs, we have varying degrees of latitude in adopting specific programs as long as we meet the performance standards. For example, in adopting a maintenance plan, we can design our own programs provided we demonstrate that we will maintain compliance with the ambient standard for 10 years. The state initiative programs do not have to meet any federal test, although some have specific requirements laid out by the legislature.

Clean Air Act Titles

In addition to listing the programs, the table provides both Clean Air Act (CAA) and Oregon Revised Statute (ORS) citations. Most of what we do falls under Title I of the CAA. Title I lays out programs to attain and maintain national ambient air quality standards, prevent significant deterioration of air quality, protect visibility and address air toxics. Title I also includes a variety of emission standards for stationary sources, pre-construction review programs, and enforcement programs. Title I includes federal lead, federal delegated and EPA approved programs.

Title II is primarily a federal lead program that regulates emissions from motor vehicles, engines and fuels. Title III is mainly administrative, Title IV addresses acid rain (mainly federal lead), Title V is the federal operating permit program (mainly EPA approved), and Title VI is the stratospheric ozone protection program (mainly federal lead). EPA implements these statutes through regulations published in the Code of Federal Regulations (CFR), Title 40, Parts 50-97.

Oregon Statutes and Rules

Oregon's statutes regarding air quality are published in the ORS Chapter 468A. The legislature provided the Commission with a mix of general authorities and specific authorities. For example, ORS 468A.025 provides general authority for the Commission to adopt ambient standards and emission standards, and ORS 468A.035 provides general authority for the Commission to adopt the State Implementation Plan. Chapter 468A provides specific authority regarding permits, vehicle inspection, Woodstove curtailment, field burning, asbestos abatement and other programs. While providing specific authority, these statutes also limit the Commission's general authority. ORS 468A.020 also lays out specific exemptions from air quality regulation, including most agricultural operations, residential heating and fire fighting training.

The Commission's rules that implement the Clean Air Act and state statutes are in the Oregon Administrative rules (OAR) Chapter 340, Divisions 200 through 268. We completely reorganized the air rules in October 1999 to group like requirements and provide room for future rules. Most, but not all, of these rules are included in the State Implementation Plan. This means that EPA must approve revisions to the rules, and that there are both state and federally enforceable versions of the rules that may differ at any given point in time. For example, EPA has not yet approved the renumbering from October 1999 nor the streamlining from May 2001. As a result, Title V permits must include both the state and federal versions of the rules.

DEQ Air Quality Programs

The second table, labeled Air Quality Program: Subprogram Overview, lists the major subprograms that are implemented by DEQ Air Quality staff. These are grouped by the source type affected (point, area or mobile). The table shows how much local discretion we have in designing the subprograms, as well as the pollutants regulated by each subprogram.

Discussion Items

Some potential discussion items for the summit include:

- Development of our air toxics program;
- Concerns about cumulative emissions growth in clean areas;
- Visibility protection and regional haze;
- Shifting from point source focus to area/mobile source focus;
- Clean diesel initiative;
- Engaging in the climate change issue;
- Northwest Collaborative Air Priorities Project; and
- Upcoming maintenance plans

With any of these topics, we can discuss where we are, issues we need to address, and options for EQC input. If you have particular interest in any of these topics (or any other topic), please e-mail me at ginsburg.andy@deq.state.or.us so I can bring appropriate handouts.

AIR QUALITY PROGRAM: STATUTORY OVERVIEW

	Federal Lead	Federal Delegated	EPA Approved State Efforts	State Initiative
Ambient Standards	• National Ambient Air Quality Standards *(CAA §109)* • National Engine and Fuel Standards *(CAA Title II)*	• New Source Performance Standards *(CAA §111: ORS 468A.025)*	• Attainment and maintenance Plan SIPs *(CAA §110 & Title I, Part D; ORS 468A.035)* • SIP Control Strategies *(CAA §110)*, e.g.: · Air Contaminant Discharge Permit (ACDP) *(ORS 468A.040-060)* · Major New Source Review *(ORS 468A.025)* · Vehicle Inspection Program *(ORS 468A.350-455)* · Employee Commute Options *(ORS 468A.363)* · Woodstove Curtailment *(ORS 468A.460-520)* · Reasonably Available Control Technology *(ORS 468A.025)* • Federal Operating Permit *(CAA Title V; ORS 468A.300-330)*	• Oregon Ambient Air Quality Standards (Particle fallout, Calcium Oxide, Sulfur Dioxide) *(ORS 468A.025)* • Growth allowances *(ORS 468A.035)*
Increments and Visibility	• Class I & II increments *(CAA Title I, Part C)* • National Engine and Fuel Standards *(CAA Title II)*	• New Source Performance Standards (NSPS) *(CAA §111; ORS 468A.025)*	• Visibility and Regional Haze SIPs *(CAA Title I, Part C)* • SIP Control Strategies *(CAA §110)* e.g.: · Smoke Management, Field Burning, Open Burning *(ORS 468A.550-620)* · Major New Source Review/PSD *(ORS 468A.025)* · Air Contaminant Discharge Permit (ACDP) *(ORS 468A.040-060)* • Emission Guidelines *(CAA §111d; ORS 468A.025)* • Federal Operating Permit *(CAA Title V; ORS 468A.300-330)*	• Prevention Plans *(ORS 468A.035)* • Columbia River Gorge Air Quality Protection *(ORS 468A.025)* • Nuisance, Odors, Best Work Practices Agreement *(ORS 468A.025)*
Air Toxics	• List of HAPs *(CAA §112b)* and source categories *(CAA §112c)* • Accidental Releases *(CAA §112r)* • National Fuel Standards *(CAA Title II)*	• National Emission Standards for Hazardous Air Pollutants (NESHAP) *(CAA §112d; ORS 468A.025)*	• Urban Air Toxics *(CAA §112k; ORS 468A.025)* • Federal Operating Permit *(CAA Title V; ORS 468A.300-330)* • Air Contaminant Discharge Permit *(ORS 468A.040-060)*	• State Air Toxics Program *(ORS 468A.025)* • Clean Diesel Initiative
Asbestos		• Asbestos NESHAP *(CAA §112; ORS 468A.025 & 468A.700-760)*		• Asbestos Abatement *(ORS 468A.700-760)*
Acid Rain	• Emission trading *(CAA Title IV)*		• Federal Operating Permit *(CAA Title V; ORS 468A.300-330)*	
Stratospheric Ozone	• Chlorofluorocarbon phase-out *(CAA Title VI)*		• Federal Operating Permit *(CAA Title V; ORS 468A.300-330)*	• Chlorofluorocarbon, Halon and Aerosol Control *(ORS 468A.625-645)*
Climate Change	• Energy Star/voluntary programs			• Oregon Office of Energy • STAPPA/ALAPCO Harmonizing Air Quality and Climate Protection

AIR QUALITY PROGRAM: SUBPROGRAM OVERVIEW

		Local Discretion			Pollutant Addressed		
Subprograms	**Source Type**	**Low**	**High**	**Ozone**	**Particulate Matter**	**Carbon Monoxide**	**Air Toxics**
ACDP	Point		✔	✔	✔	✔	✔
Federal Operating Permit	Point	✔		✔	✔	✔	✔
Plant Site Emission Limits (PSEL)	Point		✔	✔	✔	✔	
Major Source New Source Review	Point	✔		✔	✔	✔	
New Source Performance Standards	Point	✔		✔	✔	✔	
National Emission Standards for Hazardous Air Pollutants	Point	✔					✔
Reasonably Available Control Technology	Point	✔		✔	✔	✔	
Typically Achievable Control Technology	Point		✔	✔	✔	✔	
Operating and Maintenance Requirements	Point		✔	✔	✔	✔	
Boiler and Incinerator Standards	Point		✔	✔	✔	✔	
Standards for Specific Industries	Point		✔	✔	✔	✔	
Oxygenated Fuel	Mobile	✔				✔	
Employee Commute Options	Mobile		✔	✔			
Voluntary Parking Ratio	Mobile		✔	✔			
Vehicle Inspection Program	Mobile		✔	✔		✔	
Stage II Vapor Recovery	Area		✔	✔			
Consumer Products	Area		✔	✔			
Architectural Coatings	Area		✔	✔			
Field Burning	Area		✔		✔		
Open Burning	Area		✔		✔		
Woodstove Curtailment	Area		✔		✔		
Woodstove Certification	Area		✔		✔		

State of Oregon

Department of Environmental Quality Memorandum

Date: February 14, 2002

To: Environmental Quality Commission

From: Mike Llewelyn, Water Quality Administrator

Subject: Presentation of the Water Quality Program to the Environmental Quality Commission; March 7, 2002 EQC/DEQ Summit

DEQ's Water Quality Program administers several "subprograms" that are directed either by the Federal Clean Water Act or State Statutes.

This presentation will provide a general overview of the federal Clean Water Act which will focus on the major policy drivers within the act that influence the day to day operations of the Water Quality Program.

These policy drivers include:

- The establishment of water quality standards including how standards are developed and adopted, the concept of "antidegradation" and the "Use Attainability Analysis" process
- The wastewater management components of the act including National Pollution Discharge Elimination System (NPDES) permits, technology based effluent limits, and water quality based effluent limits
- The development of Total Maximum Daily Loads (TMDLs) and the "303d list"
- The implementation of nonpoint source management programs under Section 319 of the Act

After a review of these basic components of the Clean Water Act, I will briefly describe programs that DEQ administers under state law. These programs include the Groundwater Management Act and the Onsite Sewage Disposal Program. I will also briefly discuss two other programs that DEQ administers that are driven by the Federal Safe Drinking Water Act including the Underground Injection Control Program and the Source Water Protection Program.

I will conclude with a brief summary of the major policy issues facing the Water Quality Program that will or may have EQC involvement in the next year. These issues include:

- The adoption of revised or new water quality standards for surface water
- The management of the wastewater permit program in a watershed context
- Water Quality "trading"
- "Wet weather issues" facing municipalities including Combined Sewer Overflow, Sanitary Sewer Overflows, Stormwater management and the Endangered Species Act impact on stormwater management.

Please contact me at (503) 229-5324 if you would like to discuss these issues before our meeting.

State of Oregon

Department of Environmental Quality Memorandum

Date: February 14, 2002

To: Environmental Quality Commission

From: Lauri Aunan, Government Relations Manager

Subject: Potential Legislative Agenda for 2003
March 7, 2002 EQC/DEQ Summit

Purpose of Item

From 2:30 to 4:30 p.m., we will discuss potential DEQ budget and legislative concept proposals. The Director will open with a review of DEQ's Strategic Directions and I will present an overview of ideas DEQ is considering for the 2003 Legislative Session. We are currently developing budget and legislative concept ideas, and a list of these will be provided to Commissioners at the meeting.

Timeline

April 15: Deadline to submit legislative concepts to the Department of Administrative Services (DAS) for review

June 30: Agency Request budget submitted to DAS for audit

Sept. 1: Final DEQ Agency Request budget submitted to DAS

Nov/Dec: Governor announces decisions on agency budget requests; agencies can appeal to Governor; Governor submits Governor's Recommended Budget

Dec. 15: Deadline for Governor to file agency legislative concepts that have been approved by DAS and Governor

Jan. 2003 Legislative Session begins

Jan/Feb 2003: New Governor can submit new or revised Governor's Recommended Budget

Questions for EQC

- How do you want to be involved in development of DEQ's budget request and legislative concepts?
- What information would be most helpful for your understanding of DEQ's budget request?

If you have questions or would like to discuss this before our March 7 meeting, please contact me at (503) 229-5327.

Approved___
Approved with Corrections__

Minutes are not final until approved by the Commission.

Environmental Quality Commission
Minutes of the Three Hundredth Meeting

January 24-25, 2002
Regular Meeting[1]

The following Environmental Quality Commission members were present for the regular meeting, held at the World Trade Center, Plaza Conference Room, 121 S.W. Salmon Street, Portland, Oregon.

Melinda Eden, Chair
Tony Van Vliet, Vice Chair
Harvey Bennett, Member
Deirdre Malarkey, Member
Mark Reeve, Member

Also present were Larry Knudsen, Oregon Department of Justice (DOJ), Stephanie Hallock, Department of Environmental Quality (DEQ) Director, and DEQ staff.

Thursday, January 24, 2002

Prior to beginning the regular meeting, the Commission toured the DEQ and Public Health Laboratories on the Portland State University campus in downtown Portland.

Chair Eden called the meeting to order at approximately 2:00 p.m. Agenda items were taken in the following order.

A. Contested Case: Case No. WPM/SP-WR-00-009 regarding Ronald C. La Franchi

Larry Knudsen, Assistant Attorney General, introduced the case and explained the Department's appeal of a proposed order, dated July 30, 2001, that assessed Ronald C. La Franchi a $6,000 civil penalty for discharging wastes to waters of the state without a permit. Mr. Knudsen summarized the findings of fact made by the Hearing Officer and asked Commissioners to declare any ex parte contacts or conflicts of interest regarding the case. All Commissioners declared they had no ex parte contacts or conflicts of interest. Anne Price, DEQ Manager of the Office of Compliance and Enforcement, Jeff Bachman, Environmental Law Specialist, and Lynne Perry, Department of Justice, summarized arguments on behalf of the Department. Frederick J. Carleton[2] summarized arguments on behalf of Mr. La Franchi.

The primary legal issue before the Commission was whether the Hearing Officer correctly interpreted and applied the penalty formula and R-factor found in Oregon Administrative Rule 340-012-0045. The Commission discussed alternatives for resolving the case and concluded:
1. The discharge of gasoline into Knowles Creek was caused by Mr. La Franchi's negligence.
2. The Department's method of calculating the civil penalty was correct.

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[1] Staff reports and written material submitted at the meeting are made part of the record and available from DEQ, Office of the Director, 811 SW Sixth Avenue, Portland, Oregon 97204; phone: (503) 229-5990.
[2] Mr. Carleton participated in the meeting by conference call from Bandon, Oregon.

3. The $6,000 civil penalty assessed to Mr. La Franchi was correct.

Commissioner Reeve moved the Commission grant the Department's exception to the proposed order, affirm the $6,000 civil penalty, and uphold the proposed order in all other respects. Commissioner Malarkey seconded the motion and it passed with five "yes" votes. The Commission asked Mr. Knudsen to prepare the order for the Director's signature on the Commission's behalf.

B. Informational Item: Improvements in the Office of Compliance and Enforcement

Anne Price, DEQ Manager of the Office of Compliance and Enforcement, summarized changes in DEQ's compliance and enforcement work and gave an overview of ongoing and upcoming improvements. The Commission discussed process improvements plans and gave suggestions for reviewing and revising enforcement rules. Commissioners asked Ms. Price to give an update on the status of the enforcement rule review later in 2002.

Chair Eden adjourned the meeting for the day at approximately 4:30 p.m.

Friday, January 25, 2002

The Commission held an executive session at 8:00 a.m. on Friday, January 25, to consult with counsel concerning legal rights and duties with regard to current and potential litigation involving the Department. Executive session was held pursuant to ORS 192.660(1)(h).

At approximately 8:30 a.m., Chair Eden called the regular meeting to order and agenda items were taken in the following order.

C. Approval of Minutes

Commissioner Van Vliet moved the Commission approve draft minutes of the December 6-7, 2001, EQC meeting. Commissioner Malarkey seconded the motion and it passed with five "yes" votes.

D. Rule Adoption: Amendment and Clarification of Asbestos Rules

Andy Ginsburg, DEQ Air Quality Administrator, described the need for changes to asbestos rules and introduced David Wall and Audrey O'Brien, Air Quality staff, to present proposed rule amendments. Mr. Wall described problems that can result from improper asbestos handling and recommended the Commission amend rules to provide greater protection to public health and the environment, make the rules easier to understand, and improve DEQ's enforcement ability. The Commission discussed the asbestos regulation with Mr. Ginsburg and Director Hallock, and gave suggestions for informing homeowners and building contractors of rule changes. Commissioner Bennett moved the Commission adopt the proposed rules. Commissioner Van Vliet seconded the motion and it passed with five "yes" votes.

E. Rule Adoption: Water Quality NPDES and WPCF Permit Fee Increase

Mike Llewelyn, DEQ Water Quality Administrator, explained the need for a fee increase in the Wastewater Permitting Program to continue current service levels, as approved by the 2001 Legislature. Mike Kortenhoff and Ranei Nomura, Water Quality staff, described a proposed twenty percent, across-the-board increase in National Pollutant Discharge Elimination System (NPDES) and Water Pollution Control Facility (WPCF) permit fees. Commissioners discussed the proposed fee increase and funding issues in the wastewater permitting program with Mr. Llewelyn and Director Hallock. Commissioner Reeve moved the Commission adopt the proposed rules. Commissioner Malarkey seconded the motion and it passed with five "yes" votes.

G. Action Item: Consider Department Plan for Methane Regulation

Alan Kiphut, DEQ Land Quality Manager, summarized past and current actions of the Commission and Department to address methane regulation at unpermitted landfills. In August 2001, a citizen association

called CLEAN petitioned the Commission for temporary and permanent rulemaking to add methane, under certain conditions, to the list of hazardous substances subject to the state's environmental cleanup rules. In September 2001, the Commission denied the petition for temporary rulemaking and directed the Department to work with stakeholders on permanent rules to address methane issues at unpermitted landfills. In November 2001, CLEAN filed a second petition with the Commission seeking the adoption of temporary rules relating to methane regulation. The Commission denied this petition in December 2001, but agreed that the Department's inability to regulate methane gas at unpermitted landfills was a significant concern. The Commission asked the Department to evaluate whether a temporary rule that effectively addressed methane issues would serve the public interest.

At this meeting, Mr. Kiphut explained the Department's evaluation of this issue and recommended the Commission adopt a temporary rule to designate methane as a hazardous substance under certain conditions to enable methane regulation at unpermitted landfills. Commissioners discussed the recommendation and Department plans for developing a permanent solution for this issue. Commissioner Bennett moved the Commission adopt the temporary rule and the required statement of need and rule justification. Commissioner Van Vliet seconded the motion and it passed with five "yes" votes.

F. Director's Dialogue

Director Hallock and Commissioners discussed a number of current issues and recent events, including status of the state budget, efforts to stimulate the economy and streamline regulations, and various ongoing agency initiatives.

Public Forum

At approximately 11:30 a.m., Chair Eden asked whether anyone wished to provide public comment. No public comment was provided. After breaking for lunch, Chair Eden called the meeting back to order and granted a request from Michael Jones to give comments to the Commission on the St. John's Landfill.

H. Informational Item: Port Westward Energy Facilities

Bob Baumgartner, DEQ Water Quality Manager in Northwest Region, introduced the proposed Port Westward Energy Facilities project to Commissioners in preparation for future action. Mr. Baumgartner explained that the project would create two natural gas fired power plants and one ethanol production plant on land owned by the Port of St. Helens adjacent to the Columbia River near Clatskanie. The Port proposed to act as the permittee for collection and discharge of wastewater from the new facilities to the Columbia River. Because this project would include a major new discharge to the river, Commission approval of the Department's antidegradation review would be required to issue the wastewater permit for the facilities. Mr. Baumgartner explained plans to update the Commission on the status of permit development prior to requesting Commission action on this project. Chair Eden invited Paul Langner, Marine Industrial Manager for the Port of St. Helens, to comment on the project and socioeconomic condition in Columbia County and surrounding areas. Commissioners thanked Mr. Baumgartner and Mr. Langner for their information.

I. Discussion Item: Development of Performance Appraisal Process for Director

The Commission reviewed a final draft proposal for evaluating the Director's performance, which was developed and discussed at many meetings in 2001. Commissioner Bennett moved the Commission adopt the purpose, process and performance measures for evaluation. Commissioner Van Vliet seconded the motion and it passed with five "yes" votes. Commissioners asked Mikell O'Mealy, Assistant to the Commission, to prepare a potential schedule for appraising the Director's performance in late 2002 for discussion at the March 7-8, 2002, meeting.

J. Commissioners' Reports

Commissioners Bennett reported that he will be absent from the March 7-8, 2002, EQC meeting.

Chair Eden adjourned the meeting at approximately 1:40 p.m.

State of Oregon
Department of Environmental Quality

Memorandum

Date: February 18, 2002

To: Environmental Quality Commission

From: Stephanie Hallock, Director

Subject: Agenda Item B, Action Item: Tax Credit Application Consideration
March 8, 2002 EQC Meeting

Proposed Action

Commission decision on DEQ's analysis and recommendations on Pollution Control Facilities, and Reclaimed Plastic Product Tax Credit applications. Attachment A summarizes all applications.

Key Issues

Container Recovery, Inc. submitted application number 5621 on August 27, 2001 for a facility the company completed constructing on August 27, 1999. The Commission postponed consideration of the application from the December 7, 2001 meeting pending Department of Justice advice to help determine if the application was filed within the required period under ORS 468.165(6). The Department of Justice memorandum to the Environmental Quality Commission is in Attachment C. The application is presented for approval under the Material Recovery section of Attachment B of the Staff Report.

There are no other key issues.

EQC Action Alternatives

Any application may be postponed to a future meeting if the Commission:

- Requires the Department or the applicant to provide additional information; or
- Makes a determination different from the Department's recommendation and that determination may have an adverse effect on the applicant.

Department Recommendation

The Department recommends the Commission **approve** certification of the facilities represented in Attachment B

Attachments

A. Summary & Recommendations
B. Approvals
C. Department of Justice Memorandum to Environmental Quality Commission

Available Upon Request

1. ORS 468.150 to 468.190 & OAR 340-016-0005 to 340-016-0080
2. ORS 468.451 to 468.491 & OAR 340-017-0010 to 340-017-0055

Approved:
Section:
Division:

Report Prepared By: Maggie Vandehey
Phone: 503-229-6878

Attachment A

Summary
&
Recommendations

Pollution Control Facilities Tax Credit Program
Air Pollution

App. #	Applicant	Claimed		Recommendation				EQC ACTION
		Facility Cost	Percent Allocable	Facility Cost	Percent Allocable	Maximum Tax Credit	Action	
	Air: Air Cleaning Devices							
5668	Road & Driveway Company	$654,648	100%	**$330,008**	100%	50%	Approve	
5734	Portland Bulk Terminals, LLC	$7,690,655	100%	**$7,308,501**	100%	50%	Approve	
5762	Seneca Sawmill Company	$142,222	100%	**$124,562**	100%	50%	Approve	
5809	Georgia-Pacific West, Inc.	$30,521	100%	$30,521	100%	50%	Approve	
5810	Georgia-Pacific West, Inc.	$44,988	100%	$44,988	100%	50%	Approve	
	Air: Alternatives to Open Field Burning							
5869	Ken W. Eichler	$100,000	100%	**$98,500**	100%	50%	Approve	
5979	Sandau Ent. Inc.	$103,179	100%	$103,179	100%	50%	Approve	
5980	David Briggs	$125,734	100%	$125,734	**71%**	50%	Approve	
5981	T & P Farms LLC	$11,200	100%	**$10,000**	100%	50%	Approve	

* Bold denotes a difference between the claimed and recommended Facility Cost or Percent Allocable.

Pollution Control Facilities Tax Credit Program
Material Recovery: Solid Waste

App. #	Applicant	Claimed		Recommendation			Action	EQC ACTION
		Facility Cost	Percent Allocable	Facility Cost	Percent Allocable	Maximum Tax Credit		
5621	Container Recovery, Inc.	$49,560	100%	$49,560	100%	50%	Approve	
5626	Clackamas Garbage Company, Inc.	$81,381	100%	**$77,025**	100%	50%	Approve	
5796	Smith Seed Services	$6,440	100%	$6,440	100%	50%	Approve	
5800	Premier West Bank	$242,737	100%	$242,737	100%	50%	Approve	
5801	Premier West Bank	$235,780	100%	$235,780	100%	50%	Approve	
5804	Willamette Industries, Inc	$49,990	100%	$49,990	100%	50%	Approve	
5807	Western Bank,	$220,671	100%	$220,671	100%	50%	Approve	
5818	Garbarino Disposal & Recycling	$9,739	100%	$9,739	100%	50%	Approve	
5819	Garbarino Disposal & Recycling	$4,204	100%	$4,204	100%	50%	Approve	
5820	Garbarino Disposal & Recycling	$1,250	100%	$1,250	100%	50%	Approve	
5821	Global Leasing, Inc.	$40,274	100%	$40,274	100%	50%	Approve	
5822	Global Leasing, Inc.	$40,382	100%	$40,382	100%	50%	Approve	
5823	Global Leasing, Inc.	$4,973	100%	$4,973	100%	50%	Approve	
5824	Global Leasing, Inc.	$46,553	100%	**$30,228**	100%	50%	Approve	
5830	Rockwood Solid Waste, Inc.	$109,838	100%	$109,838	100%	50%	Approve	
5913	Global Leasing, Inc.	$123,458	100%	$123,458	100%	50%	Approve	
5956	Cottage Grove Garbage Service Inc.	$39,100	100%	$39,100	100%	50%	Approve	

* Bold denotes a difference between the claimed and recommended Facility Cost or Percent Allocable.

Pollution Control Facilities Tax Credit Program
Nonpoint Source: Wood Chippers

App. #	Applicant	Claimed		Recommendation				EQC ACTION
		Facility Cost	Percent Allocable	Facility Cost	Percent Allocable	Maximum Tax Credit	Action	
5873	Allen R. Schoenfeld	$2,177	100%	$2,177	100%	50%	Approve	
5874	David A. Cook	$1,449	100%	$1,449	100%	50%	Approve	
5875	James A. Christensen	$1,199	100%	$1,199	100%	50%	Approve	
5876	Rodney J. Bardell	$2,248	100%	**$2,089**	100%	50%	Approve	
5877	Russ Burger	$596	100%	$596	100%	50%	Approve	
5879	Alan Mohr	$4,495	100%	$4,495	100%	50%	Approve	
5880	Gary Anderson	$2,400	100%	$2,400	100%	50%	Approve	
5881	Jack Heffington	$450	100%	$450	100%	50%	Approve	
5882	Jacob Bergquist	$22,200	100%	$22,200	100%	50%	Approve	
5883	Lawrence Martin	$2,700	100%	$2,700	100%	50%	Approve	
5884	Vaughn Slavin	$892	100%	$892	100%	50%	Approve	
5891	Michael Hill	$596	100%	$596	100%	50%	Approve	
5892	Wayne Van Dyke	$2,214	100%	$2,214	100%	50%	Approve	
5895	Richard Rambo	$2,252	100%	$2,252	100%	50%	Approve	
5896	Thomas & Susan Petterson	$918	100%	$918	100%	50%	Approve	
5899	Anne Hernandez	$1,700	100%	$1,700	100%	50%	Approve	
5900	Dale Shostrom	$1,498	100%	$1,498	100%	50%	Approve	
5901	Donald Shields	$2,209	100%	**$2,416**	100%	50%	Approve	
5902	Gary McAlister	$2,299	100%	$2,299	100%	50%	Approve	
5903	James Kunst	$899	100%	$899	100%	50%	Approve	
5904	Jeff Graff	$9,600	100%	$9,600	100%	50%	Approve	
5905	John Walsh	$4,500	100%	$4,500	100%	50%	Approve	
5906	Jon Peasley	$5,000	100%	$5,000	100%	50%	Approve	
5907	Lund Diversified Inc.	$10,444	100%	$10,444	100%	50%	Approve	
5908	Paul Duden	$1,400	100%	$1,400	100%	50%	Approve	
5909	Richard Thompson	$562	100%	$562	100%	50%	Approve	
5910	Richard O'Brien	$2,800	100%	$2,800	100%	50%	Approve	
5911	Timothy Moore	$2,099	100%	$2,099	100%	50%	Approve	
5914	Tom & Carol Barnes	$579	100%	$579	100%	50%	Approve	

* Bold denotes a difference between the claimed and recommended Facility Cost or Percent Allocable.

NPS: Wood Chippers continued

App. #	Applicant	Claimed		Recommendation				EQC ACTION
		Facility Cost	Percent Allocable	Facility Cost	Percent Allocable	Maximum Tax Credit	Action	
5917	John & Robin Hammond	$1,500	100%	$1,500	100%	50%	Approve	
5918	Paul A. Nys	$4,641	100%	$4,641	100%	50%	Approve	
5919	Steve Ramsey	$999	100%	$999	100%	50%	Approve	
5920	Dave Dunlap	$1,700	100%	$1,700	100%	50%	Approve	
5921	Altamira Vijan	$1,435	100%	$1,435	100%	50%	Approve	
5925	Charles & Barbara Cookson	$1,631	100%	$1,631	100%	50%	Approve	
5926	Clarence Wangle	$13,000	100%	$13,000	100%	50%	Approve	
5927	Douglas Brown	$450	100%	$450	100%	50%	Approve	
5928	Glenn Woods/Mitch Gibson	$1,399	100%	$1,399	100%	50%	Approve	
5929	J-Cad Equipment Leasing, LLC.	$21,500	100%	$21,500	100%	50%	Approve	
5930	Richard Compton	$1,499	100%	$1,499	100%	50%	Approve	
5931	Spectrum Industries, Inc.	$21,465	100%	$21,465	100%	50%	Approve	
5932	West Coast Tree Care Inc.	$17,326	100%	$17,326	100%	50%	Approve	
5933	John & Carol Singleton	$580	100%	$580	100%	50%	Approve	
5934	George Anzinger	$5,595	100%	$5,595	100%	50%	Approve	
5935	John C. Dower	$719	100%	$719	100%	50%	Approve	
5936	Mike Bartlett	$14,500	100%	$14,500	100%	50%	Approve	
5937	Alsea Bay Power Products, Inc.	$9,839	100%	**$9,615**	100%	50%	Approve	
5938	Ben Watts Logging	$9,700	100%	$9,700	100%	50%	Approve	
5939	Bruce Lee Casey	$1,550	100%	$1,550	100%	50%	Approve	
5940	Craig M. Eucken	$4,895	100%	$4,895	100%	50%	Approve	
5941	D. Lee Eisner	$2,436	100%	$2,436	100%	50%	Approve	
5943	H. Fred Mickelson	$2,227	100%	$2,227	100%	50%	Approve	
5944	Herman Jackson Bryant	$7,900	100%	$7,900	100%	50%	Approve	
5945	John A. Wagoner	$1,500	100%	$1,500	100%	50%	Approve	
5946	John Clymer	$1,823	100%	$1,823	100%	50%	Approve	
5947	Kathy Larson	$580	100%	$580	100%	50%	Approve	
5962	Leroy Kuntzmann	$5,800	100%	**$4,500**	100%	50%	Approve	
5963	W.C. Watt	$567	100%	$567	100%	50%	Approve	
5964	Michael R. Joyce	$630	100%	$630	100%	50%	Approve	

* Bold denotes a difference between the claimed and recommended Facility Cost or Percent Allocable.

NPS: Wood Chippers continued

App. #	Applicant	Claimed		Recommendation				EQC ACTION
		Facility Cost	Percent Allocable	Facility Cost	Percent Allocable	Maximum Tax Credit	Action	
5965	Richard & Shirley Kemper	$2,250	100%	$2,250	100%	50%	Approve	
5966	Scott Thibert	$4,000	100%	$4,000	100%	50%	Approve	
5968	Robert W. Hammond	$900	100%	$900	100%	50%	Approve	
5969	Daniel Snyder	$890	100%	$890	100%	50%	Approve	
5970	Don & Renee Blom	$2,995	100%	$2,995	100%	50%	Approve	
5971	Sean Hodgson	$10,000	100%	$10,000	100%	50%	Approve	
5972	Gary Wells	$2,376	100%	$2,376	100%	50%	Approve	
5973	Maria Paola	$900	100%	$900	100%	50%	Approve	
5975	John Crisan	$630	100%	$630	100%	50%	Approve	
5976	Patricia & Richard Harper	$630	100%	$630	100%	50%	Approve	
5977	Bret Q. Paris	$810	100%	$810	100%	50%	Approve	
5978	Bruce Allen Ziegler	$13,615	100%	$13,615	100%	50%	Approve	
5982	Carl Eugene Jennings	$630	100%	$630	100%	50%	Approve	
5983	Denise & Joe Dwan	$1,399	100%	$1,399	100%	50%	Approve	
5984	Dick Aften	$899	100%	$899	100%	50%	Approve	
5985	Oliver J. Roman	$595	100%	$595	100%	50%	Approve	
5986	Paul Schroeder,MD	$1,499	100%	$1,499	100%	50%	Approve	
5987	Stephen J. Peacock	$16,636	100%	$16,636	100%	50%	Approve	
5988	Charles H. Seagraves Jr.	$2,250	100%	$2,250	100%	50%	Approve	
5989	Eric Martin	$1,399	100%	$1,399	100%	50%	Approve	
5990	Geoff J. Dawson	$1,580	100%	$1,580	100%	50%	Approve	
5991	Glenn W. Betts	$1,499	100%	$1,499	100%	50%	Approve	
5992	James Nolan	$567	100%	$567	100%	50%	Approve	
5993	James W. Prater	$1,850	100%	$1,850	100%	50%	Approve	
5994	Kim Brumby	$899	100%	$899	100%	50%	Approve	
5995	Larry C. Hovland	$5,505	100%	$5,505	100%	50%	Approve	
5996	Lois D. Summers	$980	100%	$980	100%	50%	Approve	
5997	Michael W. Breiholz	$1,680	100%	$1,680	100%	50%	Approve	
5998	Nancy Bachmann	$749	100%	$749	100%	50%	Approve	
5999	Steffen V. Brocks	$659	100%	$659	100%	50%	Approve	
6000	Steven E. Poet	$750	100%	$750	100%	50%	Approve	

* Bold denotes a difference between the claimed and recommended Facility Cost or Percent Allocable.

NPS: Wood Chippers continued

App. #	Applicant	Claimed		Recommendation				EQC ACTION
		Facility Cost	Percent Allocable	Facility Cost	Percent Allocable	Maximum Tax Credit	Action	
6001	Whitetail Tree Farm, LLC.	$6,969	100%	**$6,900**	100%	50%	Approve	
6002	Barbara A. Rowe	$1,299	100%	$1,299	100%	50%	Approve	
6003	Emmett A. Bigby	$630	100%	$630	100%	50%	Approve	
6004	Eric & Elise Hamner	$630	100%	$630	100%	50%	Approve	
6005	John M. Waddill/ Susan P. Smith	$1,500	100%	$1,500	100%	50%	Approve	
6006	Michael Greenbaum	$677	100%	**$630**	100%	50%	Approve	
6007	Nicholas M. Mausen	$4,115	100%	$4,115	100%	50%	Approve	
6008	Norman E. Kaldahl	$4,500	100%	$4,500	100%	50%	Approve	
6009	Richard L. Smith	$15,000	100%	$15,000	100%	50%	Approve	
6010	Timothy Neal Mangin	$2,995	100%	$2,995	100%	50%	Approve	
6011	Anya N. Malbin	$4,500	100%	$4,500	100%	50%	Approve	
6012	Lawrence E. Varney	$1,555	100%	**$1,500**	100%	50%	Approve	
6013	Shelby A. Frazier	$4,400	100%	$4,400	100%	50%	Approve	
6014	Michael W. Jantzer	$1,249	100%	$1,249	100%	50%	Approve	
6016	Glen M. Andresen	$999	100%	$999	100%	50%	Approve	
6017	LBD Landscaping, LLC	$22,695	100%	$22,695	100%	50%	Approve	
6018	Leona Brooks Brown	$950	100%	$950	100%	50%	Approve	
6019	Frederick G. Kallien	$1,739	100%	$1,739	100%	50%	Approve	
6020	Arnold C. Jirkovsky	$4,500	100%	$4,500	100%	50%	Approve	
6021	Bob E. Lile	$596	100%	$596	100%	50%	Approve	
6022	Rucker Interprises, Inc.	$8,522	100%	$8,522	100%	50%	Approve	
6023	RMF TOO, LLC	$8,795	100%	$8,795	100%	50%	Approve	
6024	Wilma R. & Chalton A. Munyon	$450	100%	$450	100%	50%	Approve	
6025	Property Repair & Maintence, LLC	$650	100%	$650	100%	50%	Approve	
6027	Charles Potter	$2,434	100%	$2,434	100%	50%	Approve	
6028	David M. Grant	$4,695	100%	$4,695	100%	50%	Approve	
6030	Eldin Joel Vanestreek	$8,200	100%	$8,200	100%	50%	Approve	
6031	Cathy Bergen	$600	100%	$600	100%	50%	Approve	
6032	The Caddisfly Resort, LLC.	$1,700	100%	$1,700	100%	35%	Approve	
6033	Robert A. Stineman	$7,500	100%	$7,500	100%	50%	Approve	
6034	Arthur G. Outler	$2,550	100%	$2,550	100%	50%	Approve	
6039	Rich's Tree Service, INC.	$9,382	100%	$9,382	100%	50%	Approve	

* Bold denotes a difference between the claimed and recommended Facility Cost or Percent Allocable.

Pollution Control Facilities Tax Credit Program
Water Pollution Control Facilities

App. #	Applicant	Claimed		Recommendation				EQC ACTION
		Facility Cost	Percent Allocable	Facility Cost	Percent Allocable	Maximum Tax Credit	Action	
5599	Road & Driveway Company	$49,442	100%	**$47,438**	100%	50%	Approve	
5738	The Amalgamated Sugar Company	$2,194,647	100%	$2,194,647	100%	50%	Approve	
5783	Willamette Industries, Inc.	$123,933	100%	$123,933	100%	50%	Approve	
5802	Synthetech, Inc	$317,946	100%	$317,946	100%	50%	Approve	
5811	Georgia-Pacific West, Inc	$19,263	100%	$19,263	100%	50%	Approve	

* Bold denotes a difference between the claimed and recommended Facility Cost or Percent Allocable.

Reclaimed Plastic Tax Credit Program

App. #	Applicant	Claimed		Recommendation				
		Facility Cost	Percent Allocable	Facility Cost	Percent Allocable	Maximum Tax Credit	Action	EQC ACTION
5719	Dinihanian Manufacturing, Inc	$21,000	100%	$21,000	100%	50%	Approve	
5720	Dinihanian Manufacturing, Inc	$26,668	100%	$26,668	100%	50%	Approve	
5812	Denton Plastics Inc	$8,560	100%	$8,560	100%	50%	Approve	
5817	Denton Plastics, Inc	$12,000	100%	$12,000	100%	50%	Approve	
5871	Bowco Industries, Inc	$10,203	100%	$10,203	100%	50%	Approve	
5872	Bowco Industries, Inc.	$7,633	100%	$7,633	100%	50%	Approve	
5897	Bowco Industries	$26,340	100%	$26,340	100%	50%	Approve	
5948	Denton Plastics, Inc.	$18,354	100%	$18,354	100%	50%	Approve	
5949	Denton Plastics, Inc.	$26,312	100%	$26,312	100%	50%	Approve	
5950	Oregon Cherry Growers	$5,514	100%	$5,514	100%	50%	Approve	
5951	Oregon Cherry Growers	$5,594	100%	$5,594	100%	50%	Approve	
5952	WinCo Foods Inc.	$5,562	100%	$5,562	100%	50%	Approve	
5954	Ernst Manufacturing, Inc.	$171,000	100%	$171,000	100%	50%	Approve	
5955	Costco Wholesale	$4,995	100%	$4,995	100%	50%	Approve	
5958	Agri-Plas, Inc.	$6,405	100%	$6,405	100%	50%	Approve	
5959	Agri-Plas, Inc.	$1,729	100%	$1,729	100%	50%	Approve	
5960	Agri-Plas Inc.	$3,402	100%	$3,402	100%	50%	Approve	
5961	Denton Plastics, Inc.	$5,595	100%	$5,595	100%	50%	Approve	

* Bold denotes a difference between the claimed and recommended Facility Cost or Percent Allocable.

Attachment B
Approvals

The Department presents **171** applications for approval in this attachment. The Department considers that each application meets the eligibility requirements for certificate issuance according to the Pollution Control Facilities Tax Credit or the Reclaimed Plastic Product Tax Credit regulations. The individual Review Reports describe each project's eligibility for the tax credit, the cost associated with the project, and the percentage of that cost allocable to pollution control or reclaimed plastic. There are no applications presented for preliminary certification of a pollution control facility.

The Department recommends the Environmental Quality Commission (EQC) certify the facility cost on **15** of the reports for a different amount than the applicant claimed on the application. The Department also presents **one** report where the percentage allocable to pollution control is less than the applicant claimed on the application. These changes are identified in each Review Report under the Director's Recommendation, the Eligibility and the Facility Cost sections.

The Review Reports in this Approvals section are separated into the categories below. The pastel separator pages discuss program information unique to that category.

1. Pollution Control Facilities Tax Credit Program - **blue pages**
   - Air Pollution Control Facilities
   - Alternatives to Field Burning Facilities
   - Material Recovery Facilities
   - Nonpoint Source Pollution Control Facilities: Wood Chippers
   - Water Pollution Control Facilities
2. Reclaimed Plastic Tax Credit Program - **green page**

The statistics for all tax credit applications recommended for approval are shown below:

	Sum	Average	Minimum	Maximum
Claimed	$13,752,332	$80,423	$450	$7,690,655
Certified	$13,000,846	$76,028	$450	$7,308,501
GF	$6,481,937	$37,906	$225	$3,654,251

New Certification Component

A new certification component has been added to the Staff Report in response to 2001 legislation amending ORS 468.170(9). The amendment reads: "A certificate issued under this section shall state the applicable percentage of the certified cost of the facility, as determined under section 6 of this 2001 Act." The Department named this the "maximum tax credit" to prevent confusing this new certification component with the existing "percentage of the facility cost allocable to pollution control" component.

The wood chipper presented in application number 6032 was purchased (construction completed) after December 31, 2001; therefore, the Department recommends the maximum tax credit be certified for 35% in accordance with the 2001 amendment. The Department recommends the EQC approve all other applications presented in this Staff Report for the 50% maximum tax credit as provided in the 1999 Edition of the ORS 468.150 – .190.

Air Pollution Control Facilities

The Department recommends the Commission approve **5** air-cleaning installations for certification as pollution control facilities. The statistics for these approvals are:

	Sum	Average	Minimum	Maximum
Claimed	$8,563,034	$1,712,607	$30,521	$7,690,655
Certified	$7,838,580	$1,567,716	$30,521	$7,308,501
GF	$3,919,290	$783,858	$15,261	$3,654,251

A summary of the air pollution control facilities is on the next page followed by the individual reports for each facility in application number order.

Increase or Decrease in Cost

The recommended certified facility cost on **three** of the reports is less than the applicant requested on the application. The Department worked with each of these three applicants to accurately identify the eligible costs. Each report explains the reason for the reduction.

Eligibility

The air pollution control facilities in this section are eligible for the tax credit because they have a **principal purpose** of meeting a requirement of the federal Environmental Protection Agency, the Oregon Department of Environmental Quality, or a regional air pollution authority. The facilities' primary and most important purposes are to comply with requirements to prevent, reduce, control, or eliminate air contamination by use of air cleaning devices as defined in ORS 468A.005 prior to discharge to the outdoor atmosphere. Each facility has only one primary and most important purpose.

Eligible Air Pollution Control Facilities

App #	Applicant	Cost Claimed	Cost Certified	Cost +/-	%	Max. TC	GF Liability
5668	Road & Driveway Company	654,648	330,008	-324,640	100%	50%	165,004
5734	Portland Bulk Terminals, LLC	7,690,655	7,308,501	-382,154	100%	50%	3,654,251
5762	Seneca Sawmill Company	142,222	$124,562	-17,660	100%	50%	62,281
5809	Georgia-Pacific West, Inc.	30,521	30,521	0	100%	50%	15,261
5810	Georgia-Pacific West, Inc.	44,988	44,988	0	100%	50%	22,494

State of Oregon
Department of Environmental Quality

Director's Recommendation: **APPROVE - Reduced Cost**

Applicant	**Road & Driveway Co.**
Application No.	**5668**
Facility Cost	**$330,008**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**7 years**

Tax Credit Review Report

EQC 0302

Pollution Control Facility: Air
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **an S corporation**
Business: **road and driveway construction**

Taxpayer ID: **93-0495713**

The applicant's address is:

#2 AC Plant
PO Box 730
Newport, OR 97365

Facility Identification

The certificate will identify the facility as:

A CMI Roto-Aire Baghouse, model RA-38PTD-0211, and one drum of a CMI Triple Drum Mixer, model CMI-PTD000-300-131

The applicant is the owner of the facility located at:

Fisher Quarry
Immonen Road
Lincoln City, OR 97367

Technical Information

The applicant installed a new asphalt concrete paving plant. The plant is powered by a diesel generator and equipped with a baghouse, four aggregate hoppers, and three conveyors. The triple-drum mixer is able to produce 300 tons of hot asphalt mix per hour. The applicant produced crushed rock at the quarry prior to installation of the claimed facility.

The claimed facility consists of:

- CMI asphalt drum mixer, model CMI-PTD-300-131. The mixer includes: the feeder and feeder cover, burner and burner control, side inlet entry, fines return auger, knock-out box, blower silencer, cable trough and cover, motor, inspection door, and drum discharge sampler; and

- CMI Roto-Aire Baghouse, model RA-38PTD-0211. The baghouse includes: bags and cages, control panel, motion sensors for augers, cable trough, cover, dust return auger, inertial dust collector, ducts from collector to counter flow mixer, 150 horsepower exhaust fan with motor, and bleed air damper.

The counter-flow drum fires backward from the second chamber towards the first chamber into overlapping combustion zones. The heating chambers completely oxidize the gaseous compounds created during firing from the mixing zones. The emissions and fine particles are directed to the baghouse and the larger particles are recycled into the triple drum for reuse in the manufacture of the asphalt.

The baghouse captures emissions and fine particles from the cold mix in the first chamber of the mixer. It contains 504 round 14 oz. scrim-supported felt bags. The larger particles fall to the bottom of the baghouse where they are collected in a fine auger screw and returned to the third chamber of the drum mixer to be incorporated into the asphalt.

The asphalt plant is in compliance with permit conditions. Emissions are 0.01 grains per dry standard cubic foot (DSCF) at the baghouse and opacity is 0%. Opacity at the generator is 5-10%.

Eligibility

ORS 468.155 (1)(a)(B)	The **principal purpose** of the **new baghouse and a portion of the drum components** is to comply with DEQ requirements to **prevent** air pollution. ACDP 37-0321 imposes the requirement.
ORS 468.155 (1)(b)(A)	The **prevention** is accomplished by the elimination of air contaminants and the use of an air-cleaning device as defined in ORS 468A.005.
ORS 468.155 (1)(a)(B)	The primary and most important purpose of the majority of the **drum components** is to mix materials for the manufacture of asphalt. The primary and most important purpose of the **dust conveyors and duct system** is to convey materials used to manufacture asphalt. These components do not make a significant contribution to air pollution control.
ORS 468.155 (3)(e)	**Replacement:**. The claimed facility does not replace any previously certified facilities.
ORS 315.304 OAR 340-016-0008	The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Construction Started	**01/2000**
Construction Completed	**04/2000**
Placed into Operation	**04/2000**
Application Received	**09/24/2001**

Facility Cost

Claimed Cost	$654,648
Ineligible Cost: mixer components, dust conveyors, and duct system	-324,640
Eligible Cost	**$330,008**

A copy of one invoice substantiated 100% of the cost of the claimed facility. The manufacturer provided an allocated cost for the components that have the primary purpose of mixing asphalt. These components included augers, feeders, and knockout boxes.

Facility Cost Allocable to Pollution Control

The following factors were considered in determining the 100% percentage of the facility cost allocable to pollution control.

Factor	Applied to This Facility
ORS 468.190(1)(a) Salable or Usable Commodity	The recovered dust and sand is not a salable commodity. The applicant uses recovered dust and sand in the manufacture of the asphalt.
ORS 468.190(1)(b) Return on Investment (ROI)	The useful life of the facility used for the ROI consideration is 7 years. The claimed facility does not provide positive revenue.
ORS 468.190(1)(c) Alternative Methods	No alternative investigated.
ORS 468.190(1)(d) Savings or Increase in Costs	The applicant estimates the recovered dust and sand will save about $21,000 per year. The applicant estimates the annual operating costs will increase about $75,000.
ORS 468.190(1)(e) Other Relevant Factors	No other relevant factors.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders.
DEQ permits issued to the site:

ACDP, number 37-0321, issued 12/20/1999
NPDES 1200-A, number 110727, issued 11/02/1999

Other tax credits issued to **Road & Driveway Co.**:

App. #	Description of Facility	Certified Cost	% Allocable	Cert. #	Issue Date
174	A spiral tube air washer and a conversion unit on a raw material dryer to allow the use of gas instead of oil as a fuel.	$8,805.00	100	133	1/7/71
2212	Variable throat Venturi scrubber & accessories, scrubber water recirculation ponds, sound attenuation system & paving of yard & haul roads.	$137,691.00	100	2081	12/1/89

Reviewers: Lois Payne, SJO Consulting Engineers
Dennis Cartier, SJO Consulting Engineers
Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Director's
Recommendation: **APPROVE - Reduced Cost**

Applicant	**Portland Bulk Terminals**
Application No.	**5734**
Facility Cost	**$7,308,501**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**10 years**

Tax Credit Review Report

EQC 0302

Pollution Control Facility: Air
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **a Limited Liability Corp.**
Business: **bulk material handling**
Marine terminal
Taxpayer ID: **93-1197676**

The applicant's address is:

15550 N. Lombard – Terminal 5
Portland, OR 97203

Facility Identification

The applicant claimed:

Cyclone and Baghouse Dust Collection System

The applicant is the owner of the facility located at:

15550 N. Lombard – Terminal 5
Portland, OR 97203

Technical Information

The applicant transfers white and red potash from railcars to ships docked at Terminal 5 on the Willamette River. The potash is dumped from the railcar onto a conveyor belt and moved on conveyors through a series of transfer towers directly to a ship or to a storage building where it is held for later transfer to a ship.

The claimed facility includes seven primary dust collectors (cyclones) and nine secondary dust collectors (baghouses) installed to replace wet scrubbers at Terminal 5. The applicant included cyclone and baghouse foundations, structural steel supports, new ducts and pick-up hoods, belt conveyor modifications, turning baffles on conveyor loaders, cyclone insulation and heat tracing, replacement of primary and secondary belt cleaners, Noell reclaimer modifications, and control system modifications.

MAC/Protech Equipment Company is the manufactures of the following claimed equipment.

Item	Model	Size (ft^3 per minute)	Location
Cyclone 1A	H96	27,100	Railcar unloading area
Baghouse 1A	96MCF494-466	27,100	Railcar unloading area
Cyclone 1B	H96	27,100	Railcar unloading area
Baghouse 1B	96MCF494-466	27,100	Railcar unloading area
Cyclone 2	H54	10,000	Transfer Tower 5
Baghouse 2	96MCF255-172	10,000	Transfer Tower 5
Cyclone 3	HE39	5,000	Top of Storage Building
Baghouse 3	96MCF112-86	5,000	Top of Storage Building
Cyclone 4	H60	13,000	Transfer Tower 6
Baghouse 4	96MCF255-224	13,000	Transfer Tower 6
Cyclone 5	H54	11,000	Transfer Tower 3
Baghouse 5	96MCF255-189	11,000	Transfer Tower 3
Cyclone 6	H54	10,000	Transfer Tower 4
Baghouse 6	96MCF255-172	10,000	Transfer Tower 4
Baghouse 7A	96MCF361-323	19,250	Dock Ship Loader
Baghouse 7B	96MCF361-323	19,250	Dock Ship Loader

The stainless steel cyclones are the primary dust-collectors that remove approximately 95% of the emissions. The captured potash is dumped back to the product conveyor. The baghouses remove the remaining potash and are also constructed of stainless steel. The 8-foot long bags have a 6:1 air to cloth ratio. Potash particulate collected in the baghouses is deposited into containers for later transfer to the Hillsboro landfill. Approximately 366 metric tons of potash was disposed of in 2001.

The applicant claimed the new ducts and pick-up hoods located outside. They were an upgrade to the existing ducting for compatibility with the new system. The ducts and hoods prevent the wind from carrying airborne potash dust away from the existing duct and conveyor system. The belt conveyors were modified at the head and tail sections to match with the new pick-up hoods. The conveyor transition points were required to reduce the spills and eliminate the visible air borne particulate emissions. The Noell reclaimers are located inside the storage building and function to move the potash from the Storage Building to the product conveyor system. They were modified to prevent surges and to match the belt capacity of the new system.

The applicant used a wet scrubbing system to control dust emissions prior to installing the claimed facility. The system did not meet air permit requirements because it did not adequately capture fugitive emissions at transfer points and opacity was too high. The scrubber wastewater contained levels of total dissolved solids that exceeded the industrial wastewater discharge limits.

The applicant is now in compliance with their permits.

Eligibility

ORS 468.155 (1)(a)(A) The **principal purpose** of the **new installed cyclones, baghouse dust collectors and exterior ductwork and hoods** is to comply with a requirement imposed by DEQ to **control** air pollution.

ACDP 26-3071 requires the lowest practicable emission levels of air contaminants. Particulate emissions from any single air contaminant source shall not exceed 0.10 grains per standard cubic foot and fugitive dust emissions must be minimized.

ORS 468.155 (2)(d) **Conveyor belt cleaners** were installed to prevent red product from mixing with white product and for maintenance purposes. The conveyor cleaners do not make a significant contribution to the prevention, control, or reduction of air pollution, therefore, are an ineligible cost.

Insulation and heat tracing were installed to prevent condensation on the product collected in the cyclones. They make an insignificant contribution to the prevention, control, or reduction of air pollution, therefore are an ineligible cost.

OAR 340-016-0070(3)(m) **Start-up costs** are ineligible persuant to EQC rule.

ORS 468.155 (1)(b)(B) The **control and prevention** is accomplished by the use of cyclones, baghouses, exterior ducting and hoods that meet the definition in ORS 468A.005 of air-cleaning devices.

OAR 340-016-0060 (3)(k) The EQC did not issue a tax credit to the previously existing scrubbers; therefore, this is not a **replacement** facility.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Construction Started	**3/1/1999**
Construction Completed	**9/22/2000**
Facility Placed into Operation	**9/22/2000**
Application Received	**10/15/2001**

Facility Cost

Claimed Cost		$ 7,690,655
Ineligible Costs:		
Conveyor belt cleaners	$ 73,779	
Insulation & heat tracing	95,961	
Start-up	212,414	
Subtotal	$382,154	$ - 382,154
Eligible Cost		**$ 7,308,501**

Copies of purchase orders, invoices and checks substantiated the claimed facility cost.

Facility Cost Allocable to Pollution Control

The following factors were used to determine that **100%** of the facility cost allocable to pollution control.

Factor	Applied to This Facility
ORS 468.190(1)(a) Salable or Usable Commodity	No salable commodity. The baghouse dust is disposed of at the Hillsboro landfill.
ORS 468.190(1)(b) Return on Investment	The useful life of the facility used for the return on investment consideration is 10 years. No gross annual revenues were associated with this facility.
ORS 468.190(1)(c) Alternative Methods	No alternative methods were considered. The wet scrubber was not adequate to meet permit requirements.
ORS 468.190(1)(d) Savings or Increase in Costs	The annual operating costs increased $300,000.
ORS 468.190(1)(e) Other Relevant Factors	No other relevant factors.

Compliance and Other Tax Credits

The applicant states the facility is in compliance with Department rules and statutes and with EQC orders. The following permits have been issued to the site:

DEQ Stormwater NPDES #101377, issued 3/17/97
Air Contaminant Discharge Permit # 26-3071, issued 1/16/97.

The EQC has not issued any other certificates to this applicant; however, application number 5737 is in review.

Reviewers: Lois L. Payne, SJO Consulting Engineers
Dennis Cartier, SJO Consulting Engineers
Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Director's Recommendation: **APPROVE - Reduced Cost**

Applicant	**Seneca Sawmill Company**
Application No.	**5762**
Facility Cost	**$124,562**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**7 years**

Tax Credit Review Report

EQC 0302

Pollution Control Facility: Air
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **an S corporation**
Business: **manufacturer of dimension and stud lumber**
Taxpayer ID: **93-0474445**

The applicant's address is:

P.O.Box 851
Eugene, OR 97440

Facility Identification

The applicant claimed:

Western Pneumatics Baghouse Filter

The applicant is the owner of the facility located at:

90201 Hwy 99 North
Eugene, OR 97402

Technical Information

The claimed facility consists of a Western Pneumatics baghouse filter, Model 452; Twin City fans, Model 915 RBO/R and 445BC; fan motors; and associated exterior exhaust air duct. The baghouse is sized for 56,760 scfm using 542 bags that have an air-to-cloth ratio of 8 to1 and an efficiency rating of 99.99%.

The new baghouse replaces a cyclone that was incapable of removing all of the exhaust particulates causing excessive emissions into the air. The fine particulate is now captured in the baghouse instead of being released in the air.

Eligibility

ORS 468.155 (1)(a)(A) The **principal purpose** of this **new baghouse and connecting ducting** is to comply with the applicant's air permit to control air pollution. The primary and most important purpose of the **fire detection and suppression system** is to protect property and provide safety not pollution control

ORS 468.155 (1)(b)(B) The elimination of air contaminants is accomplished with the installed baghouse which meets the definition in ORS 468A.005 of an air cleaning device.

OAR 340-016-0060 (3)(k) **Replacement:** The new dust control system is not a replacement facility.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Construction Started	**9/1999**
Construction Completed	**12/1999**
Placed into Operation	**1/2000**
Application Received	**10/23/2001**

Facility Cost

Claimed Cost	$142,222
Ineligible Costs: Fire sensor and suppression system	-$17,660
Eligible Cost	**$124,562**

The facility cost was greater than $50,000 but less than $500,000. Invoices and canceled checks substantiated the cost of the facility.

Facility Cost Allocable to Pollution Control

The following factors were used to determine that **100%** of the facility cost allocable to pollution control.

Factor	Applied to This Facility
ORS 468.190(1)(a) Salable or Usable Commodity	No usable or salable commodity.
ORS 468.190(1)(b) Return on Investment (ROI)	The useful life of the facility used for the ROI consideration is 7 years. No gross annual revenues were associated with this facility.
ORS 468.190(1)(c) Alternative Methods	No alternative methods were considered.
ORS 468.190(1)(d) Savings or Increase in Costs	No savings or increase in costs was identified.
ORS 468.190(1)(e) Other Relevant Factors	No other relevant factors.

Compliance and Other Tax Credits

The applicant states the facility is in compliance with Department rules and statutes and with EQC orders. The following permits have been issued to the site:

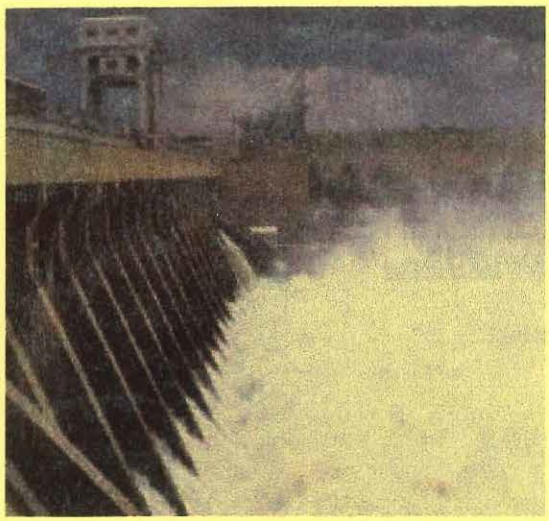
Notice of Intent to Construct No. NC-207459-A99, issued 11/8/99
LRAPA Permit Number 207459, issued June 19, 1998

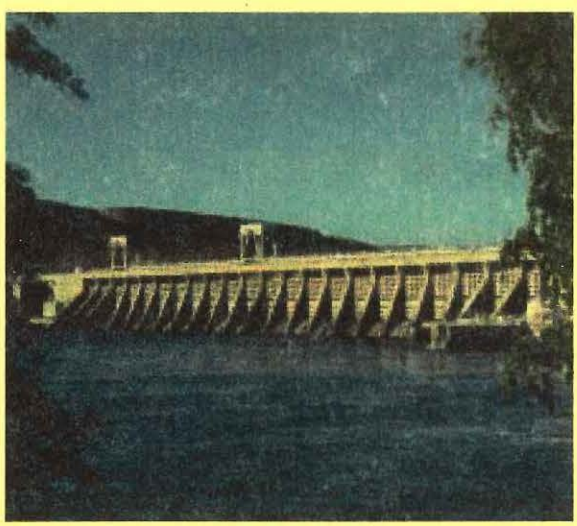
No other tax credits have been issued to the applicant.

Reviewer: Lois Payne, SJO Consulting Engineers
Dennis Cartier, Associate, SJO Consulting Engineers
Maggie Vandehey, DEQ

Review Draft – 2-13-02

Total Maximum Daily Load (TMDL) for Lower Columbia River Total Dissolved Gas





February 2002

Prepared jointly by the
Oregon Department of Environmental Quality
and the
Washington State Department of Ecology

Washington State Department of Ecology

State of Oregon Department of Environmental Quality

Publication Information

Oregon

This report is available on the Oregon Department of Environmental Quality Web Site at *http://www.deq.state.or.us/wq/TMDLs/TMDLs.htm*

For additional printed copies or a compact disk of this publication, contact:

Russell Harding
Oregon Department of Environmental Quality
811 SW Sixth Avenue
Portland, OR 97204

E-mail: harding.russell@deq.state.or.us
Phone: (503) 229-5284

Washington

This report is available on the Washington State Department of Ecology home page on the World Wide Web at *http://www.ecy.wa.gov/biblio/0203004.html*

For additional printed copies of this publication, contact:

Jean Witt
Department of Ecology Publications Distributions Office
PO Box 47600
Olympia, WA 98504-7600

E-mail: ecypub@ecy.wa.gov
Phone: (360) 407-7472

Refer to Publication Number 02-03-004.

Notice of Public Hearing & Comment Period

Lower Columbia Draft TMDL for Total Dissolved Gas & Draft Implementation Plan

The Oregon Department of Environmental Quality (DEQ) and the Washington Department of Ecology are proposing limits to total dissolved gas to protect water quality on the Lower Columbia River.

Notice issued: February 18, 2002

Hearing date(s):

Monday, March 18, 2002
Washington Dept. of Ecology Field Office
1315 W. 4th Ave. (off Olympia St.)
Kennewick, WA

3:30 p.m. Question and Answer Session
4:00 p.m. Public Hearing

Tuesday, March 19, 2002
Tamastslikt Cultural Institute
72789 Highway 331
Pendleton, OR

1:30 p.m. Question and Answer Session
2:00 p.m. Public Hearing

Friday, March 22, 2002
Oregon State Office Bldg.
800 NE Oregon St.
Portland, OR

8:30 a.m. Question and Answer Session
9:00 a.m. Public Hearing

Friday, March 22, 2002
Washington Dept. of Fish & Wildlife
2108 Grand Blvd & 4th Plain
Vancouver, WA

1:00 p.m. Question and Answer Session
1:30 p.m. Public Hearing

Written comments due:
Written comments on the proposed Total Maximum Daily Load and/or the Implementation Plan must be received by 5 p.m. April 5, 2002.

Where can I send comments and get more information?
DEQ and Ecology accept comments by mail, fax and email. Send comments to:

Russell Harding
Oregon DEQ
811 SW 6th Avenue
Portland, OR 97204
E-mail: harding.russell@deq.state.or.us
Phone: (503) 229-5284
Fax: (503) 229-5408

Paul Pickett
Washington Dept. of Ecology
PO Box 47600
Olympia, WA 98504-7600
E-mail: Ppic461@ecy.wa.gov
Phone: (360) 407- 6882

(If there is a delay between servers, e-mails may not be received before the deadline.)

What is proposed?
DEQ and Ecology propose to submit the Lower Columbia River Total Dissolved Gas TMDL and Implementation Plan to the U.S. Environmental Protection Agency (EPA) for approval as a total maximum daily load (TMDL). EPA approval would remove water quality limited streams covered by the TMDL from DEQ's and Ecology's "303d" lists of impaired waterbodies.

The Lower Columbia River Total Dissolved Gas TMDL is based on the Clean Water Act, the Dissolved Gas Abatement Study conducted by the U.S. Army Corps of Engineers and the National Marine Fisheries Service's 2000 Biological Opinion for the Federal Columbia River Power System. This public hearing addresses only the TMDL and Implementation Plan that are being submitted to EPA.
The purpose of this notice is to invite you to make oral comments on this proposed TMDL at a hearing. You also may comment in writing.

Who is affected?
Users of the Columbia River. People interested in water quality and fisheries, and people interested in DEQ's and Ecology's implementation of Section 303(d) of the federal Clean Water Act.

DEQ

State of Oregon
Department of Environmental Quality

811 SW 6th Avenue
Portland, OR 97204
Phone: (503) 229-5284
(800) 452-4011
Fax: (503) 229-5408
Contact:
Russell Harding
www.deq.state.or.us

WASHINGTON STATE DEPARTMENT OF ECOLOGY

Washington State Department of Ecology
PO Box 47600
Olympia, WA 98504
Phone: (360) 407-6882
Fax: (360) 407-
Contact:
Paul Pickett
www.ecy.wa.gov

Why is this action necessary?

Section 303(d) of the federal Clean Water Act requires development of TMDLs for waterbodies included on states' "303(d)" list.

Where can I review the documents?

The TMDL/Implementation Plan is available for examination and copying at DEQ's Headquarters Office at Oregon DEQ, Water Quality Division, 811 SW 6th Avenue, Portland, OR 97204.

Documents are also available on DEQ's web site at:

http://www.deq.state.or.us.

Click on "water quality" then on "water quality program public notices".

The TMDL/Implementation Plan is available for examination and copying at Ecology's Headquarters Office at 300 Desmond Drive SE, Lacey, WA 98503.

Documents are also available at:

http://www.epa.gov/r10earth/columbiamainstemtmdl.htm

While not required, scheduling an appointment will ensure documents are readily accessible during your visit.

To schedule an appointment in Portland contact Russell Harding at (503) 229-5284.

For an appointment in Lacey, contact Paul Pickett at (360) 407-6882.

To request copies of the TMDL and Implementation Plan call Russell Harding or Paul Pickett at the above phone numbers.

Questions on the proposed TMDL and Implementation Plan should be addressed to Russell Harding or Paul Pickett at the above phone number.

Additional document locations

Copies of the TMDL/Implementation Plan are also available at:

DEQ - Pendleton Office
700 SE Emigrant, Suite 330
Pendleton, OR 97801

DEQ - The Dalles Office
400 East Scenic Drive, #307
The Dalles, OR 97058

DEQ - Northwest Region Office
2020 SW 4th Ave., #400
Portland, OR 97201

DEQ - North Coast Branch Office
65 N. Highway 101, Suite G
Warrenton, OR 97146

DEQ - Hermiston Office
256 E. Hurlburt, Suite 105
Hermiston, OR 97838

What happens next?

DEQ and Ecology will review and consider all comments received during the public comment period. Following this review, the TMDL and Implementation Plan may be sent to U.S. EPA for approval as a TMDL or may be modified prior to submission. You will be notified of DEQ's and Ecology's final decision if you present either oral or written comments during the comment period. If you do not comment but wish to receive notification of DEQ's and Ecology's final decision, please call or write DEQ or Ecology at the above phone numbers/addresses.

Accommodation of disabilities

DEQ and Ecology are committed to accommodating people with disabilities. Please notify DEQ or Ecology of any special physical or language accommodations you may need as far in advance of the hearing date as possible. To make these arrangements, contact Russell Harding at (503) 229-5284 or Paul Pickett at (360) 407-6882. People with hearing impairments can call DEQ's TTY at 503-229-6993 or Ecology's TTD or at Ecology's TDD number (360) 407-6006.

Accessibility information

This publication is available in alternate format (e.g., large print, Braille) upon request. Please contact DEQ Public Affairs at 503-229-5317 or toll free within Oregon 1-800-452-4011 to request an alternate format. People with a hearing impairment can receive help by calling DEQ's TTY at 503-229-6993.

WASHINGTON STATE DEPARTMENT OF ECOLOGY

Meeting Notice

Public hearings planned on the Lower Columbia Total Dissolved Gas TMDL

The Washington Department of Ecology (Ecology) and the Oregon Department of Environmental Quality (DEQ) will host four public hearings to receive comment on the proposed Lower Columbia River Total Maximum Daily Load (TMDL) and implementation plan for reducing total dissolved gas.

Before the formal public hearing, there will be a brief presentation to learn about the proposed TMDL and implementation plan, followed by an informative question and answer session. Hearings will be in Oregon and Washington at the following locations:

Monday, March 18, 2002
3:30 – 6:00 p.m.
1315 W. 4th Ave. /off Olympia St.
Ecology Field Office, Kennewick, WA

Tuesday, March 19, 2002
1:30 – 4 p.m.
Tamastslikt Cultural Institute
72789 Highway 331
Pendleton, OR

Friday, March 22, 2002
8:30 – 11:00 a.m.
State Office Bldg., rm. 120C
800 NE Oregon St.
Portland, OR

Friday, March 22, 2002
1:00 – 3:30 p.m.
2108 Grand Blvd./ Fourth Plain
WA Depts. Of Fish & Wildlife
and Ecology
Vancouver, WA

Background

The Lower Columbia River Total Dissolved Gas TMDL is based on the federal Clean Water Act, the Dissolved Gas Abatement Study conducted by the U.S. Army Corps of Engineers, and the National Marine Fisheries Service's 2000 Biological Opinion for the Federal Columbia River Power System. The TMDL/Implementation plan identifies strategies for reducing Total Dissolved Gas in the Lower Columbia River – from the confluence with the Snake River to the mouth at the Pacific Ocean. *This public hearing addresses only the TMDL and Implementation Plan that are being submitted to U.S. Environmental Protection Agency (EPA).*

Federal law requires cleanup of polluted waters

Federal law requires states to identify sources of pollution in waters that fall short of water quality standards, and to determine how much pollution needs to be reduced for the water body to remain healthy. Using the source and allocation information, Ecology and local interests develop strategies for achieving the necessary reduction or elimination of pollution. The result is a water cleanup plan or Total Maximum Daily Load (TMDL).

Public Comment Period:
DEQ and Ecology will review and consider all comments received during the public comment period. Following this review, the TMDL and Implementation Plan may be sent to EPA for approval as a TMDL or may be modified prior to submission. You will be notified of DEQ's and Ecology's final decision if you present either oral or written comments during the comment period. If you do not comment but wish to receive notification of DEQ's and Ecology's final decision, please call or write DEQ or Ecology (see information below).

The public comment period on the plan is February 18 through April 5, 2002.
Written comments on the proposed Total Maximum Daily Load and/or Implementation Plan must be received by **5 p.m. on April 5, 2002**. Written comments should be mailed to:

Russell Harding
Oregon Department of Environmental Quality
811 SW Sixth Avenue
Portland, OR 97204
harding.russell@deq.state.or.us
(503) 229-5284

OR

Paul Pickett
Washington Department of Ecology
PO Box 47600
Olympia, WA 98504-7600
Ppic461@ecy.wa.gov
(360) 407-6882

The TMDL/Implementation Plan is available for examination and copying at Oregon DEQ Headquarters, Water Quality Division, 811 S.W. 6th Avenue, Portland, OR 97204. Documents are also available on DEQ's web site at http://www.deq.state.or.us. Click on "water quality" then on "water quality program public notices".

The TMDL/Implementation Plan is also available for examination and copying at Ecology's Headquarters Office at 300 Desmond Drive SE, Lacey, WA 98503 or at Ecology Field Offices in Kennewick and Vancouver (see above hearing locations). Documents are also available on Ecology's web site at: http://www.ecy.wa.gov/biblio/0203004.html. Or at http://www.epa.gov/r10earth/columbiamainstemtmdl.htm.

For more information call Paul Pickett or Russell Harding at the above phone numbers. For this information in alternative formats or for other special accommodations, please call Ecology's Ann Butler at (360) 407-6480 or (360) 407-6006 (TDD) OR DEQ Public Affairs at 503-229-5766 or TTY at 503-229-6993 or toll free within Oregon 1-800-452-4011.

News Release

For release: Feb. 19, 2002

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WASHINGTON STATE DEPARTMENT OF ECOLOGY

Washington State Department of Ecology
PO Box 47600
Olympia, WA 98504
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Oregon, Washington Agencies Invite Public Input On Plan to Protect, Improve Columbia River Water Quality

First public meeting scheduled Monday, Mar. 18 in Kennewick, WA

The public has an opportunity to comment on a draft plan that will propose limits to pollution in the Columbia River. The plan, a collective effort between the Oregon Department of Environmental Quality (DEQ) and the Washington Department of Ecology (DOE), is necessary to improve water quality in the main stem of the Columbia River from the confluence of the Snake River to the Pacific Ocean.

Currently, the Columbia River's main stem does not meet state water quality standards for *total dissolved gas* for both Oregon and Washington. Total dissolved gas refers to water that is supersaturated with oxygen, nitrogen and the other constituents of air. Elevated total dissolved gas levels are the result of water passing over the spillways of the four lower Columbia River hydroelectric projects. As the water spills over, it becomes saturated with air bubbles that collect deep within the stilling basin below the dam. Total dissolved gas is considered a pollutant because it is harmful to aquatic species.

The plan will also satisfy requirements of the federal Clean Water Act by establishing goals and pollution control targets for improving water quality, limiting the amount of total dissolved gas generated at Columbia River hydropower projects through a combination of structural and operational measures.

In order to reach the goals and targets described in the draft plan, the Oregon and Washington environmental agencies are establishing limits for total dissolved gas entering the water system. These limits are known by state and federal researchers as Total Maximum Daily Loads (TMDLs).

(More/over)

A TMDL document uses scientific data collection and analysis to determine the amount and source of each pollutant entering the river system, and allocates specific pollution limits, known as pollutant loads, to each source at levels that would ultimately restore water quality to clean water standards. A load is the amount of each pollutant a source can contribute without violating water quality standards. A TMDL takes into account the pollution from all sources.

Public hearings on the proposed limits are as follows:

Monday, March 18, 2002
Washington Dept. of Ecology Field Office
1315 W. Fourth Ave. (off Olympia Street)
Kennewick, WA

3:30 p.m.: Question-and-Answer Session
4 p.m.: Public Hearing

Tuesday, March 19, 2002
Tamastslikt Cultural Institute
72789 Highway 331
Pendleton, OR

1:30 p.m.: Question-and-Answer Session
2 p.m.: Public Hearing

Friday, March 22, 2002
Washington Dept. of Fish & Wildlife and
Ecology Field Office
2108 Grand Blvd. & Fourth Plain Boulevard
Vancouver, WA

1 p.m.: Question-and-Answer Session
1:30 p.m.: Public Hearing

Friday, March 22, 2002
Oregon State Office Building
800 NE Oregon St.
Portland, OR

8:30 a.m.: Question-and-Answer Session
9 a.m.: Public Hearing

For more information contact Russell Harding, Oregon DEQ, Portland, at (503) 229-5284 or Paul Pickett, Washington DOE, Olympia, at (360) 407-6882.

Documents and related materials are available for review at:

Oregon DEQ
Water Quality Division
811 SW Sixth Ave.
Portland, OR 97204
Please call in advance: (503) 229-5279

Washington DOE
300 Desmond Drive, SE
Lacey, WA 98503
Or at Wash. Dept. of Ecology Field offices in Kennewick and Vancouver – see addresses above

Copies are available upon request by contacting Russell Harding or Paul Pickett. One- to two-page summaries of the TMDLs are also available. DEQ and DOE encourage individuals with computer capabilities to view the document directly on the Columbia River Web site at:

http://www.epa.gov/r10earth/columbiamainstemtmdl.htm

The public may request a copy of the document on compact disc to save printing and mailing costs. People with hearing impairments may call DEQ's TTY at (503) 229-5471.

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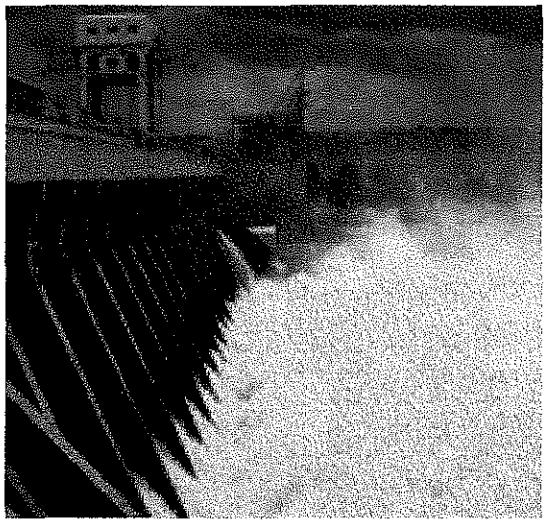
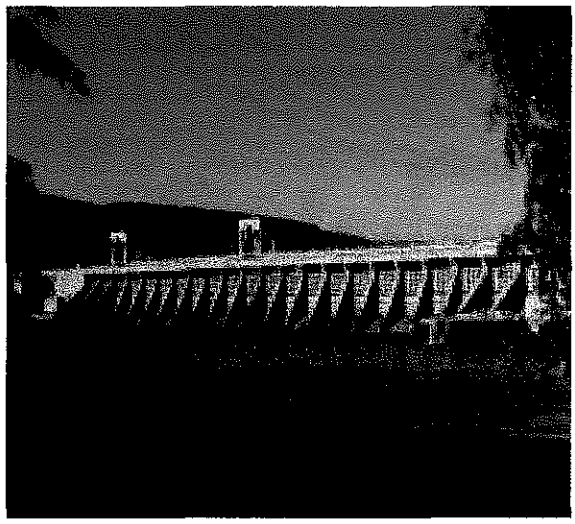
Review Draft – 2-13-02

Total Maximum Daily Load (TMDL) for Lower Columbia River Total Dissolved Gas





February 2002

Prepared jointly by the
Oregon Department of Environmental Quality
and the
Washington State Department of Ecology

Washington State Department of Ecology

State of Oregon **Department of Environmental Quality**

Publication Information

Oregon

This report is available on the Oregon Department of Environmental Quality Web Site at *http://www.deq.state.or.us/wq/TMDLs/TMDLs.htm*

For additional printed copies or a compact disk of this publication, contact:

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Washington

This report is available on the Washington State Department of Ecology home page on the World Wide Web at *http://www.ecy.wa.gov/biblio/0203004.html*

For additional printed copies of this publication, contact:

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Olympia, WA 98504-7600

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Refer to Publication Number 02-03-004.

Total Maximum Daily Load for Lower Columbia River Total Dissolved Gas

by
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Table of Contents

List of Figures

List of Tables

Acronyms and Abbreviations

Corps	U.S. Army Corps of Engineers
CRITFC	Columbia River Inter-Tribal Fish Commission
DGAS	Dissolved Gas Abatement Study
EPA	U.S. Environmental Protection Agency
FMS	Fixed Monitoring Station
fmsl	feet above mean sea level
kcfs	thousand cubic feet per second
mm Hg	Millimeters of Mercury
NMFS	National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
OAR	Oregon Administrative Rules
TDG	Total Dissolved Gas
TMDL	Total Maximum Daily Load
WAC	Washington Administrative Code
WBID	Waterbody Identification
WRIA	Water Resource Inventory Area
303(d)	Section 303(d) of the federal Clean Water Act
7Q10	Seven-day, ten-year frequency flow
ΔP	Excess gas pressure over barometric pressure

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Abstract

This Total Maximum Daily Load (TMDL) addresses total dissolved gas (TDG) in the mainstem Columbia River from its confluence with the Snake River to its mouth at the Pacific Ocean. The states of Oregon and Washington have both listed multiple reaches of the Lower Columbia River on their federal Clean Water Act 303(d) lists, due to TDG levels exceeding state water quality standards. The entire reach is considered impaired for TDG. Oregon and Washington are jointly issuing this TMDL and submitting it to the U.S. Environmental Protection Agency for its approval.

Elevated TDG levels are caused by spill events at four hydroelectric projects on the Lower Columbia River. Water plunging from a spill entrains TDG at high levels. High TDG can cause "gas bubble trauma" in fish which causes chronic or acutely lethal effects, depending on TDG levels. Spills can be caused by several conditions. "Voluntary" spills are provided to meet juvenile fish passage goals. "Involuntary" spills are caused by lack of powerhouse capacity for river flows. Involuntary spills can result from turbine maintenance or break-down, lack of power load demand, or high river flows.

This TMDL sets a TDG loading capacity for the Lower Columbia River in terms of excess pressure above ambient. Load allocations are also expressed in terms of excess pressure, with allocations for each dam, the upstream boundary, and natural conditions in the pools between each dam. Allocations for the dams must be met at points of compliance within each dam's tailrace at a specified distance below the spillway, corresponding to the end of the aerated zone. Other allocations must be met in the forebays of the dams.

An implementation plan is provided that describes short-term compliance with Endangered Species Act requirements. Long-term compliance is described for both Endangered Species Act and TMDL requirements.

Acknowledgements

The Oregon Department of Environmental Quality and the Washington State Department of Ecology wish to acknowledge the cooperation of the following agencies in the production of this TMDL.

- The U.S. Army Corps of Engineers (Portland District, Walla Walla District, and Northwest Division) provided extensive technical information. Large tracts of the technical analysis have been quoted or paraphrased from the Corps' Dissolved Gas Abatement Study (DGAS). This TMDL would have been much more difficult without the understanding of total dissolved gas production resulting from the DGAS study.

- The National Marine Fisheries Service provided valuable advice and review. The Biological Opinion issued in December 2000 pursuant to the Endangered Species Act was invaluable in describing the studies that have been conducted to date, and in specifying the effects of total dissolved gas on fish.

- The U.S. Environmental Protection Agency provided financial and technical assistance.

- Tetra Tech and Battelle Northwest Laboratories provided review and technical input.

- The Western Governor's Association played a major role in outreach.

- The Columbia River Inter-Tribal Fish Commission provided invaluable review and coordination. Staff from the Yakama, Nez Perce, Colville, Spokane, and Kalispel Tribes also contributed to the process.

- The Bonneville Power Administration, U.S. Bureau of Reclamation, and Grant County Public Utilities District provided review and input.

Nothing in this TMDL purports to represent the technical or policy positions of any of the above agencies or organizations. Any flaws in this TMDL are entirely the responsibility of the Oregon Department of Environmental Quality and Washington State Department of Ecology.

Executive Summary

Description of Waterbody, Pollutant of Concern, and Pollutant Sources

This Total Maximum Daily Load (TMDL) addresses total dissolved gas (TDG) in the mainstem Columbia River from its confluence with the Snake River to its mouth at the Pacific Ocean. The states of Oregon and Washington have both listed multiple reaches of the Lower Columbia River on their federal Clean Water Act 303(d) lists due to TDG levels exceeding state water quality standards. The entire reach is considered impaired for TDG. Oregon and Washington are jointly issuing this TMDL and submitting it to the U.S. Environmental Protection Agency for its approval.

Elevated TDG levels are caused by spill events at four hydroelectric projects on the Lower Columbia River. Water spilled over the spillway of a dam entrains air bubbles. When these are carried to depth in the dam's stilling basin, the higher hydrostatic pressure forces air from the bubbles into solution. The result is water supersaturated with dissolved nitrogen, oxygen, and the other constituents of air. Fish in this water may not display signs of difficulty if the higher water pressures at depth offset high TDG pressure passing through the gills into the blood stream. However, if the fish inhabit supersaturated water for extended periods, or rise in the water column to a lower water pressure at shallower depths, TDG may come out of solution within the fish, forming bubbles in their body tissues. This gives rise to gas bubble trauma, which can be lethal at high levels or give rise to chronic impairment at lower levels. There is extensive research reported in the literature on the forms of physical damage to fish that represent the symptoms of gas bubble trauma.

Spills can occur at any time for several reasons:

- Fish passage spills (voluntary spills), conducted under the Biological Opinion in compliance with the federal Endangered Species Act.
- Spills required when flow exceeds powerhouse capacity (involuntary spills).

There are three main reasons for involuntary spills:

- The powerhouse cannot pass flood flows.
- The powerhouse is off-line due to lack of power demand.
- The powerhouse is off-line for maintenance or repair.

Dams on the Lower Columbia are run-of-the-river dams with very little storage capacity. Therefore, spills are often forced due to operational decisions at upstream storage reservoirs, such as Washington's Grand Coulee Dam or Dworshak Dam.

This document describes the production of TDG at the four projects in the Lower Columbia River. It presents general production equations representing the production of TDG, and specific

equations taking into account each project's particular physical characteristics. Any other sources of TDG in the TMDL area, such as tributaries, are considered negligible compared to the four dams. TDG is also affected by barometric pressure and water temperature, and these influences are addressed in the TMDL.

Description of the Applicable Water Quality Standards and Numeric Target

The water quality standards for both Oregon and Washington have an identical TDG criterion: *110 percent of saturation not to be exceeded at any point of measurement.* This criterion does not apply to flows above the seven-day, ten-year frequency flow (7Q10) flood flow. In addition, special "waiver" limits for TDG have been established as a temporary special condition in Washington rules, to allow higher criteria with specific averaging periods during periods of spill for fish passage. Oregon rules specify a process for establishing waiver limits as variance on an annual basis. Because the waiver limits are either temporary or annually renewed, this TMDL addresses only the 110 percent criterion. However, the implementation plan allows compliance with waiver limits as an interim allowance for compliance with the TMDL in the short-term.

Loading Capacity

Loading capacity for TDG has been defined in terms of excess pressure over barometric pressure (ΔP). This parameter was chosen because it can be directly linked to the physical processes by which spills generate high TDG, and it has a simple mathematical relationship to TDG percent saturation. A loading capacity of 75 mm Hg has been assigned to the Columbia River in this TMDL area.

Pollutant Allocations

Because of the unique nature of TDG, load allocations for dam spills are not directly expressed in terms of mass loading. Like loading capacity, load allocations for each dam will be made in terms of ΔP defined site-specifically for each dam. A load allocation is specified for the upstream boundary of the TMDL area. Load allocations are also provided for natural background, which takes downstream temperature variation into account. The wasteload allocation under this TMDL is zero, because no NPDES-permitted sources produce TDG.

Long-term compliance with load allocations for dam spills will be at the downstream end of the aerated zone below each spillway. Distances are specified for the compliance location at each dam. The load allocation is essentially applied to the spill from each dam, with allowance made for degassing in the tailrace below the spillway.

Compliance with load allocations are tied to structural changes at each dam, and are intended as long-term targets. Short-term compliance will be established under the implementation plan, and will be based on operational management of spills.

Margin of Safety

A margin of safety is supplied implicitly by use of conservative critical conditions for ambient barometric pressure, temperature, and time of travel. The TDG criterion itself provides a margin of safety due to its stringency as compared to extensive site-specific research on TDG and aquatic life in the Columbia River. Due to extensive data collection in the TMDL area, the margin of safety for data variability is small.

Seasonal Variation

Spills and associated high TDG levels, although most likely to occur in the spring and early summer, can potentially occur at any time. Therefore, TMDL load allocations apply year-round. Seasonal effects have been evaluated in the development of critical conditions, but seasonal variations appear to be small. The TMDL only applies for flows below the 7Q10 flood flows, which have been calculated for each dam.

Monitoring Plan

Long-term compliance with load allocation will be monitored with special studies in the tailrace of the dam, following structural modifications. Monitoring of implementation and operational controls in the short term will use continuous monitoring at fixed monitoring station sites.

Implementation Plan

The Implementation Plan incorporates actions described and analyzed by the U.S. Army Corps of Engineers in its Dissolved Gas Abatement Study. Both short-term (Phase I) and long-term (Phase II) measures are described with specific TDG and spill reduction measures. The Implementation Plan has been developed in consultation with the National Marine Fisheries Service, so that TMDL implementation will be coordinated with requirements of the Endangered Species Act.

Reasonable Assurance

Structural work has already been carried out to reduce TDG at the four Lower Columbia River dams. Both the Oregon Department of Environmental Quality and the Washington State Department of Ecology have regulatory authority over the four federal dam projects. However, both are confident that the collaborative effort with the dam operators toward reducing gas will continue and be enhanced through this TMDL. The track record for Congressional funding for these projects is good, and there is reason to believe that further funding of projects will continue.

Public Participation

Extensive public involvement activities, organized by the inter-agency TMDL Coordination Team, have occurred under this TMDL for over a year. Activities have included websites, focus sheets, coordination meetings, stakeholder meetings, conference presentations, and public workshops. Public hearings will be held in March 2002 (see *Summary of Public Involvement* section of this report).

Introduction

State water quality standards establish criteria at levels that ensure the protection of the water's beneficial uses. Water that fails to meet water quality standards triggers a state action in Oregon and Washington. The Oregon Department of Environmental Quality and Washington State Department of Ecology are charged to assess, manage, and protect the beneficial uses of the waters of their respective states.

A number of waterbodies fail to meet water quality standards. Oregon and Washington are charged with returning waterbodies to standards. The requirement under the federal Clean Water Act for achieving this is known as a Total Maximum Daily Load (TMDL).

Oregon and Washington have established criteria for total dissolved gas (TDG), which at high levels has deleterious effects on fish and other aquatic life. This document details a TMDL approach for TDG in the mainstem Columbia River from the mouth of the Snake River to its mouth at the Pacific Ocean (Figure 1). This report will explain what TDG is, why high TDG is a problem, and a strategy for managing it so water quality standards will be met.

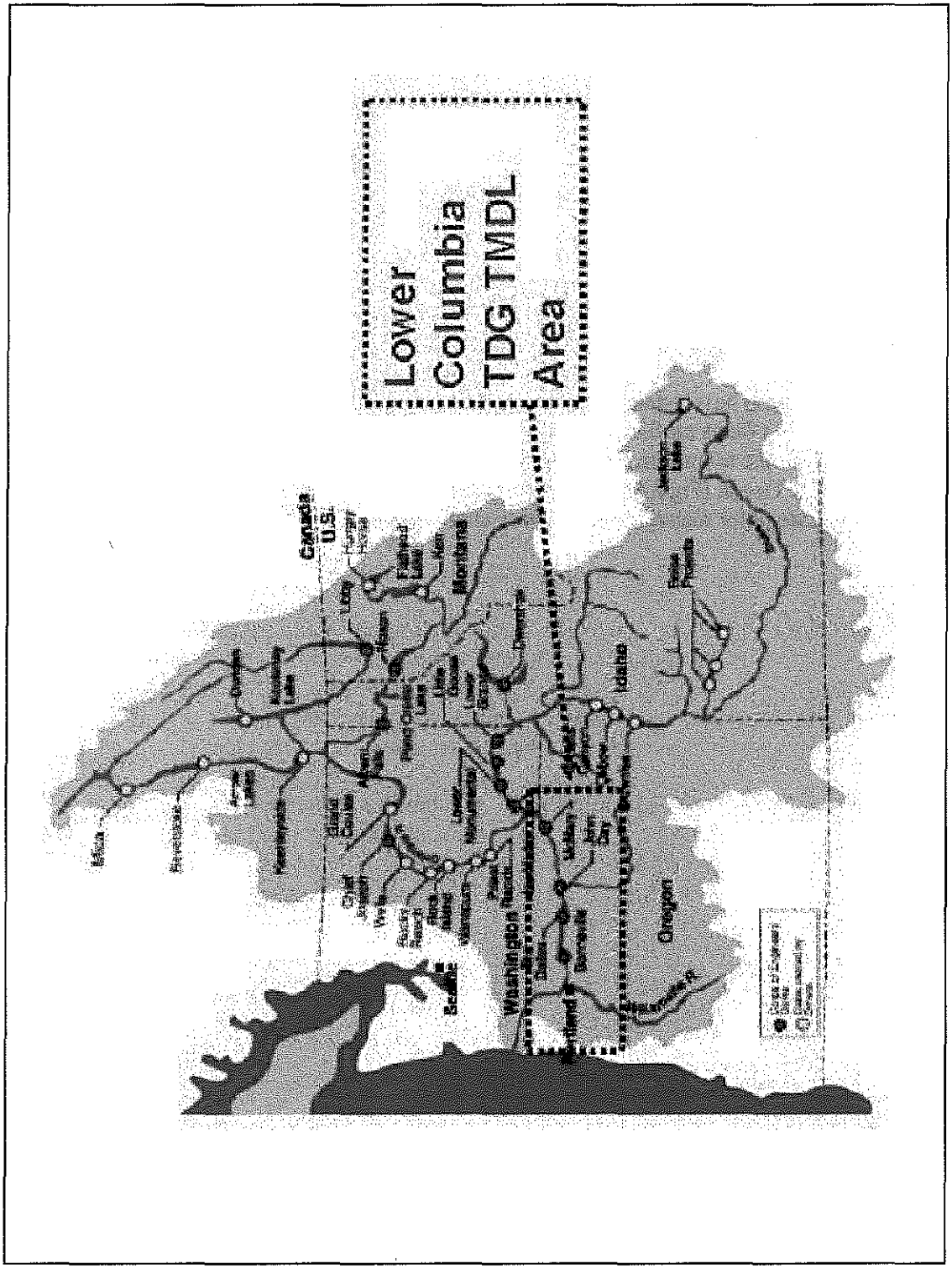

Figure 1: Map of Lower Columbia TMDL Area

Purpose of, and Authority for, TMDL

Compliance with Clean Water Act

The border between the states of Washington and Oregon follows the geographic center of the Columbia River mainstem for most of the river from the Wallula Gap (a few miles below the confluence of the Snake and Columbia rivers) to its mouth. This entire reach of the river is out of compliance with the TDG water quality standard both for the state of Oregon and the state of Washington. In both states the river is listed on their 1998 lists of waterbodies failing to meet standards pursuant to Section 303(d) of the federal Clean Water Act. As a result of the standards exceedances and subsequent listings, this TMDL is being prepared jointly by Oregon and Washington.

Although Oregon and Washington only have authority over the waters within their boundaries, under federal law each state must meet the standards of the other where the waters are shared, such as in the Lower Columbia River. Therefore, the goal of this TMDL is to provide a single TMDL analysis and implementation plan that both states agree to, which will then be implemented by each state with their unique authorities.

A TMDL determines the quantity (load) of a pollutant that can enter a waterbody and still meet water quality standards. This load is then allocated among the various sources. An implementation component (in Washington, Summary Implementation Strategy or SIS) is included to identify actions that appropriate agencies and stakeholders (in Oregon, Designated Management Agencies or DMAs) will undertake to achieve the allocated loads.

The TMDL, as described in this document, must be submitted to the U.S. Environmental Protection Agency (EPA) for their approval. Oregon and Washington each operate under a Memorandum of Agreement with EPA, which guides the TMDL submittal. This document has been organized by Oregon's guidelines, but Table 1 outlines the components of Washington's TMDL submittal and how they match up.

Table 1: Comparison of Oregon's and Washington's TMDL Submittal Format

State of Oregon	State of Washington
Table of Contents	(Optional)
List of Tables	(Optional)
List of Illustrations	(Optional)
Acknowledgement	(Optional)
Executive Summary	(Optional)
Introduction	Introduction
Purpose of, and Authority for, TMDL	Introduction
Geographic Extent	Background
TDG Water Quality Standards	Applicable Criteria
Basin Assessment	Background
Deviation of Ambient Conditions from Water Quality Standards	Water Quality and Resource Impairments
Loading Capacity	Technical Analysis; Loading Capacity
Identification of Sources	Technical Analysis
Load Allocations	Load and Wasteload Allocations
Margin of Safety	Margin of Safety
Seasonal Variations	Seasonal Variation
Implementation Plan	Summary Implementation Strategy
References and Bibliography	References Cited

Coordination with Endangered Species Act

In Oregon and Washington, a TMDL is a planning tool, not a rule of law or other stand-alone enforceable document. It does not take precedence over the federal Endangered Species Act, Indian Treaties, or federal hydropower system enabling legislation. It takes no action that would trigger a review under the National Environmental Policy Act or Washington State Environmental Policy Act. TMDLs may be used to condition exemptions, modifications, variances, permits, licenses, and certifications.

There is much overlap between this TMDL established pursuant to the federal Clean Water Act and anadromous fish passage for salmonids listed as threatened or endangered under the Endangered Species Act, administered by the National Marine Fisheries Service (NMFS). It is therefore important that there is a clear understanding of the requirements of this TMDL relative to measures required by Biological Opinions issued in relation to the threatened and endangered species of the Snake and Columbia rivers.

The 2000 Federal Columbia River Power System (hydrosystem) Biological Opinion requires that the action agencies (U.S. Army Corps of Engineers, Bonneville Power Administration, and the U.S. Bureau of Reclamation) meet specific hydrosystem biological performance standards for both adult and juvenile salmon. The purpose of these standards is to help reverse the downward

trend in listed salmon populations and therefore ensure viable salmon resources in the Columbia River Basin. The juvenile hydrosystem goals are one part of a three-tiered approach to assessing performance of implementation of the Reasonable and Prudent Alternative Section items presented in the Biological Opinion. These hydrosystem standards are combined with standards for harvest, habitat, and hatcheries and other life stage indicators to arrive at a population level standard.

The hydrosystem survival performance standards can be met by a combination of controlled spills, fish passage facilities to divert juvenile salmon from passing through the turbines, or juvenile transportation by truck or barge. Due to the current configuration of the hydroelectric projects along the Columbia and Snake rivers, NMFS sees spill as the safest, most effective tool available. However, these performance standards are not being met at the current implementation level of the spill program. Therefore, in the short-term, structural gas abatement solutions may result in higher spills rather than lower TDG levels. But as new, more effective fish passage facilities are completed and evaluated, their contribution to the attainment of hydrosystem performance standards will hopefully allow spill levels for fish passage and associated TDG levels to be reduced, but only as long as the performance standards are met.

Spills for fish passage under the Biological Opinion cause TDG supersaturation above the 110 percent criterion. The state water quality standards are meant to be sufficiently protective so as to prevent damage to beneficial use of the state waters. The effects of elevated dissolved gas on migrating juvenile and adult salmon due to voluntary spill have been monitored each year of spill program implementation. Based on five years of data from the biological monitoring program, the average incidence of gas bubble disease signs has been low, although the state-allowed maximum TDG due to spill was 120 percent in the tailrace and 115 percent in forebays. From 1995 to 1996, only 1.6 percent of all the juveniles sampled, nearly 200,000 fish, showed signs of disease (Schneider, 2001). These results suggest that, in weighing the benefit gained in increased salmon survival by spills for fish passage against the benefit to the beneficial use from strict adherence to the standard, it would be reasonable to find flexibility in application of the standards.

In summary, the provisions of both Acts must be met. Notwithstanding that, it is not the purpose of the Clean Water Act to usurp functions properly undertaken pursuant to the Endangered Species Act. On the contrary, the Endangered Species Act contains provisions that encourage EPA to consult with NMFS prior to approval of a TMDL that affects ESA-listed species to ensure the TMDL is consistent with species recovery goals. The 2000 Biological Opinion issued pursuant to the Endangered Species Act requires attainment of certain fish passage performance standards. One of the means of attaining these is through spilling water over hydroelectric dam spillways. This action, though, results in elevated TDG. Control of TDG is the purpose of this TMDL. The Clean Water Act does not envisage trade-offs of fish passage for TDG; it requires, rather, attainment of water quality standards. This is one of the significant challenges posed by this TMDL.

This TMDL must be written to reflect ultimate attainment of the TDG water quality standard. Fish passage requirements can be facilitated under an implementation plan, but the clear expectation of the Clean Water Act is that water quality standards will be attained in a limited amount of time. NMFS and EPA have been discussing how to meet biological performance

standards under the Endangered Species Act at the same time as meeting the water quality standards of the Clean Water Act. However, the primary purpose of this TMDL must be to comply with the Clean Water Act, although finding a means of compliance with both laws is also a goal.

Geographic Extent

This TMDL applies to the Columbia River mainstem from the confluence of the Snake and Columbia rivers to its mouth at the Pacific Ocean.

The laws of the state of Oregon apply to the river's southern half from its point of entry into Eastern Oregon from the state of Washington. This takes in seven river segments as follows:

- The mouth to Tenasillahe Island. Segment number COLU0
- Tenasillahe Island to Willamette River. Segment number COLU037
- Willamette River to Bonneville Dam. Segment number COLU102.
- Bonneville Dam to The Dalles Dam. Segment number COLU146.
- The Dalles Dam to John Day Dam. Segment number COLU191.6.
- John Day Dam to McNary Dam. Segment number COLU215.6.
- McNary Dam to the Washington border. Segment Number COLU292.

These seven segments fall on the Columbia River mainstem. The hydrologic unit code for the Columbia Basin is 1707. All of these waters have been identified as impaired and have been included on Oregon's 1998 303(d) list.

The laws of the Washington apply to the entire Columbia River from the mouth of the Snake River to the Oregon border in Wallula Gap, and to the northern half of the river from there to the mouth. All of these waters have been included on Washington's 1996 303(d) list, and have been identified as impaired or have been included on Washington's 1998 303(d) list. The segments covered by this TMDL are listed in Table 2, along with the Water Resource Inventory Area (WRIA) and Waterbody Identification (WBID) numbers.

TMDLs are also planned for the Lower Snake River (Clearwater River to confluence with the Columbia River), and for the Mid-Columbia River (Canada border to confluence with Snake River). Those two TMDLs at their downstream end will address compliance with this TMDL at its upstream end.

Table 2: Washington's Lower Columbia River TDG Listed and Impaired Segments

Segment description	WRIA	WBID	1996 303(d) listings	1998 303(d) listings	1998 impaired but unlisted
Bonneville Dam to Mouth	(24 – 28)	WA-CR-1010	**1**		
Willapa	24	NN57SG		**1**	
Grays-Elokoman	25	NN57SG		**1**	
Cowlitz	26	NN57SG			**1**
Lewis	27	NN57SG		**1**	
Salmon-Washougal	28	NN57SG		**6**	
McNary Dam to Bonneville Dam	(28 – 31)	WA-CR-1020	**1**		
Salmon-Washougal	28	NN57SG		**2**	
Wind-White Salmon	29	NN57SG			**1**
Klickitat	30	NN57SG		**3**	
Rock-Glade	31	NN57SG		**3**	
Oregon Border to McNary Dam	31	WA-CR-1026	**1**		
Rock-Glade	31	NN57SG		**2**	
Walla Walla	32	NN57SG			**1**
Totals			**3**	**19**	**3**

Total Dissolved Gas Water Quality Standards

For waters that are shared by two states, water quality must meet the standards of both states. For this TMDL, the standards of the two states are virtually identical.

State of Oregon Standards

Oregon's Water Quality Standards are contained in Oregon Administrative Rules (OAR) 340, Division 41. The standards relevant to the total dissolved gas (TDG) TMDL [OAR 340-041-0205(2)(n)] are:

(A) The concentration of total dissolved gas relative to atmospheric pressure at the point of sample collection shall not exceed 110 percent of saturation, except when stream flow exceeds the ten-year, seven-day average flood. However, for Hatchery receiving waters and waters of less than two feet in depth, the concentration of total dissolved gas relative to atmospheric pressure at the point of sample collection shall not exceed 105 percent of saturation;

(B) The Commission may modify the total dissolved gas criteria in the Columbia River for the purpose of allowing increased spill for salmonid migration. The Commission must find that:

- *(i) Failure to act would result in greater harm to salmonid stock survival through in-river migration than would occur by increased spill;*
- *(ii) The modified total dissolved gas criteria associated with the increased spill provides a reasonable balance of the risk of impairment due to elevated total dissolved gas to both resident biological communities and other migrating fish and to migrating adult and juvenile salmonids when compared to other options for in-river migration of salmon;*
- *(iii) Adequate data will exist to determine compliance with the standards; and*
- *(iv) Biological monitoring is occurring to document that the migratory salmonid and resident biological communities are being protected.*

(C) The Commission will give public notice and notify all known interested parties and will make provision for opportunity to be heard and comment on the evidence presented by others, except that the Director may modify the total dissolved gas criteria for emergencies for a period not exceeding 48 hours;

(D) The Commission may, at its discretion, consider alternative modes of migration.

"Commission" means the Oregon State Environmental Quality Commission.

State of Washington Standards

Washington's Water Quality Standards, Chapter 173-201A Washington Administrative Code (WAC), classify the reaches of the Columbia River covered by this TMDL as Class A. The following standards specifically apply to this TMDL:

WAC 173-201A-030:

Total dissolved gas shall not exceed 110 percent of saturation at any point of sample collection.

WAC 173-201A-060:

(4)(a) The water quality criteria herein established for total dissolved gas shall not apply when the stream flow exceeds the seven-day, ten-year frequency flood.

(b) The total dissolved gas criteria may be adjusted to aid fish passage over hydroelectric dams when consistent with a department approved gas abatement plan. This gas abatement plan must be accompanied by fisheries management and physical and biological monitoring plans. The elevated total dissolved gas levels are intended to allow increased fish passage without causing more harm to fish populations than caused by turbine fish passage. The specific allowances for total dissolved gas exceedances are listed as special conditions for sections of the Snake and Columbia rivers in WAC 173-201A-130 and as shown in the following exemption:

Special fish passage exemption for sections of the Snake and Columbia rivers: When spilling water at dams is necessary to aid fish passage, total dissolved gas must not exceed an average of one hundred fifteen percent as measured at Camas/Washougal below Bonneville dam or as measured in the forebays of the next downstream dams. Total dissolved gas must also not exceed an average of one hundred twenty percent as measured in the tailraces of each dam. These averages are based on the twelve highest hourly readings in any one day of total dissolved gas. In addition, there is a maximum total dissolved gas one hour average of one hundred twenty-five percent, relative to atmospheric pressure, during spillage for fish passage. These special conditions for total dissolved gas in the Snake and Columbia rivers are viewed as temporary and are to be reviewed by the year 2003.

(c) Nothing in these special conditions allows an impact to existing and characteristic uses.

The "ten-year, seven-day average flood" or "seven-day, ten-year frequency flood" are usually termed the "7Q10" flood flows.

The criteria in WAC section 173-201A-060 are sometimes termed the "waiver" TDG limits for fish passage. Oregon establishes "waiver" limits on an annual basis using the procedures outlined above. Since the Oregon waiver limits are established annually, and the Washington waiver limits are to be viewed as temporary, this TMDL cannot use the waiver limits as a compliance endpoint. TMDLs must by law ensure compliance with the existing permanent standards. There are separate processes to revise the water quality standards and establish new criteria. If the TDG standards are ever revised in a way that affects this TMDL, then the TMDL would need to be revisited and modified at that time.

Basin Assessment

Total dissolved gas (TDG) levels can be increased above the water quality criteria by spilling water over spillways of dams on the Columbia River. These are the major sources of elevated TDG in the Columbia mainstem. There are a variety of other ways that TDG may be elevated: passage of water through turbines, fishways, or locks; and natural processes such a low barometric pressure, high water temperatures, or high levels of biological productivity. However, the vast majority of the high TDG levels found in the Columbia River are caused by spills from dams. Man-made sources other than spill are minor, and can be considered negligible. Natural processes may have a significant effect on TDG, and are addressed in setting load allocations.

Spill at dams occurs for several reasons:

1. To enhance downstream fish passage (to meet "Performance Standards" for fish survival under the Endangered Species Act).
2. To bypass water that exceeds the available hydraulic capacity of the powerhouse due to:
   - High river flows.
   - Lack of power market.
   - Maintenance, break-down, or other reasons.

The first type of spill is sometimes called "voluntary spill", while the second types are termed "involuntary spills". Figure 2 illustrates the typical configuration of a dam on the Lower Columbia River.

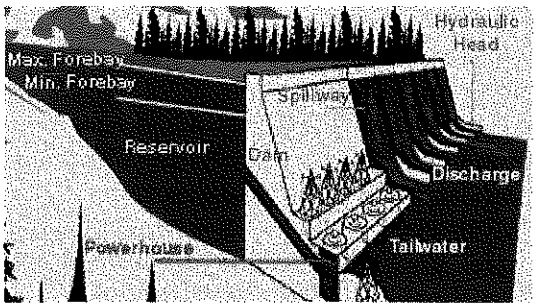

Figure 2: Typical Dam Configuration

Spill for Fish Passage

Spill for purposes of fish passage involves water deliberately released over dam spillways, rather than being discharged through turbines or fish bypass facilities. The intent is to reduce turbine and bypass mortalities. Schoeneman et al (1961) found that mortality in Chinook juveniles spilled over McNary Dam (Columbia River) and Big Cliff Dam (Santiam River) was less than two percent. Subsequent studies confirmed this estimate. The requirement for spring and summer spills to pass juvenile salmon was included in the 1995 and 2000 Biological Opinions for the Columbia River dam operations. To comply with these Biological Opinions, Oregon and Washington have established the waiver TDG limits to allow limited fish passage spill.

In Oregon, the Environmental Quality Commission has granted variances to the TDG standard to enable spill for salmonid juvenile passage for species listed under the federal Endangered Species Act. This has occurred annually since 1994. Variances usually require TDG levels not exceed 120 percent saturation relative to atmospheric pressure in the tailrace of the spilling dam, and 115 percent TDG saturation relative to atmospheric pressure as measured in the forebay of the next dam downstream. Variance periods usually extend from the middle of April through the end of August each year. Additional variances have been granted each year for spill over Bonneville Dam for up to ten days each March to assist with passage of the Spring Creek National Fish Hatchery Tule Chinook release. One variance has also been given for John Day Dam to enable testing of flow deflectors.

Washington's approach to conform with the Biological Opinion was to adopt a rule revision specifying the TDG criteria for fish passage spill (see above). These waiver limits have generally been identical to Oregon's annual variances.

Involuntary Spill

Like spills for fish passage, involuntary spill involves water being discharged over dam spillways. The causes and intended consequences, though, are different. As its name suggests, there is no choice involved in "involuntary" spill. At times of very high river flows, the quantity of water exceeds the capacity of a dam to either temporarily store the water upstream of the dam or pass the water through its turbines. In these circumstances, water is released over the spillway, because there is nowhere else for it to go. The Columbia River hydropower system in Washington and Oregon is somewhat unique in that regard. With the exception of Washington's Grand Coulee Dam, it contains very little storage potential relative to the quantity of spring runoff. At times of rapid runoff, the dams cannot constrain the quantity of water, and it is spilled with attendant high TDG levels. Often dissolved gas levels from involuntary spill exceed those experienced during periods of spill for fish. However, high river flows under these circumstances are often in excess of the 7Q10 high flow, in which case the TDG standard would not apply.

Involuntary spill as a result of lack of power market is a variant of the above. In this scenario, the power marketing authority cannot sell any more power, and even though turbines are available, water is bypassed over the spillway because there is nowhere for electricity generated to go. Running water through the turbines with no load increases wear and tear with attendant

higher maintenance costs, and may also reduce fish survival. Lack of power load demand can occur at times of both high and low flows (e.g., in the spring or fall when power demands are low both in California and the Pacific Northwest). Also releases from upstream storage dams during high load times (morning and evening) can result in high flows at downstream dams during low load times (middle of the night), causing an involuntary spill.

Involuntary spill can also occur at low flows when powerhouses are taken off-line for maintenance, breakdown, or other needs. Maintenance is usually scheduled to prevent a spill, by doing maintenance on one or two generating units at a time during low power demand periods. Nonetheless, releases from upstream dams can complicate management of spills during powerhouse maintenance. Also, unscheduled maintenance and repairs sometimes occur, which may require a powerhouse shut-down and involuntary spill.

In general, involuntary spill conditions at the "run of the river" dams may result from reservoir control and power marketing decisions made by the federal project operators having storage capacity upstream. Improved accuracy in water forecasting could help avoid understating or overstating available water supply, which could cause the federal project operators to spill water because they left too little or too much room in the reservoirs. Additionally, a water management plan could also identify uncoordinated releases and manage intra-day fluctuations in river flows. These events often result in isolated involuntary spill events, because reservoir elevation must be maintained within limits at run of the river projects.

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Deviation of Ambient Conditions from Water Quality Standards

TDG Generation from Spills

Spills for fish passage typically occur during the spring and summer months. During periods of fish spills, deviations of ambient conditions from the water quality standard are frequent but usually small. This is because spill quantities are managed to meet the waiver levels for fish passage: either variances granted by the state of Oregon or Washington's Special Conditions (described above). For the past six years, Oregon has granted a variance to its water quality standard for TDG to facilitate fish passage. These variances are virtually identical to Washington's Special Conditions, which allow TDG levels to rise to 120 percent of saturation relative to atmospheric pressure in the tailrace of the dam that is spilling, and 115 percent in the forebay of the next dam downstream.

The excursions beyond this level usually have been no more than one or two percent above the variance request, and occur as a result of the imprecision in setting spillway gates. Generally, the fishery management agencies have sought spill quantities in order to remain right at the TDG variance limit at the fixed monitoring station sites. Any small change in conditions that influence TDG, such as change in barometric pressure, water temperature, incoming gas, total river flow or tailwater elevation will cause an exceedance when operated this way. Also, these levels do not meet the 110 percent criterion of either state.

Involuntary spills can occur at any time. Involuntary spills caused by river flows above powerhouse capacity are most likely to occur from late fall to early summer, depending on rainfall or snowmelt in the tributary watersheds. However, high flows could also occur due to releases from upstream dams with significant storage, such as Grand Coulee or the Canadian dams. Involuntary spill due to low power demand is most likely in the spring, although this is also dependent on regional power management by the Bonneville Power Administration. Loss of powerhouse capacity to maintenance or repair is usually scheduled so that no more than one or two turbines are out at any given time, but an emergency powerhouse shutdown and spill could occur at any time as the result of a fire or other disaster.

At times of involuntary spill, exceedances above the standard can rise dramatically, peaking above 130 percent of saturation, and even 140 percent. Absolute TDG pressures at these levels, which usually only occur in shallow waters, can be lethal to fish. Usually fish are protected from fatal pressures in deeper waters by compensation from hydrostatic pressures, which reduces absolute TDG levels.

For all spills, the highest TDG levels, and therefore the area most likely to exceed standards, is directly below the spillway. In this area, the plunging and air entrainment of the spill (aerated zone) generates high levels of TDG, but then quickly degasses while the water remains turbulent and full of bubbles. However, as this water moves from the stilling basin into the tailrace, degassing slows and the TDG levels stabilize.

In the pools, gas exchange rates are small to negligible except under high wind conditions, which can increase degassing. If conditions are still and TDG concentrations are constant, the percent saturation of TDG can increase if the water temperature increases or barometric pressure drops (Figure 3). Also, primary productivity (periods of algal growth) can increase dissolved oxygen levels, which results in a higher TDG percent saturation.

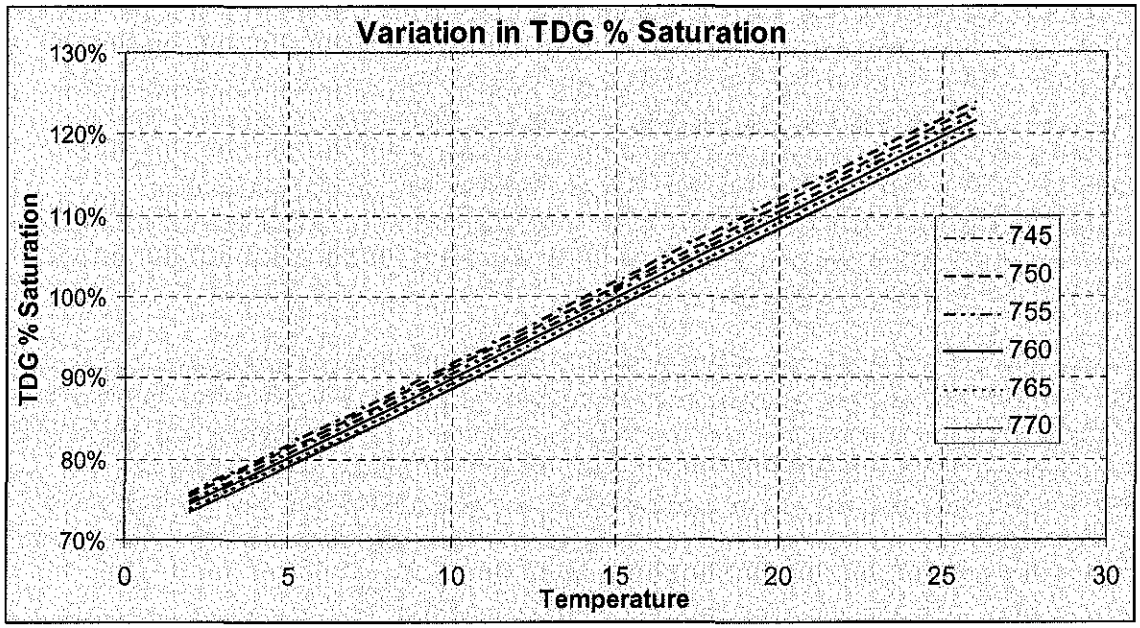

Figure 3: Variation in TDG Percent Saturation with Temperature and Barometric Pressure at Constant Concentration

Due to the hydraulic properties of the spill, a proportion of the powerhouse flow entrains with the spill and is aerated as if it were part of the spill. This amount may be negligible where physical structures separate powerhouse from spillway flows, such as islands at Bonneville Dam. The rest of the powerhouse flow mixes slowly with the spillway flows. Powerhouse TDG levels are typically identical with forebay TDG levels – very little gas exchange occurs as water passes through the powerhouse. Therefore, if the forebay TDG levels are lower than levels below the spillway, the powerhouse flows that mix slowly and farther downstream will reduce the TDG levels in the spillway waters by dilution.

TDG Impacts on Aquatic Life

Fish and other aquatic life inhabiting water supersaturated with TDG may tend to display signs of difficulty, especially if higher dissolved gas pressure gradients occur. Gas bubbles form only when the TDG pressure is greater than the sum of the compensating pressures. Compensating pressures include water (hydrostatic) and barometric pressure. For organisms, tissue or blood pressure may add to the compensating pressures. Gas bubble development in aquatic organisms

is then a result of excessive uncompensated gas pressure. The primary actions which will enhance the likelihood of bubbles forming in the fish are (1) continued exposure to the highly saturated water, (2) rising higher in the water column bringing about a higher pressure gradient (decreased hydrostatic pressure), (3) decreases in barometric pressure, and (4) increasing water temperature.

The damage caused by release of gas bubbles in the affected organism is termed gas bubble trauma or gas bubble disease. There is a wide body of research on this condition. Effects of gas bubble trauma include emphysema, circulatory emboli, tissue necrosis, and hemorrhages in brain, muscle, gonads, and eyes (Weitkamp and Katz 1980). Nebeker et al. (1976) found that death in adults was due to massive blockages of blood flow from gas emboli in the heart, gills, and other capillary beds. Investigators in the 1970s reported many and varied lesions in fish exposed in the 115%-to-120% TDG range in shallow water. At higher gas exposures (e.g.,120% to 130% TDG), death frequently ensued before gas bubble trauma signs appeared (Bouck et al. 1976). External signs of gas bubble trauma (e.g., blisters forming in the mouth and fins of fish exposed to chronic high gas) often disappeared rapidly after death. The signs were largely gone within 24 hours (Countant and Genoway 1968).

Water quality standards for TDG were set at 110 percent, the threshold for chronic effects found in the literature. The severity of gas bubble trauma increases as the absolute TDG level increases, until at higher levels lethality can occur swiftly. However, there are a number of factors that affect a particular organism's response to high TDG levels. Different species respond to changing TDG differently, and the response also varies by life stage. Juvenile salmonids appear to be relatively resilient compared to adults or to non-salmonids.

The duration of exposure to high TDG appears to have an impact on the severity of gas bubble trauma symptoms. Although the standards are not specific on this issue, defining a duration of exposure to be applied to the criteria is appropriate. The waiver limits developed for fish passage provide two levels: a one hour maximum, and the average of the twelve highest hourly readings in any 24-hour period. Based on the 110 percent criteria representing chronic impacts, use of the longer averaging period is appropriate.

Extensive research has been conducted on the effects of TDG on anadromous fish in the Columbia River. It is beyond the scope of this TMDL to review that literature. The Clean Water Act requires compliance with existing standards, although existing research can be used to aid in interpretation of those standards. A review of the standards to look at adoption of different criteria, duration, frequency, and spatial application, if appropriate, would occur through a completely separate process. If new standards were adopted, then the TMDL could be reviewed and possibly revised.

It is possible that TDG became elevated under historical natural conditions in the Columbia River, such as below Celilo Falls. However, elevated TDG probably dissipated quickly as it passed over shallows and rapids. Conditions different from natural conditions exist at the Columbia dams that create high TDG levels. These conditions include the height of the dams, the shape of the spillways, and the presence of the long deep pools below the dams. Allowing a point of compliance below the aerated portion of the tailrace can be considered to reflect gas generation patterns in a natural system.

Monitoring of TDG

Routine monitoring of instream TDG levels occur at fixed monitoring station (FMS) sites above and below each dam. The tailwater FMS sites in some cases may be a mile or two downstream of the dam. The FMS sites have been the primary point of compliance and assessment of TDG levels, especially for compliance with waiver limits during fish passage spills. The locations have been chosen for a variety of reasons, a primary one being the logistics and feasibility of long-term monitoring. However, studies suggest that some of these sites are not collecting data that are representative of river conditions. The FMS sites will continue to be the primary location for determining compliance with waiver limits used for fish passage management. For the purposes of TMDL compliance, TMDL requirements do not need to drive FMS siting issues.

The interagency Water Quality Team manages issues regarding the fish passage program and FMS. The Water Quality Team is jointly chaired by NMFS and EPA. It is charged with providing technical guidance on temperature and total dissolved gas water quality in the context of the NMFS 2000 Biological Opinion relating to the Columbia River Hydropower System. A subgroup of that team has been addressing concerns with the FMS sites, and the appropriateness of the current FMS locations has been the subject of vigorous debate between the resource agencies and U.S. Army Corps of Engineers within the subgroup. The subgroup has concluded that the "representativeness" of FMS data is a very difficult characteristic to define. The TDG measurements at a given location in the river are influenced significantly by environmental factors such as water temperature, biological productivity, barometric pressure, and wind, as well as the spill. The Water Quality Team will continue to study and discuss these issues in order to achieve a mutually satisfactory monitoring end product.

To gain additional knowledge of TDG conditions in the river, the Corps has conducted a number of detailed special studies of TDG levels below the dams (e.g., Schneider and Wilhelms, 1996; Wilhelms and Schneider, 1997a; Wilhelms and Schneider, 1997b; Schneider and Wilhelms, 1999). These studies have shown that TDG levels measured at the FMS sites are usually lower than levels longitudinally upstream towards the spillway, may be lower than levels laterally across the river if powerhouse flows are not fully mixed, and in some conditions may be lower than levels longitudinally downstream.

Loading Capacity

Analysis of TDG generation processes

Introduction

The discussion that follows is taken (sometimes verbatim) from the Dissolved Gas Abatement Study conducted by the U.S. Army Corps of Engineers, and in particular from Appendix G: "Spillway Discharge Production of Total Dissolved Gas Pressure" (USACE, 2001a).

The material in this section provides a general overview of TDG generation processes at the Lower Columbia River dams. Specific details may change over time as structural changes are made to these projects. These processes provide the basis for the determination of loading capacity.

The TDG exchange associated with spillway operation at a dam is a process that couples both the hydrodynamic and mass exchange processes. The hydrodynamics are shaped by the structural characteristics of spillway, stilling basin, and tailrace channel as well as the operating conditions that define the spill pattern, turbine usage, and tailwater stage. The hydrodynamic conditions are influenced to a much smaller extent by the presence of entrained bubbles.

The air entrainment will influence the density of the two-phase flow and impose a vertical momentum component associated with the buoyancy in the entrained air. The entrained air content can result in a bulking of the tailwater elevation and influence the local pressure field. The transfer of atmospheric gasses occurs at the air-water interface, which is composed of the surface area of entrained air at the water surface. The exchange of atmospheric gases is greatly accelerated when entrained air is exposed to elevated pressures because of the higher saturation concentrations. The pressure time history of entrained air will, therefore, be critical in determining the exchange of atmospheric gases during spill.

The volume, bubble size, and flow path of entrained air will be dependent on the hydrodynamic conditions associated with project releases. The bubble size has been found to be a function of the velocity fluctuations and turbulent eddy length. The bubble size can also be influenced by the coalescence of bubbles during high air concentration conditions. The volume of air entrained is a function of the interaction of the spillway jet with the tailwater. The entrained bubble flow path will be dependent upon the development of the spillway jet in the stilling basin and associated secondary circulation patterns. The turbulence characteristics are important to the vertical distribution of bubbles and the determination of entrainment and de-entrainment rates.

Physical Processes

The exchange of TDG is considered to be a first order process where the rate of change of atmospheric gases is directly proportional (linear relationship) to the ambient concentration. The driving force in the transfer process is the difference between the TDG concentration in the water

and the saturation concentration with the air. The saturation concentration in bubbly flow will be greater than that generated for non-bubbly flow where the saturation concentration is determined at the air-water interface. The flux of atmospheric gasses across the air-water interface is typically described by Equation 1.

$$J = K_l(C_s - C) \qquad \text{Equation 1}$$

Where:

J	=	gas flux (mass per surface area per time)
K_l	=	the composite liquid film coefficient
C_s	=	the saturation concentration (mass per volume)
C	=	the ambient concentration in water (mass per volume)

The rate of change of concentration in a well-mixed control volume, $\frac{dC}{dt}$, can be estimated by multiplying the mass flux by the surface area and dividing by the volume over which transfer occurs as shown by Equation 2:

$$\frac{dC}{dt} = K_l \frac{A}{V}(C_s - C) \qquad \text{Equation 2}$$

Where:

A	=	the surface area associated with the control volume
V	=	the volume of the waterbody over which transfer occurs

This relationship shows the general dependencies of the mass transfer process. In cases where large volumes of air are entrained, the time rate of change of TDG concentrations can be quite large, as the ratio of surface area to volume becomes large. The entrainment of air will also result in a significant increase in the saturation concentration of atmospheric gases, thereby increasing the driving potential over which mass transfer takes place. Outside of the region of aerated flow during transport through the pools, the contact area is limited to the water surface and the ratio of the surface area to the water volume becomes small, thereby limiting the change in TDG concentration. The turbulent mixing will influence the surface renewal rate and hence the magnitude of the exchange coefficient K_l.

Equation 2 can be integrated, provided the exchange coefficient, area, and volume are held constant over the time of flow. The initial TDG concentration at time=0 is defined as C_i and the final TDG concentration time=t is defined as C_f shown in Equation 3. The resultant concentration C_f exponentially approaches the saturation concentration for conditions where the

term $K_t \frac{A}{V}$ is large. The final concentration becomes independent of the initial concentration under these conditions.

$$C_f = C_s(1 - e^{-K_t \frac{A}{V} t}) + C_t e^{-K_t \frac{A}{V} t} \qquad \text{Equation 3}$$

Modeling TDG Transfer

The TDG exchange process involves the coupled interaction of project hydrodynamics and mass transfer between the atmosphere and the water column. Mechanistic models of TDG transfer must simulate the two-phase (liquid and gas phases) flow conditions that govern the exchange process. Several mechanistic models have been developed to simulate the TDG exchange in spillway flows.

Orlins and Gulliver (2000) solved the advection-diffusion equation for spillway flows at Wanapum Dam for different spillway deflector designs. Physical model data were used to develop the hydraulic descriptions of the flow conditions throughout the stilling basin and tailrace channel. The model results were also compared to observations of TDG pressure collected during field studies of the existing conditions.

A second model developed by Urban et al. (2000), used the same mass transport relationships together with the hydraulic descriptions associated with plunging jets. This approach does not require the specific hydraulic information to be derived from a physical model, but it can be applied to any hydraulic structure that has plunging jet flow. This model accounted for the TDG exchange occurring across the bubble-water interface and the water surface. This model was calibrated to observations of TDG exchange at The Dalles Lock and Dam (The Dalles) and was developed as part of the U.S. Army Corps of Engineers Dissolved Gas Abatement Study (DGAS). This model successfully simulated the absorption and desorption exchange caused by the highly aerated flow during spillway operations.

As a part of its DGAS study, the Corps decided to use empirically derived equations of TDG exchange, based on the recognition that data were not available to support mechanistic models of the mass exchange process at all the projects in the Columbia/Snake River system. The greatest unknowns associated with the development of a mechanistic model of highly aerated flow conditions in a stilling basin revolve around the entrainment of air and subsequent transport of the bubbles. The surface area responsible for mass transfer will require estimates of the total volume and bubble size distribution of entrained air. In addition, the roughened water surface is thought to contribute to the net exchange of atmospheric gasses. The pressure time history of entrained air would also need to be accounted for to determine the driving potential for TDG mass exchange.

A description of the highly complex and turbulent three-dimensional flow patterns in the stilling basin and adjoining tailrace channel would need to be defined for a wide range of operating conditions. The influence of turbulence on both the mass exchange coefficients and redistribution of buoyant air bubbles would also need to be quantified throughout a large channel reach and for a wide range of operating conditions.

The flow conditions generated by spillway flow deflectors have been found to be sensitive to both the unit spillway discharge and submergence of the flow deflector. The presence of flow deflectors has significantly changed the rate of energy dissipation in the stilling basin and promotes the lateral entrainment of flow. These entrainment flows are often derived from powerhouse releases, which reduce the available volume of water for dilution of spillway releases.

TDG Exchange Formulation

The accumulated knowledge generated through observations of flow conditions during spill at Columbia/Snake River projects and in-scale physical models at the Waterways Experiment Station in Vicksburg, MS, along with mass exchange data collected during site-specific near-field TDG exchange studies and from the fixed monitoring stations, has led to the development of a model for TDG exchange at dams throughout the Columbia/Snake river system for the federal hydropower projects. The general framework is based upon the observation that TDG exchange is an equilibrium process that is associated with highly aerated flow conditions that develop below the spillway. It recognizes that flow passing through the powerhouse is not generally exposed to entrained air under pressure and, therefore, does not experience a significant change in TDG pressure. It also recognizes that powerhouse releases can directly interact with the aerated flow conditions below the spillway and experience similar changes in TDG pressure that are found in spill.

The large volume of air entrained into spillway releases initiates the TDG exchange in spill. This entrained air is exposed to elevated total pressures and the resulting elevated saturation concentrations. The exposure of the bubble to elevated saturation concentrations greatly accelerates the mass exchange between the bubble and water. The amount and trajectory of entrained air is greatly influenced by the structural configuration of the spillway and the energy associated with a given spill.

The presence of spillway flow deflectors directs spill throughout the upper portion of the stilling basin, thereby preventing the plunging of flow and transport of bubbles throughout the depth of the stilling basin. Spillway flow deflectors also greatly change the rate of energy dissipation in the stilling basin, transferring greater energy and entrained air into the receiving tailrace channel.

Generally, spill water experiences a rapid absorption of TDG pressure throughout the stilling basin region where the air content, depth of flow, flow velocity, and turbulence intensity are generally high. As the spillway flows move out into the tailrace channel, the net mass transfer reverses and component gases are stripped from the water column as entrained air rises and is vented back to the atmosphere. The region of rapid mass exchange is limited to the highly aerated flow conditions within 1,000 feet of the spillway.

In general, downstream of the aerated flow conditions, the major changes to the TDG pressures occur primarily through the redistribution of TDG pressures through transport and mixing processes. The in-pool equilibrium process established at the water surface is chiefly responsible for changes to the total TDG loading in the river.

One of the more important observations regarding TDG exchange in spillway flow is the high rate of mass exchange that occurs below a spillway. The resultant TDG pressure generated during a spill is determined by physical conditions that develop below the spillway and is independent from the initial TDG content of this water in the forebay. The TDG exchange in spill is not a cumulative process where higher forebay TDG pressures will generate yet higher TDG pressures downstream in spillway flow. The TDG exchange in spill is an equilibrium process where the time history of entrained air below the spillway will determine the resultant TDG pressure exiting the vicinity of the dam.

One consequence of this observation is that spilling water can result in a net reduction in the TDG loading in a system if forebay levels are above a certain value. This was a common occurrence at The Dalles during the high-flow periods during 1997 where the forebay TDG exceeded 130 percent saturation. A second consequence of the rapid rate of TDG exchange in spill flow is that the influence from upstream projects on TDG loading will be passed downstream only through powerhouse releases. If project operations call for spilling a high percentage of the total river flow, the contribution of TDG loading generated from upstream projects will be greatly diminished below this project.

Given the conceptual framework for TDG exchange described above, the average TDG pressures generated from the operation of a dam can be represented by the mass conservation statement using TDG pressure shown in Equation 4:

$$P_{avg} = \frac{(Q_{sp} + Q_e)P_{sp} + (Q_{ph} - Q_e)P_{ph}}{Q_{sp} + Q_{ph}} \qquad \text{Equation 4}$$

Where:

Q_{sp}	=	Spillway discharge [thousands of cubic feet per second (kcfs)]
Q_{ph}	=	Powerhouse discharge (kcfs)
Q_e	=	Entrainment of powerhouse discharge in aerated spill (kcfs)
Q_{se}	=	$Q_{sp} + Q_e$
	=	Effective spillway discharge (kcfs)
Q_{tot}	=	$Q_{sp} + Q_{ph}$
	=	Total river flow (kcfs)
P_{ph}	=	TDG pressure releases from the powerhouse [mm Hg]
P_{sp}	=	TDG pressure associated with spillway flows (mm Hg)
P_{avg}	=	Average TDG pressure associated with all project flows (mm Hg)

This conservation statement assumes the water temperature of powerhouse and spillway flows are similar, and that the heat exchange during passage through the dam and aerated flow region is minimal. Some projects have other water passage routes besides the powerhouse and spillway, such as fish ladders, lock exchange, juvenile bypass systems, and other miscellaneous sources.

These sources of water have generally been lumped into powerhouse flows and are not accounted for separately.

Equation 4 contains three unknowns: Q_e = powerhouse entrainment discharge, $P_{sp} = TDG$ pressure associated with spillway flows, and $P_{ph} = TDG$ pressure associated with powerhouse releases. The TDG pressure associated with the powerhouse release is generally assumed to be equivalent to the TDG pressure observed in the forebay. Numerous data sets support the conclusion that turbine passage does not change the TDG content in powerhouse releases. All of the near-field TDG exchange studies have deployed TDG instruments in the forebay of a project and directly below the powerhouse in the water recently discharged through the turbines. An example of this type of data is shown in Figure 4 during the 1998 post-deflector John Day Lock and Dam (John Day) TDG exchange study (Schneider and Wilhelms, 1999a).

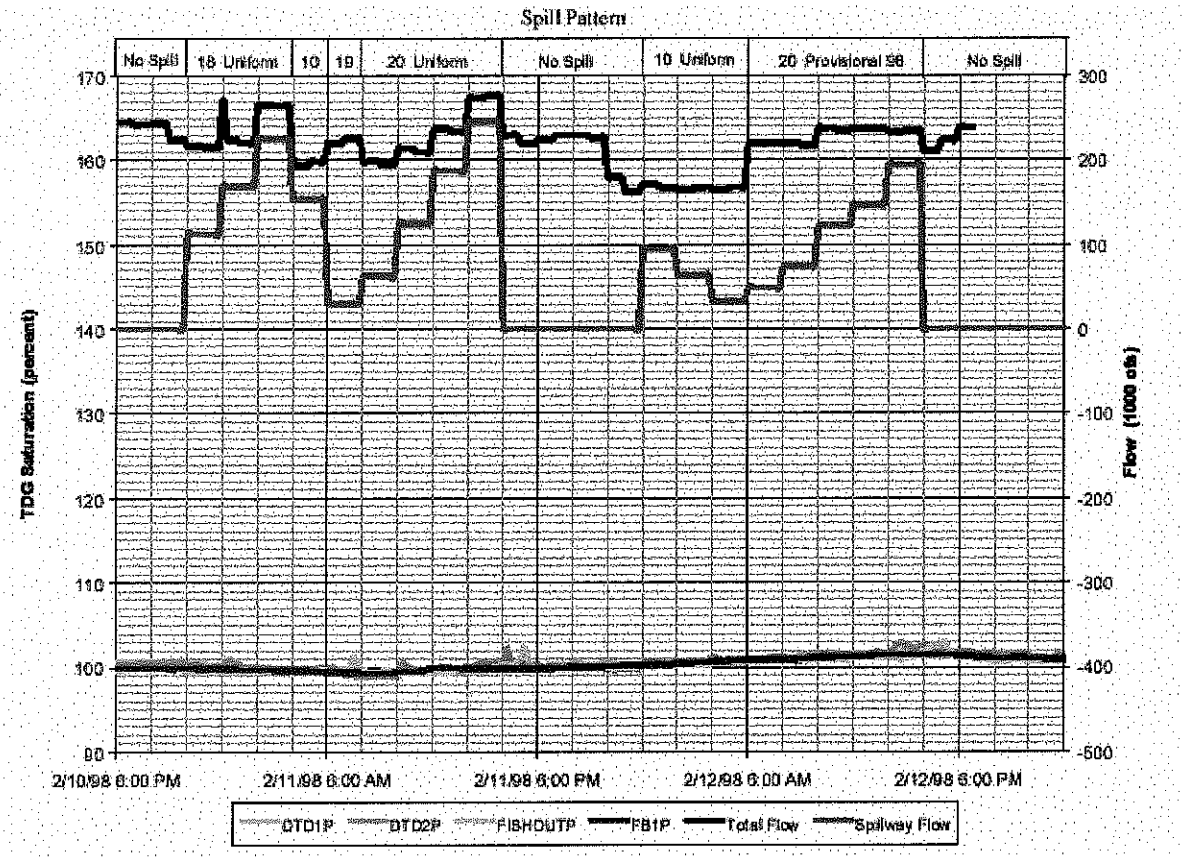

Figure 4: TDS Saturation in the Forebay and Below the Powerhouse Draft Tube Deck of John Day Dam, February 1998

The TDG instruments were deployed in the forebay of John Day (station FB1P) and in the tailwater below powerhouse draft tube deck (station DTD1P and DTD2P), near the fish outfall (FISHOUTP). The TDG pressure was logged on a 15-minute interval at each of these stations

throughout the testing period. All four stations recorded the same TDG saturations throughout the testing period, even during operating events calling for spilling nearly the entire river on February 11 and 12. The TDG pressure from the forebay and tailwater fixed monitoring stations should also be similar during periods of no spill, provided that these stations are sampling water with similar water temperatures. In cases where a turbine aspirates air or air is injected into a turbine to smooth out operation, the above assumption will not hold.

Spillway TDG Exchange

The TDG exchange associated with spillway flows has been found to be governed by the geometry of the spillway (standard or modified with flow deflector), unit spillway discharge, and depth of the tailrace channel. The independent variable used in determining the exchange of TDG pressure in spillway releases is the delta TDG pressure (ΔP) defined by the difference between the TDG pressure (P_{tdg}) and the local barometric pressure (P_{atm}) as listed in Equation 5. The selection of TDG pressure as expressed as the excess pressure above atmospheric pressure accounts for the variation in the barometric pressure as a component of the total pressure.

$$\Delta P = P_{tdg} - P_{atm} \qquad \text{Equation 5}$$

Restating the exchange of atmospheric gases in terms of mass concentrations introduces a second variable (water temperature) into the calculation. The added errors in calculating the TDG concentration as a function of temperature and TDG pressure were the main reasons for using pressure as the independent variable. The TDG concentration would also vary seasonally with the change in water temperature.

The TDG pressure is often summarized in terms of the percent saturation or supersaturation. The TDG saturation (S_{tdg}) is determined by normalizing the TDG pressure by the local barometric pressure as expressed as a percentage. The delta pressure has always been found to be a positive value when spillway flows are sampled. The TDG saturation (S_{tdg}) is determined by Equation 6.

$$S_{tdg} = \frac{P_{tdg}}{P_{atm}} * 100 = \frac{(P_{atm} + \Delta P)}{P_{atm}} * 100 \qquad \text{Equation 6}$$

Unit Spillway Discharge

The TDG exchange associated with spillway flows has been found to be a function of unit spillway discharge (q_s) and the tailrace channel depth (D_{tw}). The unit spillway discharge is a surrogate measure for the velocity, momentum, and exposure time of aerated flow associated with spillway discharge. The higher the unit spillway discharge, the greater the TDG exchange during spillway flows. An example of the dependency between the change in TDG pressure and unit spillway discharge is shown in Figure 5 at Ice Harbor Lock and Dam (Ice Harbor).

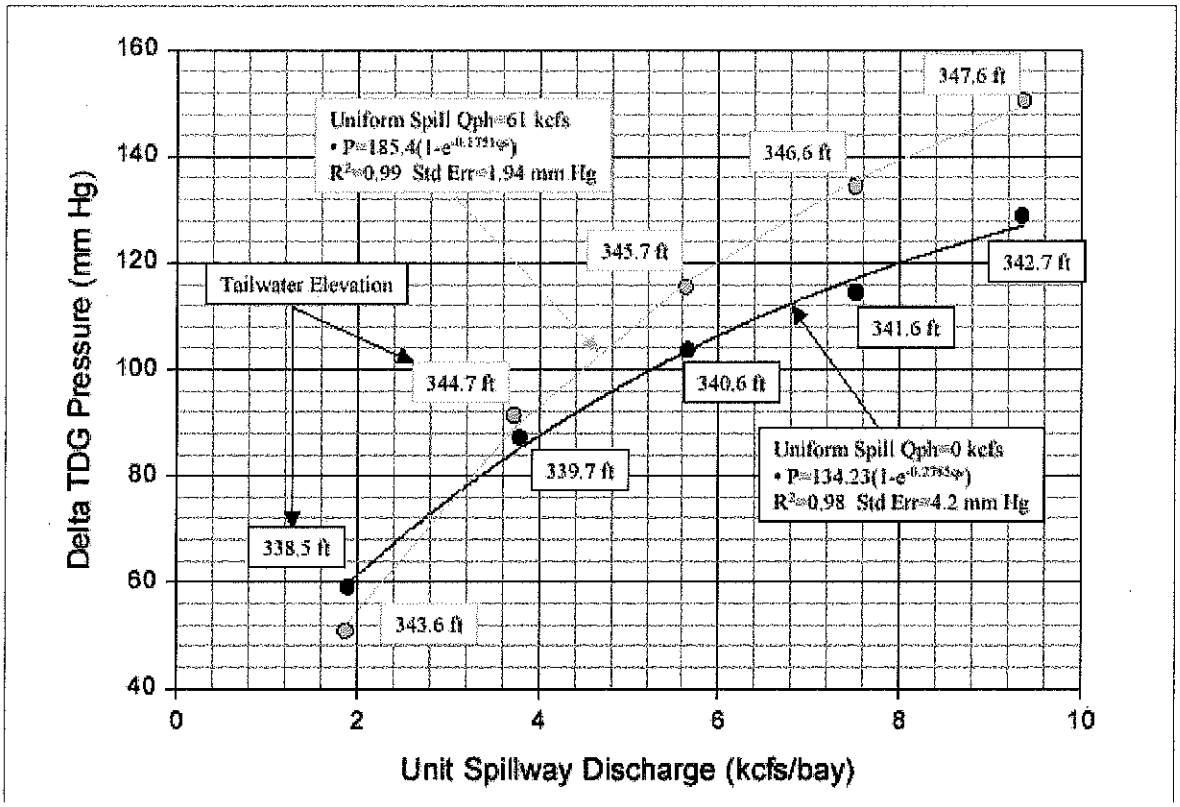

Figure 5: TDG Pressure (Delta P) as a Function of Unit Spillway Discharge and Tailwater Elevation at Ice Harbor Dam, March 1998

This figure shows two sets of tests involving a uniform spill pattern over eight bays with flow deflectors. The two sets of tests were distinguished only by the presence of powerhouse releases. In both cases, the resultant spill TDG pressure was found to be an exponential function of the unit spillway discharge. The determination of a single representative unit discharge becomes problematic in the face of a non-uniform spill pattern. The flow-weighted specific discharge was found to be a better determinant of spillway TDG production in cases where the spill pattern is highly non-uniform. The flow-weighted unit discharge places greater weight on bays with the higher discharges. The following Equation 7 describes the determination of the specific discharge used in the estimation of TDG exchange relationships:

$$q_s = \frac{\sum_{i=1}^{nb} Q_i^2}{\sum_{i=1}^{nb} Q_i} \qquad \text{Equation 7}$$

Where:

q_s = Specific discharge (flow-weighted unit discharge)

Qi = Flow for spill bay i (for nb number of bays)

Depth of Flow

The large amount of energy associated with spillway releases has the capacity to transport entrained air throughout the water column. In many cases, the depth of flow is the limiting property in determining the extent of TDG exchange below a spillway. An example of the influence of the depth of flow on TDG exchange is shown in Figure 5 at Ice Harbor. The only difference between the two sets of data in this figure was the presence of powerhouse flow. The events with powerhouse flow resulted in higher TDG pressure than comparable spill events without powerhouse releases at higher spillway flows. The observed tailwater elevation is also listed in Figure 5 for each test event. The tailwater elevation was about five feet higher during the events corresponding with powerhouse operation.

The depth of flow in the tailrace channel was hypothesized to be more relevant to the exchange of TDG pressure than the depth of flow in the stilling basin because of the influence of the flow deflectors and resultant surface jet, and the high rate of mass exchange observed below the stilling basin. The average depth of flow downstream of the spilling basin was represented as the difference between the tailwater elevation as measured at the powerhouse tailwater gauge and the average tailrace channel elevation within 300 feet of the stilling basin. The tailrace channel reach within 300 feet of the stilling basin was selected because most of the TDG exchange (degassing) occurs in this region. A summary of project features at the time of the Corps DGAS study are listed in Table 3, including stilling basin elevation, deflector elevation, and tailrace channel elevation.

Table 3: Columbia River and Snake River Project Features (April 2001)

Project	Spillway Crest Elev. (ft)	Number Spillways: Deflectors		Deflector Elevation (ft)	Stilling Basin Elev. (ft)	Tailwater Channel Elev. (ft)	Min. Pool (ft)	Normal Tailwater Pool (ft)
		w/	w/out					
Bonneville	24	13	5	14/7[1]	-16	-30	70	20
The Dalles	121	0	23	NA	55	58	155	80
John Day	210	18	2	148	114	125	257	162
McNary	291	18	4	256	228	235	335	267

Source: U.S. Army Corps of Engineers DGAS Study, Appendix G, p. G-8 (USACE, 2001a)
[1]Existing deflectors/New deflectors installed 2001-02

The functional form of the relationship between the change in TDG pressure change and the prominent dependent variables unit spillway discharge and tailrace channel depth of flow, takes the same form as the exponential formulation shown in Equation 3. The delta TDG pressure was found to be a function of the product of the depth of flow and the exponential function of unit spillway discharge as shown in Equation 8.

$$\Delta P = C_1 D_{tw}(1 - e^{-c_2 q_s}) + C_3 \qquad \text{Equation 8}$$

The coefficients C_1, C_2, and C_3 were determined from nonlinear regression analyses. The product of C_1 and the tailwater depth (D_{tw}) represents the effective saturation pressure in Equation 3 while the product of C_2 and the unit spillway discharge (q_s) reflects the combined contribution from the mass exchange coefficient, ratio of surface area to control volume, and time of exposure.

A second formulation used in this study relating the delta TDG pressure and independent variable involves a power series as shown in Equation 9. This equation can also result in a linear dependency between the delta TDG pressure and either tailwater depth or unit spillway discharge. A linear dependency in the tailwater depth occurs when C_2=1 and C_3=0. A linear dependency between TDG pressure and unit spillway discharge occurs when C_2=0 and C_3=1.

$$\Delta P = C_1 D_{tw}^{C_2} q_s^{C_3} + C_4 \qquad \text{Equation 9}$$

Entrainment of Powerhouse Flow

The interaction of powerhouse flows and the highly aerated spillway releases can be considerable at many of the projects. Observations of the flow conditions downstream of projects where the powerhouse is adjacent to the spillway often indicate a strong lateral current directed toward the spillway. The presence of Bradford and Cascade Islands at Bonneville eliminates the potential entrainment of powerhouse flow into aerated spillway releases.

The clearest example of the influence of the entrainment of powerhouse flow on TDG exchange was documented during the near-field TDG exchange study at Little Goose. The study at Little Goose was conducted during February 1998 when the ambient TDG saturation in the Snake River ranged from 101 to 103 percent. The test plan called for adult and juvenile fish passage spill of up to 60 kcfs with the powerhouse discharging either 60 kcfs or not operating. The cross-sectional average TDG pressure in the Snake River below Little Goose was determined from seven separate sampling stations located across the river from the tailwater FMS. The project operations and resultant TDG saturation are summarized in Figure 6 where the observations from the forebay and tailwater fixed monitoring stations are shown as LGS and LGSW, the cross-sectional average TDG saturation at the tailwater FMS is labeled $T5_{avg}$, and the flow-weighted average TDG saturation assuming no entrainment of powerhouse flow is labeled FWA (flow-weighted average).

The TDG saturation estimated by assuming that powerhouse releases were available to dilute spillway flows during this test (FWA) were significantly less than estimates derived from averaging information from the seven sampling stations at the tailwater fixed monitoring station ($T5_{avg}$). This study demonstrated that nearly all of the powerhouse flows from Little Goose were entrained and acquired TDG pressures similar to those in spillway flows during this study.

The circulation patterns below the dam during the test clearly supported the TDG data indicating high rates of entrainment of powerhouse flows into the stilling basin.

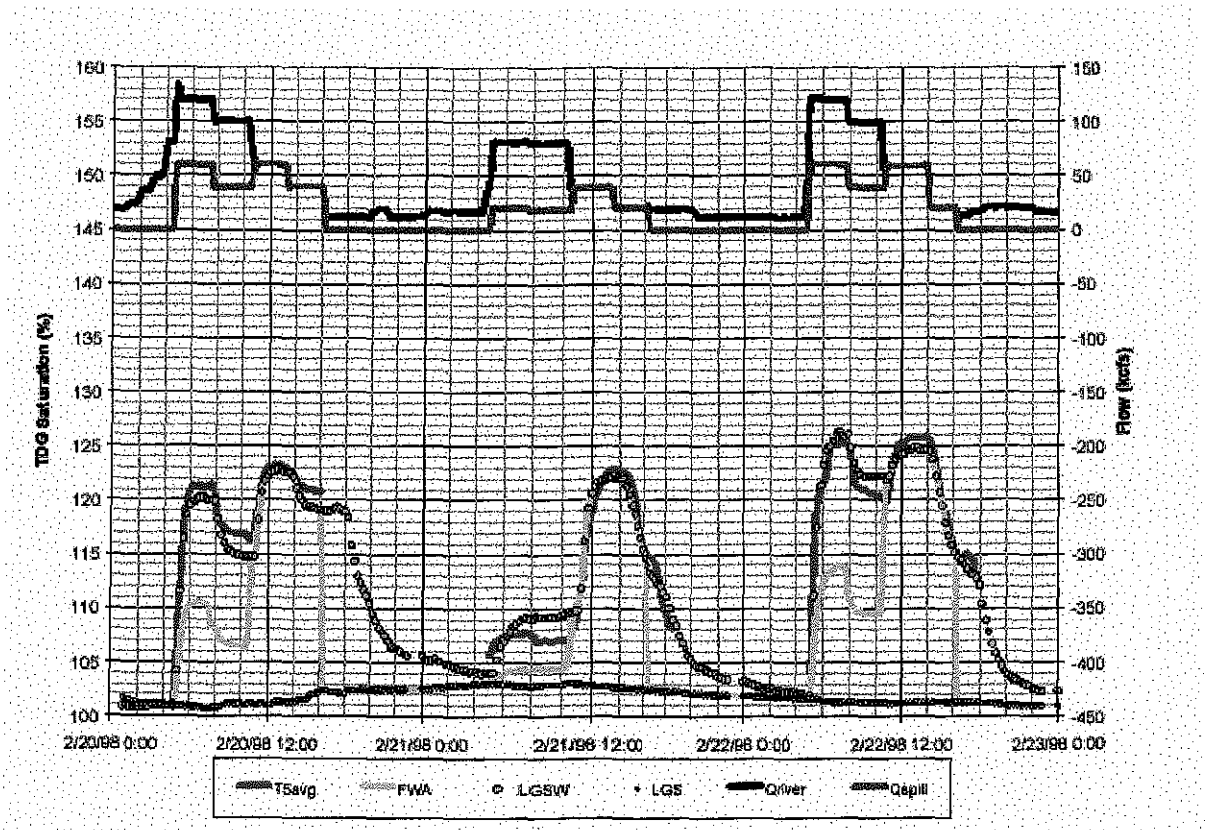

Figure 6: Project Operation and TDG Saturation at Little Goose Dam, February 1998 ($T5_{avg}$ Average TDG Level at Tailwater FMS, LGS- Forebay FMS, LGSW- Tailwater FMS, FWA- Flow Weighted Average Assuming No Entrainment)

The entrainment of powerhouse flow was modeled as a simple linear function of spillway discharge. The relationship shown in Equation 10 was used to estimate the entrainment discharge for each project. The coefficients C_1 and C_2 are project-specific constants. The entrainment of powerhouse flow was assumed to be exposed to the same conditions that spillway releases encounter and, hence, achieve the same TDG pressures.

$$Q_e = C_1 Q_{sp} + C_2 \qquad \text{Equation 10}$$

The loading capacity of the river segments identified for this TMDL are the water quality standard, namely 110 percent of saturation relative to atmospheric pressure.

Analysis of TDG Loading Capacity

Linkage of TDG Loading to the Criteria

As discussed above, the fundamental process that elevates TDG is gas transfer between the air and water at the boundary of entrained bubbles, driven by differential gas pressures. For any given spill volume and tailwater depth, the excess pressure over ambient barometric pressure, ΔP, can be predicted. The mass loading of air that is associated with any given ΔP will depend on water temperature. However, this mass loading is of less importance than ΔP, since it is ΔP that drives whether gas bubble trauma will occur. For these reasons, using excess pressure rather than mass loading to express loading capacity is appropriate for this TMDL, and is supported by the Clean Water Act's allowance for the use of "other appropriate measures" in the development of TMDLs.

To determine the TMDL loading capacity, ΔP can be directly related to the TDG water quality criteria, as describe in Equation 6:

$$S_{tdg} = \frac{(P_{atm} + \Delta P)}{P_{atm}} * 100$$

If S_{tdg} is set at the criterion of 110 percent saturation, the equation can be rearranged to establish a ΔP loading capacity (ΔP_{lc}):

$$\Delta P_{lc} = P_{atm} * 0.1$$

To choose a critical barometric pressure P_{atm} for establishing a loading capacity, the 95th percentile low pressure was determined. This pressure varies from 743 mm Hg at the McNary forebay to 754 mm Hg in the Bonneville tailwater. Therefore, the loading capacity for the Lower Columbia River is set to ΔP of 75 mm Hg.

Identification of Sources

There are four sources of TDG within the geographic scope of this TMDL. They are:

1. McNary Dam
2. John Day Dam
3. The Dalles Dam
4. Bonneville Dam

No other significant sources of elevated TDG exist in the Lower Columbia River, other than increases in TDG caused by natural changes in barometric pressure, temperature, or biological activity.

Water entering the portion of Lower Columbia River covered by this TMDL at times exceeds the TDG standard at the upstream boundary. Future TMDLs for the Mid-Columbia and Lower Snake rivers will address upstream sources and compliance with a load allocation at the upstream boundary of this TMDL. This TMDL addresses those loads of TDG introduced by dams on the Lower Columbia River that fall within both Oregon and Washington below the confluence of the Snake and Columbia rivers.

The discussion of gas generation at each dam provided in this section is based on the U.S. Army Corps of Engineers analysis reported in the DGAS report (USACE, 2001a) and other sources. The information is provided to illustrate processes at the dams with their configuration at the time of the studies described. As structural modifications are made at the dams, the specific gas generation equations will change.

Analysis of Current Conditions

Data Sources

TDG data were available on many of the projects from several sources: the fixed monitoring station (FMS) system; near field (tailrace) and spillway performance tests; and in-pool transport and dispersion tests. Operational data were obtained from each project detailing the individual spillway and turbine discharge on an interval ranging from five minutes to one hour. These sources of data are discussed below. With these data sources, the most appropriate analysis was selected for each project. Individual mathematical relationships were developed on a project-by-project basis.

Data Quality

TDG data collected in the Columbia River has undergone rigorous evaluation for data quality. For the TDG controlled spill studies, Wilhelms, Carroll, and Schneider (1997) reported on a workshop attended by a team of experts who evaluated the quality of data collections and recommended area for improvement. The workshop built on previous data quality evaluations.

The U.S. Army Corps of Engineers and the U.S. Geological Survey collect FMS data jointly following rigorous quality control. Basic data quality procedures are provided in the annual Plan of Action (e.g., USACE, 2001b). Detailed methods and quality assurance data are reported by the U.S. Geological Survey (e.g., Tanner and Johnston, 2001). The Corps annual water quality reports provide detailed data quality analysis (e.g., USACE, 2000).

In general, the data quality assurance/quality control procedures for the source information used in this TMDL meet or exceed the standards applied by the Washington State Department of Ecology and the Oregon Department of Environmental Quality for their own data collection and analysis for TMDL development.

The Fixed Monitoring Station (FMS) Data

The TDG data from the FMSs consisted of remotely monitored TDG pressure, dissolved oxygen, water temperature, and atmospheric pressure from a fixed location in the forebay and tailwater of each project. Data from the FMSs provide a continuous record of TDG throughout the season, capturing detailed temporal and extreme events. However, the FMSs provide only limited spatial resolution of TDG distribution. In some cases, the TDG observed in the tailwater at the FMS location was not representative of average spillway conditions and misrepresented the TDG loading at a dam.

Spillway Performance Tests and Near-Field Studies

Spillway performance tests and near-field tailwater studies were conducted at several projects to define the relationship between spill operation and dissolved gas production more clearly. Water temperature, TDG, and dissolved oxygen were monitored in the immediate tailrace region, just downstream of the project stilling basin. These observations provided a means to relate the local TDG saturation to spill operations directly, and to define gas transfer in different regions of the tailrace area. Manual sampling of TDG pressures in spillway discharges from several bays was conducted downstream of the aerated flow regime at Lower Granite Lock and Dam, Little Goose Lock and Dam, Ice Harbor, and The Dalles (Wilhelms 1995); and John Day, Lower Monumental Lock and Dam, and Bonneville Lock and Dam (Wilhelms, 1996).

In these studies, automated sampling of TDG pressures in spillway discharges during uniform and standard spill patterns was conducted with an array of instruments in the stilling basin and tailwater channel of all the projects in the study area with the exception of Lower Granite. Automated sampling of TDG levels provide the opportunity to assess three-dimensional characteristics of the exchange of TDG immediately downstream of the stilling basin on a sampling interval ranging from five to 15 minutes. The integration of the distribution of flow and TDG pressure can yield estimates of the total mass loading associated with a given event. These tests were of short duration, generally lasting only several days and, therefore, pertain to the limited range of operations scheduled during testing.

In-Pool Transport and Dispersion Studies

During the 1996 spill season, in-pool transport and dispersion investigations were conducted to define the lateral mixing characteristics between hydropower and spillway releases. Water temperature, TDG levels, and dissolved oxygen were measured at several lateral transects located over an entire pool length. These studies focused on the lateral and longitudinal distribution of TDG throughout a pool during a period lasting from a few days to a week. In-pool transport and mixing studies were conducted below Little Goose, Lower Monumental, Ice Harbor, John Day, The Dalles, and Bonneville during the 1996 spill season. In most cases, a lateral transect of TDG instruments was located below the dam to establish the level of TDG entering the pool, with additional transects throughout the pool. These studies provided observations of the TDG saturation in project releases as they moved throughout an impoundment. However, only a limited range of operations was possible during the relatively short duration of these tests.

Operational Data

Operational data were obtained from each project detailing the spillway and powerhouse unit discharge on time intervals ranging from five minutes to one hour. The average hourly total spillway and generation releases, and forebay and tailwater pool elevations were summarized in the DGAS database. The tailwater pool gauge was generally located below the powerhouse of each dam. The tailwater elevation at the powerhouse was found to be within one foot of the water elevation downstream of the stilling basin in most instances.

Data Interpretation

The objective of this analysis was to develop mathematical relationships between observed TDG and operational parameters such as discharge, spill pattern, and tailwater channel depth. These relationships were derived with observations from the FMSs and spillway performance tests. However, before the analysis could be conducted, the monitored data had to be evaluated to determine its reliability for this kind of analysis. For example, the monitored TDG data from the FMSs provide a basis for defining the effects of spillway operation on dissolved gas levels in the river below a dam, but the following limitations should be noted:

- The FMSs sample water near-shore, which may not reflect average TDG levels of the spill. The monitor sites were, in general, located on the spillway side of the river to measure the effects of spillway operation. However, with a non-uniform spill distribution and geometry across the gates of the spillway, the FMS may be more representative of the spillbays closest to the shore. Outside spillbays, without flow deflectors can create elevated TDG levels downstream from these bays compared to adjacent deflectored bays. A spill pattern that dictates higher unit discharges on these outside bays can further elevate the TDG levels downstream of these bays relative to the releases originating from the deflectored interior bays.

- Depending upon the lateral mixing characteristics, the FMS downstream of a project may be measuring spillway releases that have been diluted with hydropower releases. The tailwater

FMSs below The Dalles and Bonneville are located in regions where substantial mixing has occurred between generation and spillway discharges. Under most conditions, the TDG saturation of generation releases is less than the TDG level associated with spillway releases. The TDG at the tailwater FMS will be a function of the discharge and level of TDG from both generation and spillway releases. Obviously, if there is no spill, then the monitored TDG levels will reflect the TDG saturation released by the hydropower facility.

- Passage of generation flows through a power plant does not significantly change the TDG levels associated with this water. However, there can be a significant near-field entrainment of powerhouse flow by spillway releases at some projects, especially if flow deflectors are present. Observed data suggest that, under these conditions, some portion of the powerhouse discharges will be subjected to the same processes that cause absorption of TDG by spillway releases. In these cases, the TDG levels measured immediately downstream of a spillway will be associated with the spillway release plus some component of the powerhouse discharge.

The observations of tailwater TDG pressure need to be paired up with project operations to conduct an evaluation of the data. A set of filters or criteria were established to select correctly-paired data for inclusion in this analysis. The travel time for project releases from the dam to the tailwater FMS was typically less than two hours and steady-state tailwater stage conditions were usually reached within this time period. Thus, the data records were filtered to include data pairs corresponding with constant operations of duration greater than two hours to exclude data corresponding with unsteady flow conditions. This filtering criterion eliminated data associated with changing operations and retained only a single observation for constant operating conditions equal to three hours in duration.

- *Manual and Automated Inspections for Obviously Inaccurate Observations.* An automated search for values above or below expected extremes identified potential erroneous and inaccurate data in the database. These data were inspected and, if appropriate, excised from the database.

- *Comparison of Measurements from Forebay and Tailwater Instruments During Non-Spill Periods.* During the non-spill periods, downstream measurements should approach the forebay concentration when only the hydropower project is releasing water. Inspection of the data was conducted to identify errors when this condition was not met.

- *Comparison of Measurements from Redundant Tailwater TDG Monitors, if Available.* TDG tailwater data was rejected when measurements of two instruments at the same site varied by more than three percent saturation.

McNary Dam

The TDG Exchange

A TDG exchange field investigation was conducted at McNary during February 11-13, 1996, with the study summarized in Wilhelms and Schneider (1997a). The study consisted of sampling

TDG pressures below the spillway during spillway discharges ranging from 50 to 285 kcfs. Two different spill patterns were investigated during this study, standard and uniform.

The study findings indicated that the TDG production was directly related to the unit spillway discharge. The TDG saturation ranged from 108 to 135 percent during the study for unit spillway discharges ranging from two to 17 kcfs/bay. The influence of the operation of spillway bays without flow deflectors was found to increase the TDG exchange for comparable unit spill discharges. The relatively small total river flows and associated range in tailwater elevations resulted in test spill conditions corresponding with tailwater elevations ranging from 265.5 to 269.0 feet above mean sea level (fmsl).

Regression

The TDG production during spillway releases from McNary, as defined by . $P = P_{tw} - P_{bar}$, was found to be a power function of tailwater depth and the specific discharge as shown in Equation 11. The regression equation was based on data collected during the 1997 spill season. The data filtering resulted in 172 observations. The delta TDG pressure ranged from 81.9 mm Hg to a maximum value of 307.6 mm Hg as listed in Table 4. The range in unit spillway discharge ranged from 2.0 kcfs/bay to 21.9 kcfs/bay and the tailwater depth ranged from 30.8 to 40.5 feet.

$$\Delta P = D_{tw}^{0.647} q_s^{0.969} + 82.14 \qquad \text{Equation 11}$$

Where:

ΔP	=	P_{tw} - P_{bar}
P_{tw}	=	TDG pressure at the tailwater FMS (mm Hg)
q_s	=	Flow-weighted unit spillway bay discharge (kcfs/bay)
D_{tw}	=	Tailrace channel depth (feet) (E_{tw} - E_{ch})
E_{tw}	=	Elevation of the tailwater (ft)
E_{ch}	=	Average elevation of the tailrace channel (320 fmsl)
P_{bar}	=	Barometric pressure at the tailwater FMS (mm Hg)

Table 4: Statistical Summary of Regression Variables for McNary Dam

	Delta Pressure ΔP (mm/Hg)	Unit Spillway Discharge q_s (kcfs/bay)	Tailwater Depth D_{tw} (ft)
Number	173	173	173
Minimum	81.9	2.0	30.8
Maximum	307.6	21.9	40.5
Average	191.6	11.7	35.0
Standard Deviation	53.0	5.4	2.2
Source: U.S. Army Corps of Engineers DGAS Study, Appendix G, p. G-29			

The unit spillway discharge was plotted against the observed and calculated tailwater TDG pressure difference in Figure 7.

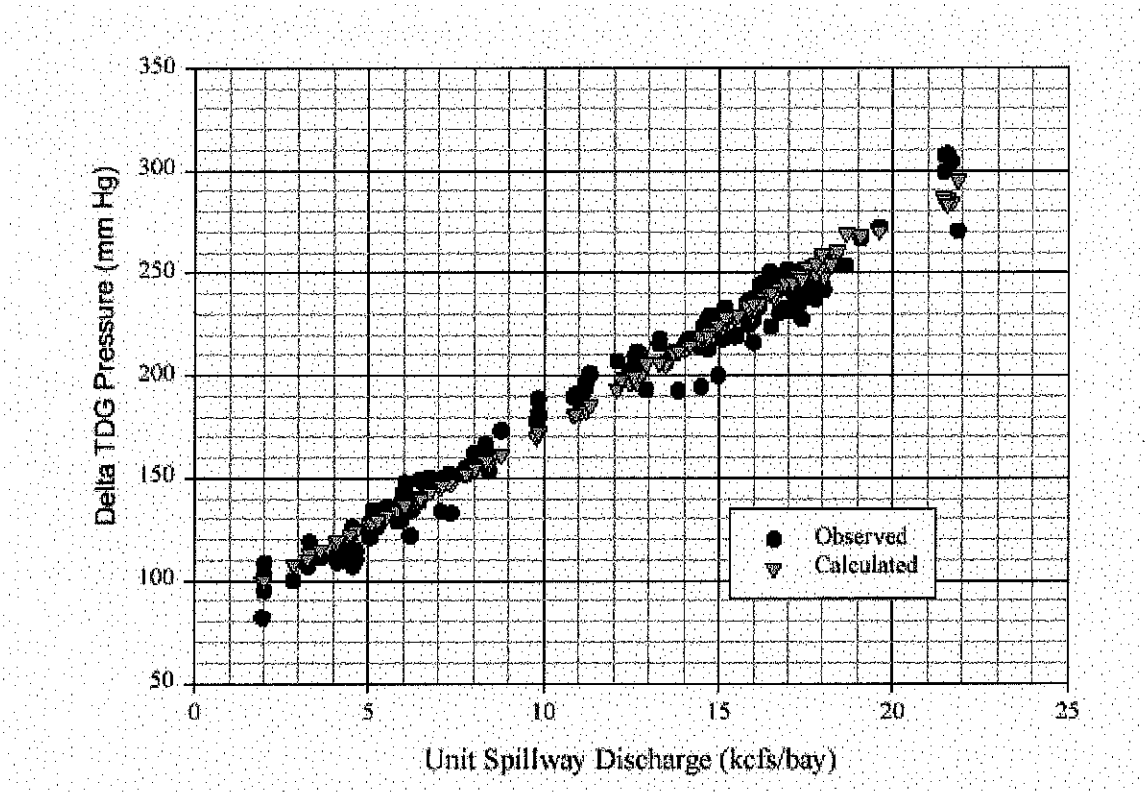

Figure 7: Unit Spillway Discharge versus TDG Pressure Above Barometric Pressure at McNary Dam, 1997

The near linear relationship between the TDG pressure and unit discharge is evident in this figure as the TDG pressure continues to increase as the specific unit discharge becomes large. Much of the variability in the TDG pressure for a constant unit discharge can be accounted for by the variation in the tailrace channel depth. All of the coefficients determined by the nonlinear regression analysis were significant to at least a 99 percent confidence interval as shown in Table 5. This formulation explained much of the variability in the data with an r^2 of 0.97 and a standard error of 9.25 mm Hg.

Table 5: Statistical Summary of Nonlinear Regression at McNary 1997 Spill Season

$\Delta P = D_{tw}^{c1} q_s^{c2} + c3$ Number of Observations n=173 $r^2 = 0.97$ Std Error = 9.26 mm Hg				
Coefficient	Estimate from Regression	Standard Error	t-statistic	Probability
C_1	0.647	0.0693	12.71	<0.0001
C_2	0.969	0.0762	9.35	<0.0001
C_3	82.14	5.89	14.08	<0.0001
Source: U.S. Army Corps of Engineers DGAS Study, Appendix G, p. G-29				

A review of the regression coefficients in Equation 11 reveals that the TDG exchange is relatively insensitive to the variation in the depth of flow below McNary. The response surface for TDG pressure above atmospheric pressure as a function of both unit spillway discharge and tailwater stage is shown in Figure 8.

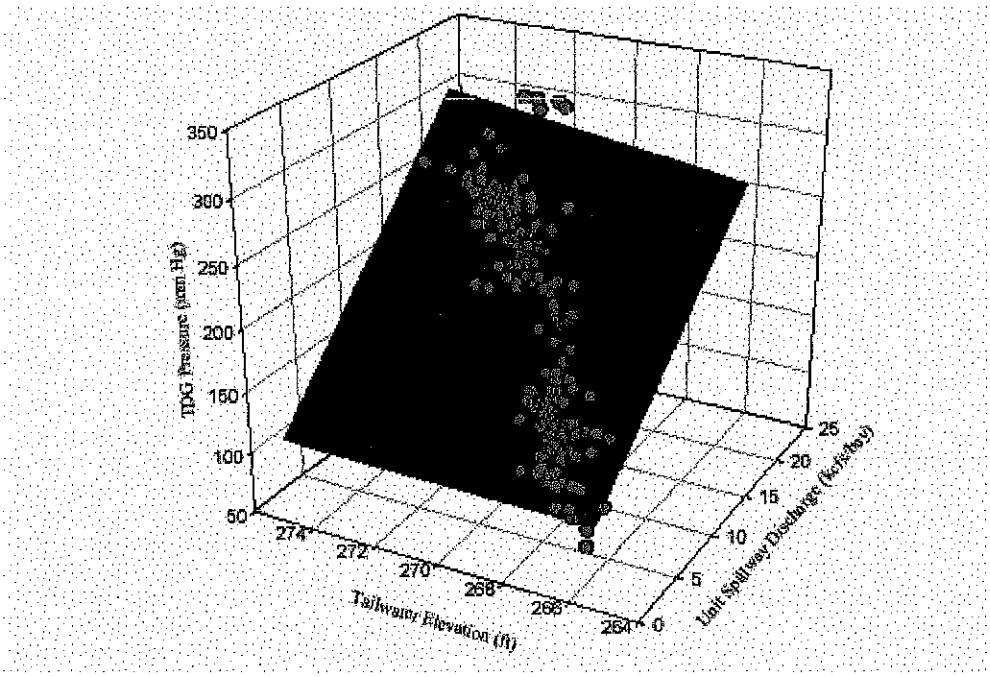

Figure 8: Unit Spillway Discharge, Tailwater Elevation, and TDG Pressure Above Barometric Pressure at McNary Dam, 1997

The response function as defined in Equation 11 was used to create a hindcast of the TDG production observed during the 1997 spill season. The hourly project operation and TDG saturation at the McNary FMSs for June 1998 are shown in Figure 9 along with the estimates of TDG saturation based on Equation 3.

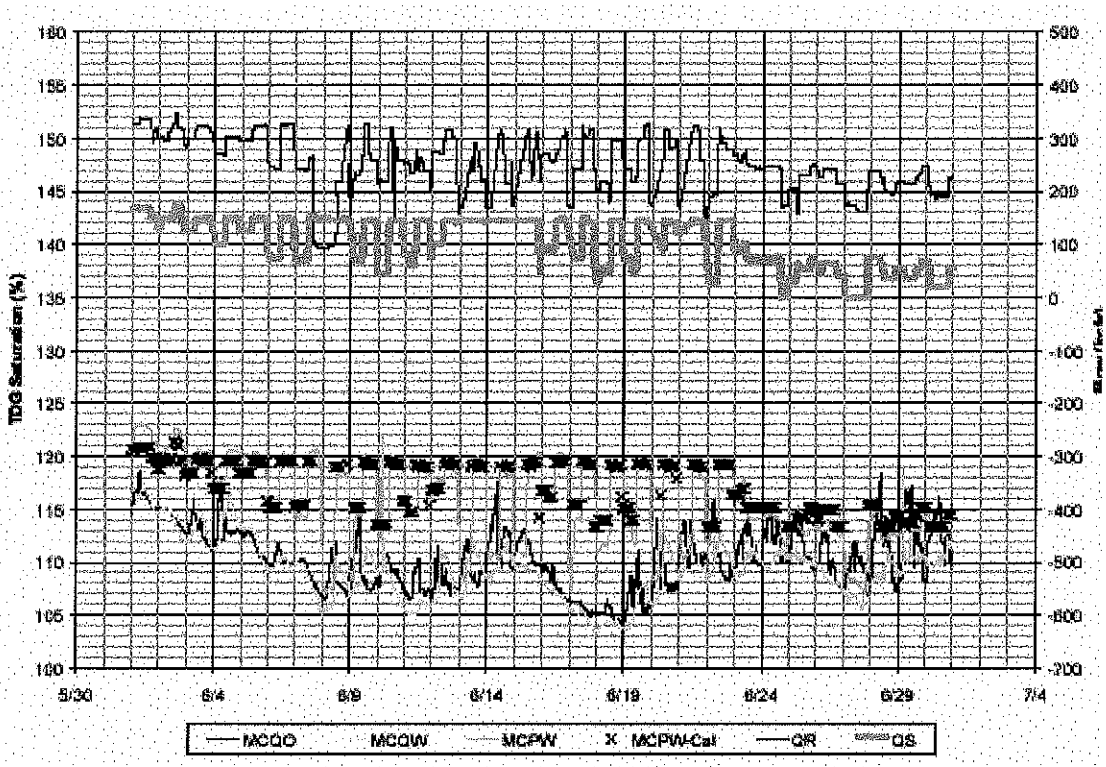

Figure 9: Observed and Estimated TDG Saturation at the Tailwater Fixed Monitoring Station at McNary Dam, May 1997. (MCQO/ MCQW= Observed Forebay TDG, MCPW= Observed Tailwater TDG, MCPW- cal= Calculated Tailwater TDG, QR= Hourly Total River Flow, QS= Hourly Spillway Flow)

In general, the estimated TDG saturation was generally within one percentage point of the observed tailwater TDG saturation. The maximum daily spillway discharge remained constant during much of June with little variation in the production of TDG saturation. The forebay TDG level however, varied. The TDG performance of the spillway bays without flow deflectors was needed to derive the TDG exchange from the exiting spillway. Spillway bays 1, 2, 21, and 22 do not have flow deflectors and are typically operated by raising only the upper leaf of the split leaf vertical gates. This operation results in a jet that plunges into the stilling basin as a fully aerated nap. It should be noted that bay 22 is not typically operated due to absence of a dedicated gate hoist.

The results from the near-field TDG exchange test were used to estimate the TDG exchange characteristics of standard spillway bays. The TDG production resulting from uniform spill

flows from bays 3 through 20 (bays with flow deflectors) was subtracted from the TDG response for the standard spill pattern. The difference in the delta TDG pressure generated between these curves was divided by the discharge from the spillway bays 1, 2, and 21 to arrive at the response relation listed in Equation 12. A linear relationship between the unit spillway discharge and delta TDG pressure was estimated for these end bays at McNary. The non-deflectored bays generated TDG saturation about ten percent greater on average than deflectored bays.

$$\Delta P = 11.35_{qs} + 143.1 \qquad \text{Equation 12}$$

Powerhouse Entrainment

Estimates of the entrainment of powerhouse flows into spillway discharge were not available from this study because of the limited amount of powerhouse discharge and the absence of flow distribution information. Since direct determination of the entrainment of powerhouse flows into the highly aerated conditions below McNary were not practical, it was assumed for this study that the entrainment characteristics of McNary were similar to John Day. The entrainment of powerhouse flows was estimated to average 35 kcfs at McNary and to be independent of the total spillway discharge.

John Day Dam

The TDG Exchange

The installation of spillway flow deflectors at John Day was completed during the winter of 1997-98. Deflectors were installed in spillway bays two through 19 at elevation 148 fmsl. The flow deflectors significantly changed the TDG exchange properties of releases from John Day. A detailed near-field study of TDG exchange below John Day was conducted during February 10-12, 1998, as described by Schneider and Wilhelms (1999a). The study consisted of sampling TDG pressures below the stilling basin during spillway discharges ranging from 36 to 246 kcfs. Several different spill patterns were investigated during this study: uniform bays two through 19, uniform bays one through 20, provisional standard spill pattern, and uniform bays ten through 19.

The study findings indicated that the TDG production was directly related to the unit spillway discharge. The TDG saturation was found to be an exponential function of unit spillway discharge with 115 percent saturation associated with a unit spillway discharge of four kcfs/bay and 120 percent saturation generated for a unit spillway discharge of nine kcfs/bay for the uniform spill pattern. The main limitation of this TDG exchange study was the small range in tailwater elevations (158.4 to 161.3 fmsl).

The influence of standard operating conditions on TDG exchange was further investigated through analyzing the TDG exchange indicated by the FMS during the 1998-spill season. These conditions involved the newly adopted spill pattern, a wider range in tailwater elevation, and both fish passage and involuntary spill discharges. The observed TDG data at the John Day tailwater FMS were used to generate a description of TDG exchange. The filtering of these data

resulted in a total of 51 observations as summarized in Table 6. The observed delta pressure ranged from 108 mm Hg to 184.0 mm Hg for these 51 events. The unit spillway discharge was found to range from 4.3 to 9.4 kcfs/bay and the tailwater depth was found to range from 33.6 to 42.4 feet.

Table 6: Statistical Summary of Regression Variables

	Delta Pressure ΔP (mm/Hg)	Unit Spillway Discharge q_s (kcfs/bay)	Tailwater Depth D_{tw} (ft)
Number	52	52	52
Minimum	108.0	4.3	33.8
Maximum	184.0	9.4	42.4
Average	152.7	7.1	38.7
Standard Deviation	16.7	1.2	1.9
Source: U.S. Army Corps of Engineers DGAS Study, Appendix G, p. G-31			

The functional relationship between TDG production and project operation at John Day was similar to those relationships derived for upper Snake River projects. The delta TDG pressure, as defined by $\Delta P = P_{tw} - P_{bar}$, was found to be proportional to the product of tailwater depth and an exponential function of the specific discharge as shown in Equation 13. Both of the coefficients determined by the nonlinear regression analysis were significant to at least a 99 percent confidence interval as shown in Table 7. This formulation explained much of the variability in the data with an r^2 of 0.84 and a standard error of 6.8 mm Hg.

$$\Delta P = 4.969 D_{tw}(1 - e^{-0.2278 q_s}) \qquad \text{Equation 13}$$

Where:

ΔP = $P_{tw} - P_{bar}$
P_{tw} = TDG pressure at the tailwater FMS (mm Hg)
q_s = Unit spillway bay discharge (kcfs/bay)
D_{tw} = Tailrace channel depth (feet) (Etw-Ech)
E_{tw} = Elevation of the tailwater (fmsl)
E_{ch} = Average elevation of the tailrace channel (125 fmsl)
P_{bar} = Barometric pressure at the tailwater FMS (mm Hg)

Table 7: Statistical Summary of Nonlinear Regression at John Day 1998 Spill Season
(Bays 2 Through 19 With Flow Deflectors)

$\Delta P_{tw} = C_1 * D_{tw} * (1 - \exp(C_2 * q_s))$ Number of observations n=51 $r^2 = 0.84$ Std. Error=6.78 mm Hg				
Coefficient	Estimate from Regression	Standard Error	t-statistic	Probability
C_1	4.969	0.192	25.908	<0.0001
C_2	-0.2278	0.0221	10.3069	<0.0001
Source: U.S. Army Corps of Engineers DGAS Study, Appendix G, p. G-32				

The unit spillway discharge was plotted against the observed and calculated tailwater TDG pressure above the local barometric pressure as shown in Figure 10.

The exponential relationship between the TDG pressure and specific discharge is not as clearly defined at John Day as at other projects with this functional form. Much of the variability in the TDG pressure for a constant unit discharge can be accounted for by the variation in the tailrace channel depth. Equation 13 can be solved directly for the unit specific discharge assuming a delta pressure of 150 mm Hg (120 percent saturation) and a tailwater depth of 35 feet. The resultant unit spillway discharge of about nine kcfs/bay is the solution to this equation. This unit spillway discharge was similar to the spillway capacity determined during the near-field TDG exchange study.

The three-dimensional response surface for Equation 13 is shown in Figure 11 along with the observed data.

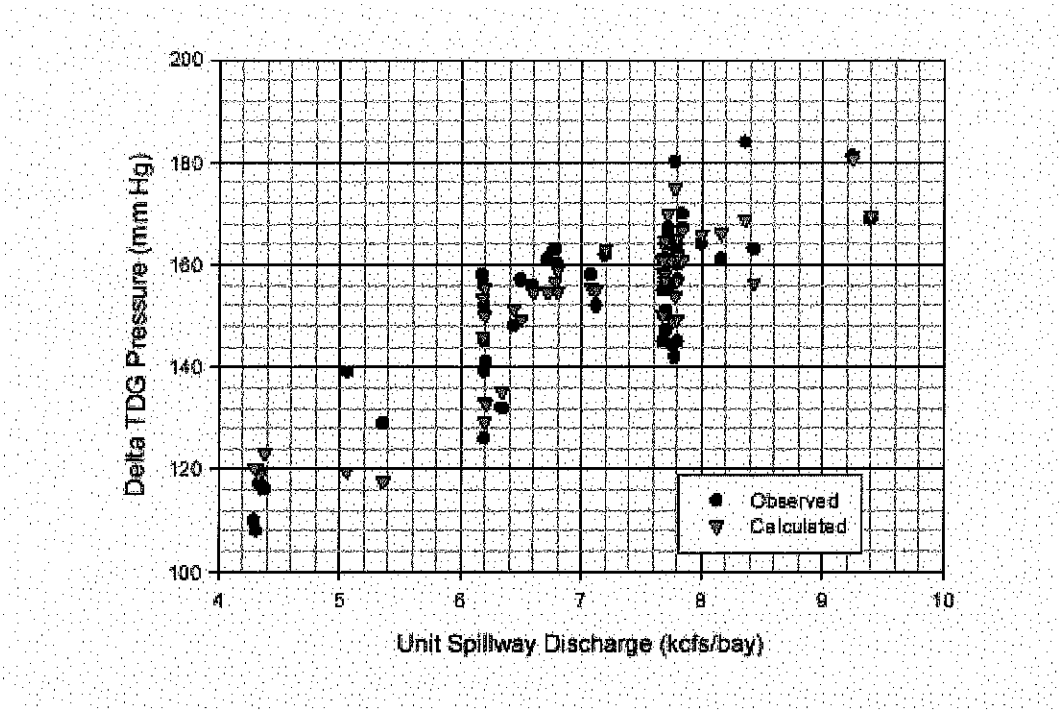

Figure 10: Unit Spillway Discharge versus TDG Pressure Above Barometric Pressure at John Day Dam, 1998

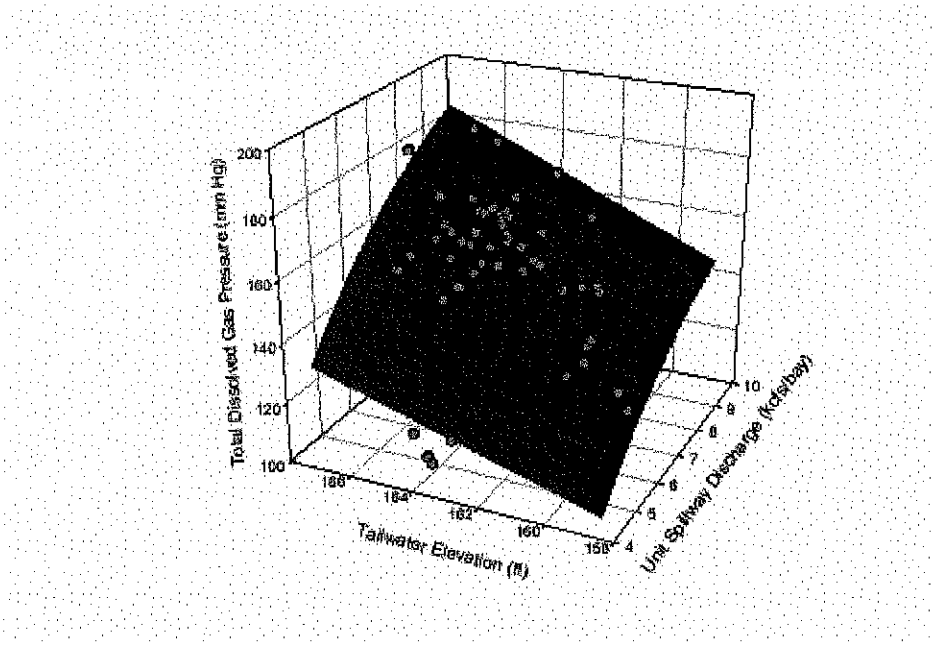

Figure 11: Unit Spillway Discharge, Tailwater Elevation, and TDG Pressure Above Barometric Pressure at John Day Dam, 1998

The TDG pressure increases for a constant unit spillway discharge as the tailrace channel depth increases. The influence of the tailwater depth is significant as evidenced by the slope in the response surface for a constant unit discharge. The upper limit in delta TDG pressure will continue to increase with increasing tailwater elevation. The TDG response during fish passage spill conditions will be different than a comparable spill discharge at a much higher total river flow.

The tailwater TDG saturation as approximated by Equation 13 was used to create a hindcast of the TDG production observed during the 1998 spill season below John Day. The hourly project operation and TDG saturation at the John Day tailwater FMSs (JHAW) for the months of May and June 1998 are shown in Figure 12 along with estimates of the tailwater TDG saturation (JHAW-est).

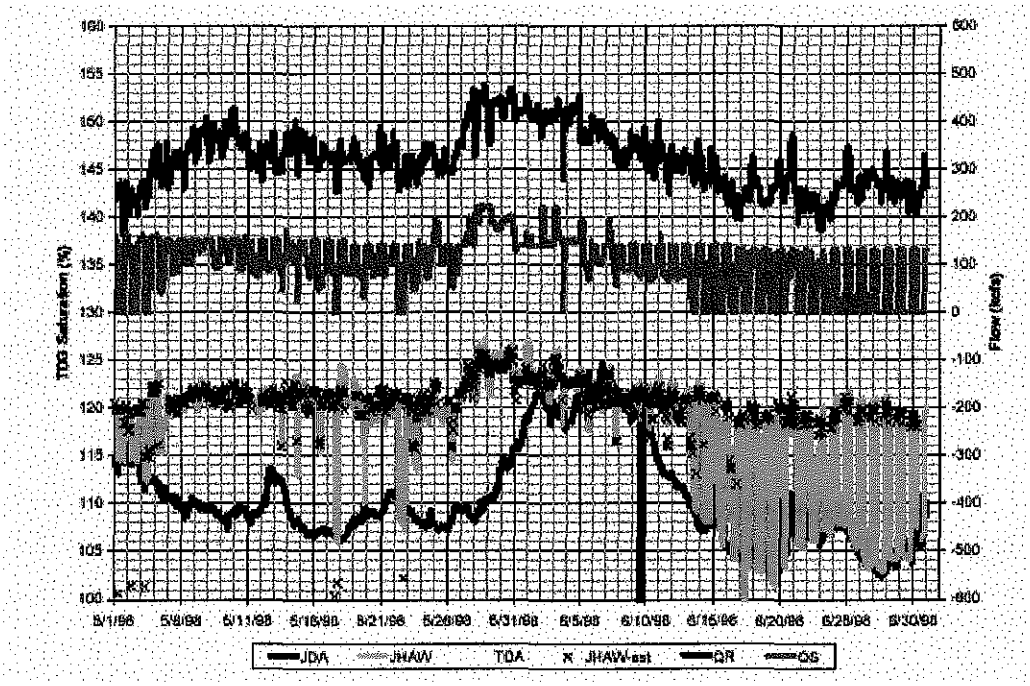

Figure 12: Observed and Estimated TDG Saturation at the Tailwater Fixed Monitoring Station at John Day Dam, May- June 1998. (JDA= Observed Forebay TDG, JHAW= Observed Tailwater TDG, JHAW- est =Calculated Tailwater TDG, QR= Hourly Total River Flow, QS= Hourly Spillway Flow)

In general, the estimated average TDG saturation was generally within seven mm Hg of the observed tailwater TDG pressure. The operating conditions during May 1998 depict both fish passage and involuntary spill conditions. The spill discharges were as high as 230 kcfs for total river flows over 400 kcfs, resulting in tailwater TDG saturation of about 126 percent. The nighttime-only spill operations during the last two weeks of June imply fish passage spill conditions. Note the range in TDG response for the constant nighttime spill operations during this period. The nighttime spill on June 21 corresponded with elevated total river flows and high

tailwater conditions resulted in TDG saturation exceeding 121 percent. A comparable spill two days later during much lower total river flow and tailwater stage conditions resulted in TDG saturations of only 119 percent.

Regression

John Day has two spillway bays without flow deflectors. The TDG response of these two bays were estimated using tailwater TDG pressures observed prior to the installation of the 18 flow deflectors during the 1996 and 1997 spill seasons. A total of 1,137 hourly observations were pooled from the 1996 and 1997 spill seasons. The presence of two flow deflectors located in bays 18 and 19 during the 1997 spill season were not thought to influence the TDG response at the tailwater FMS below John Day. The delta pressure for these events ranged from 84 to 324 mm Hg as shown in Table 8. The unit spillway discharge ranged from 1.8 to 15.3 kcfs/bay and the tailwater depth ranged from 35.6 to 46.7 feet during this sample period.

Table 8: Statistical Summary of Regression Variables

	Delta Pressure ΔP (mm Hg)	Unit Spillway Discharge q_s (kcfs/bay)	Tailwater Depth D_{tw} (ft)
Number	1137	1137	1137
Minimum	84.0	1.8	35.6
Maximum	324.0	15.3	48.7
Average	223.0	5.8	41.1
Standard Deviation	64.6	3.0	2.3
Source: U.S. Army Corps of Engineers DGAS Study, Appendix G, p. G-33			

The delta pressure of a standard spillway bay at John Day was determined to be a function of the unit spillway discharge. The functional form of this relationship is shown in Equation 14 where a threshold delta pressure of 315.3 mm Hg is approached for large unit spillway discharges as shown in Figure 13.

The maximum TDG saturation generated by this relationship approaches 141 percent for a barometric pressure of 760 mm Hg. All of the coefficients determined by the nonlinear regression analysis were significant to at least a 99 percent confidence interval as shown in Table 9. This formulation explained much of the variability in the data with an r^2 of 0.94 and a standard error of 15.9 mm Hg. The TDG exchange for a known spill pattern using bays with and without flow deflectors can be estimated by using both Equations 13 and 14. The average TDG pressure associated with a spill discharge would be determined by calculating a flow-weighted average of the individual spillway bay
responses.

$$\Delta P = 315.29 - 519.09e^{-0.365 q_s} \qquad \text{Equation 14}$$

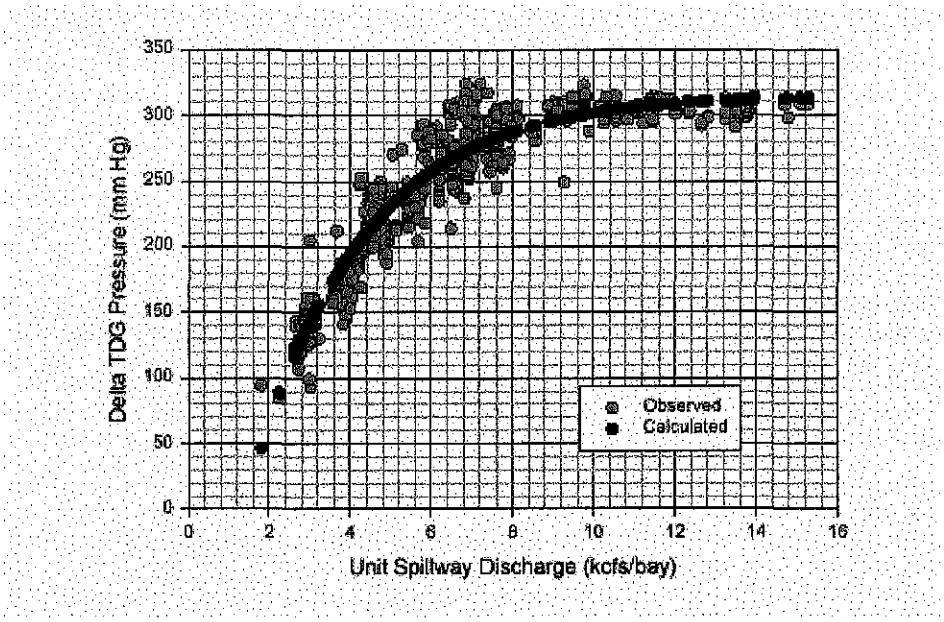

Figure 13: Observed and Calculated Delta TDG pressure at John Day Dam
(Standard Spillway – no Deflector)

Table 9: Statistical Summary of Nonlinear Regression at John Day 1996-1997 Spill Season

$$\Delta P_{tw} = C_1 - C_2 * (\exp(C_3 * q_s))$$

Number of observations = 1137

$r^2 = 0.94$

Std. Error = 15.95 mm Hg

Coefficient	Estimate from Regression	Standard Error	t-statistic	Probability
C_1	315.29	1.647	191.48	<0.0001
C_2	-519.09	10.3867	-49.975	<0.0001
C_3	-0.3649	0.0084	-43.38	<0.0001

Source: U.S. Army Corps of Engineers DGAS Study, Appendix G, p. G-34

Powerhouse Entrainment

The entrainment of powerhouse flows into the highly aerated flow conditions below John Day was estimated from data collected during the 1998 spillway TDG exchange study (Schneider and Wilhelms, 1999a). The average TDG pressure of project and spillway releases was used with a simple mass balance statement of project flows to provide estimates of the effective spillway discharge and entrainment of powerhouse flows. The estimates of the entrainment of powerhouse flows were found to range from five to 60 kcfs average and average about 35 kcfs.

The powerhouse entrainment discharge was not found to vary as a function of the total spillway discharge.

The Dalles Dam

The TDG Exchange

A TDG exchange field investigation was conducted below The Dalles during August 28-29, 1996, with the study summarized in Schneider and Wilhelms (1996a). The study consisted of sampling TDG pressures below the spillway during spillway discharges ranging from 50 to 200 kcfs. Three different spill patterns were investigated during this study: adult, juvenile, and uniform spill patterns.

The study findings indicated that the TDG production was weakly related to the unit spillway discharge. The TDG saturation ranged from 119 to 124 percent during the study for unit spillway discharges ranging from two to 14 kcfs/bay. The influence of the spill pattern was found to be accounted for by representing the total spillway discharge as defined by unit spillway bay discharge. The main limitation of this TDG exchange study was the small range in tailwater elevation (75.7 to 78.3 fmsl).

Regression

The high river flows and spillway discharges during 1997 generally fell outside of the range of conditions scheduled during the 1996 spillway performance test. The application of the TDG production relationship determined during the 1996 near-field study did not replicate TDG conditions observed below The Dalles during the 1997 spill season.

The observed TDG data at The Dalles from the forebay and tailwater FMS were used to generate an alternative description of TDG exchange. The TDG pressures observed at the forebay FMS were assumed to represent the conditions discharged from the powerhouse. The TDG pressures observed at the tailwater FMS were assumed to reflect the average TDG pressures in the Columbia River. The TDG properties of spillway discharge were estimated by performing a simple mass balance of project releases. The hourly data were filtered to retain only those data having constant project operations for a six-hour duration. This criterion was selected to allow steady-state conditions to develop at the tailwater FMS located three miles downstream of the project. This criterion also allowed the inclusion of a single datum for each extended event.

This data filtering resulted in a total of 87 observations as summarized in Table 10. The estimated delta pressure ranged from 143.3 mm Hg to 203.6 mm Hg for these 87 events. The unit spillway discharge was found to range from 4.3 to 19.0 kcfs/bay and the tailwater depth was found to range from 8.3 to 23.3 feet.

Table 10. Statistical Summary of Regression Variables

	Delta Pressure ΔP (mm Hg)	Unit Spillway Discharge q_s (kcfs/bay)	Tailwater Depth D_{tw} (ft)
Number	87	87	87
Minimum	143.3	4.3	8.3
Maximum	206.6	19.0	23.3
Average	178.4	9.6	14.5
Standard Deviation	14.1	3.6	3.6
Source: U.S. Army Corps of Engineers DGAS Study, Appendix G, p. G-35			

The spillway releases from The Dalles, as defined by $\Delta P = P_{tw} - P_{bar}$, was found to be proportional to the product of tailwater depth and the specific discharge as shown in Equation 15. The regression equation was based on data collected during the 1997 spill season. The data filtering resulted in a total of 87 independent observations. The unit spillway discharge was plotted against the estimated and calculated tailwater delta TDG pressure in Figure 14.

The form of the relationship shown in Equation 15 implies the TDG exchange for small spillway discharge will exceed 120 percent as was observed during the 1996 near-field investigation. All of the coefficients determined by the nonlinear regression analysis were significant to at least a 99 percent confidence interval as shown in Table 11. This formulation explained much of the variability in the estimated dependent variable with an r^2 of 0.735 and a standard error of 7.3 mm Hg.

$$\Delta P = D_{tw}^{1.02} q_s^{0.33} + 145.9 \qquad \text{Equation 15}$$

The dual dependency of the delta pressure change on tailwater depth and unit spillway bay discharge is shown in Figure 15.

Table 11. Statistical Summary of Nonlinear Regression at The Dalles 1997 Spill Season

$\Delta P_{tw} = D_{tw}^{C_1} q_s^{C_2} + C_3$
Number of observations = 87
$r^2 = 0.735$
Std. Error = 7.34 mm Hg

Coefficient	Estimate from Regression	Standard Error	t-statistic	Probability
C_1	1.02	0.12	2.69	<0.0086
C_2	0.33	0.12	8.72	<0.0001
C_3	145.9	2.21	66.11	<0.0001
Source: U.S. Army Corps of Engineers DGAS Study, Appendix G, p. G-36				

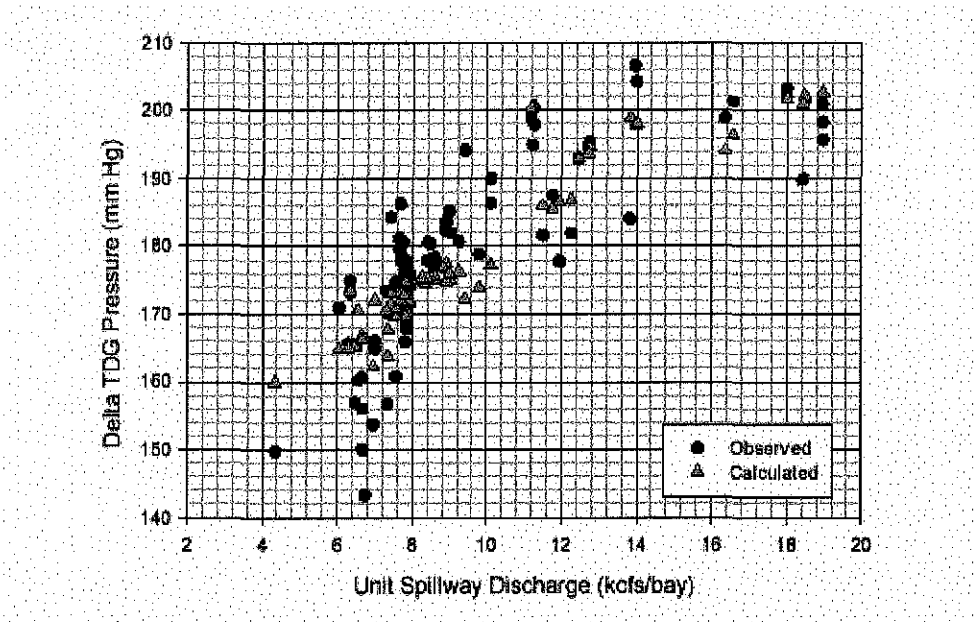

Figure 14: Unit Spillway Discharge versus TDG Pressure Above Barometric Pressure at The Dalles Dam, 1997

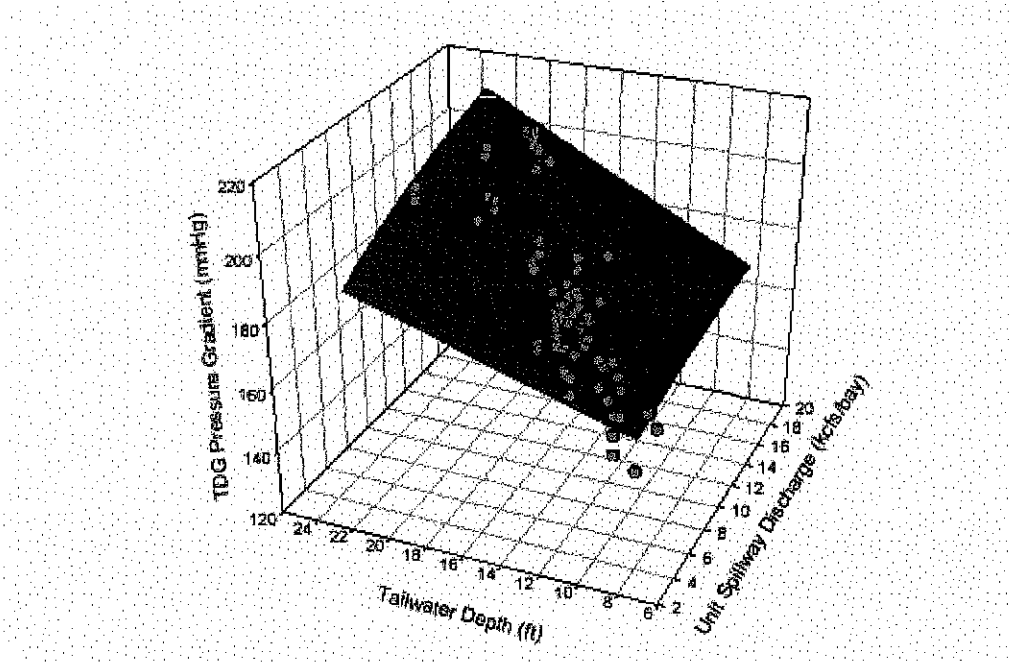

Figure 15: Unit Spillway Discharge, Tailwater Elevation, and TDG Pressure Above Barometric Pressure at The Dalles Dam, 1997

This equation also indicates that the depth of flow accounts for most of the variability in the increase in TDG pressure associated with spillway discharges. The increase in TDG pressure was found to be a linear function of the depth of flow for a constant unit spillway discharge. The tailrace channel depth is a function of the total river flow and the pool elevation of the lower reservoir. This relationship couples the operation of the powerhouse at The Dalles and the storage management in Bonneville pool to the TDG production in spillway releases from The Dalles spillway.

The response function as defined in Equation 15 was used to create a hindcast of the TDG production observed during the 1997 spill season. The hourly project operation and TDG saturation at The Dalles tailwater FMS for June 1997 are shown in Figure 16 along with the estimates of the flow-weighted TDG saturation released from The Dalles based on Equation 15 and observations of TDG pressures in the forebay. In general, the estimated average TDG saturation was generally within seven mm Hg of the observed tailwater TDG pressure.

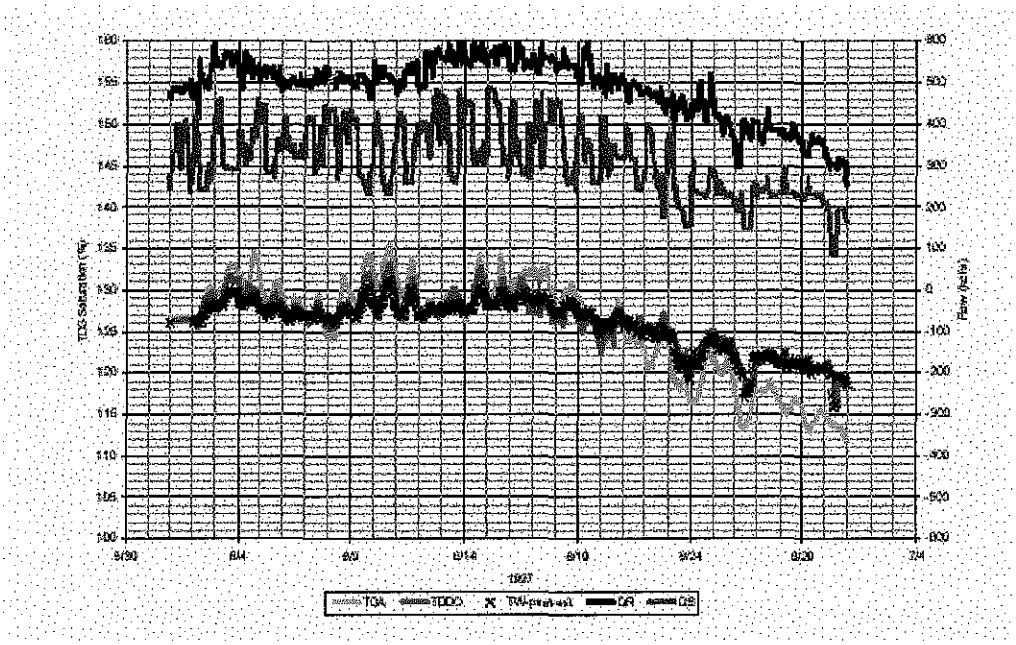

Figure 16: Observed and Estimated TDG Saturation at the Tailwater Fixed Monitoring Station at The Dalles Dam, June 1997. (TDA= Observed Forebay TDG, TDDO= Observed Tailwater TDG, TW-psat-est =Calculated Tailwater TDG, QR= Hourly Total River Flow, QS= Hourly Spillway Flow)

The maximum daily spillway discharge and percent of river spilled varied greatly during June 1997, with spill discharges as high as 480 kcfs. The forebay TDG pressures often were higher than the tailwater TDG pressures, implying a net reduction in TDG conditions in the Columbia River as a result of the operation of The Dalles. The second half of June found the TDG pressures below The Dalles larger than observed at the forebay station, implying a net increase in

TDG conditions in the Columbia River as a result of the operation of The Dalles. The conditions during the latter half of June in 1997 reflect conditions more typical of fish passage spill conditions where spill at The Dalles contributes to higher TDG loading in the Columbia River.

Powerhouse Entrainment

The entrainment of powerhouse water into the aerated spilling basin was assumed to be zero at The Dalles. The powerhouse is located a considerable distance from the spillway. The standard spillway design efficiently dissipates energy in the stilling basin, which minimizes the potential to entrain flow laterally. The extent of aerated flow generally does not extend downstream of the shallow shelf below the stilling basin. The TDG exchange was not found to be large near the downstream limits of the shallow tailwater shelf below the spillway (Schneider and Wilhelms, 1996a).

Bonneville Dam

The TDG Exchange

A description of TDG exchange at Bonneville is needed to evaluate dissolved gas abatement alternatives and develop a system model of TDG properties. The following summarizes the findings of two TDG exchange studies conducted below Bonneville and the TDG production relationships that were derived from this body of work.

The first study was conducted during February 1-4, 2000 and involved measuring TDG pressures and velocities below the Bonneville spillway. The objective of this investigation was to describe the TDG exchange processes associated with non-deflectored bays, deflectored bays, and a combination of deflectored and non-deflectored bays as dictated by the standard spill patterns.

The second test was conducted during May 7-June 7 and involved measuring TDG pressures near the exit of the Bonneville spillway channel. The objective of this test was to investigate the role of tailwater elevation changes on the exchange of TDG associated with spillway releases during standard operating conditions.

The TDG pressures and flow distributions were measured near the exit of the Bonneville spillway channel during the first week in February (Schneider, 1999). A total of 11 TDG instruments were deployed across the channel at fixed locations and logged TDG pressure, water temperature, dissolved oxygen, and instrument depth on a 15-minute interval. The velocity field was also measured near this array of instruments using an Acoustic Doppler Current Profiler. The TDG pressures were then integrated with the velocity field to estimate the TDG loading produced during spillway operations.

The test conditions involved spillway flows over non-deflectored bays, deflectored bays, and a combination of both deflectored and non-deflectored bays. A total of five spill levels corresponding with gates setting of one, two, three, four, and five dogs were investigated for four different spill patterns. ("Dogs" are pawls or cams that drop into holes on the sides of leaf gates on Bonneville and McNary dams. The leaf gates are hoisted by cranes, and the dogs drop in to

keep the gate set at one place. They are spaced approximately a foot apart.) The first day of testing used only non-deflectored bays two, three, 16, and 17 (day one). The spill pattern for the second day of testing involved only deflectored bays eight through 15 with spill flow uniformly distributed (day two). The third day of testing involved a uniform pattern over deflectored bays nine through 15, and non-deflectored bays 16 and 17 (day three). The spill pattern tested on the fourth day involved the standard 1997 spill pattern (day four).

The non-deflectored bays generated the highest TDG saturation for gate setting(s) up through three dogs as shown in Figure 17.

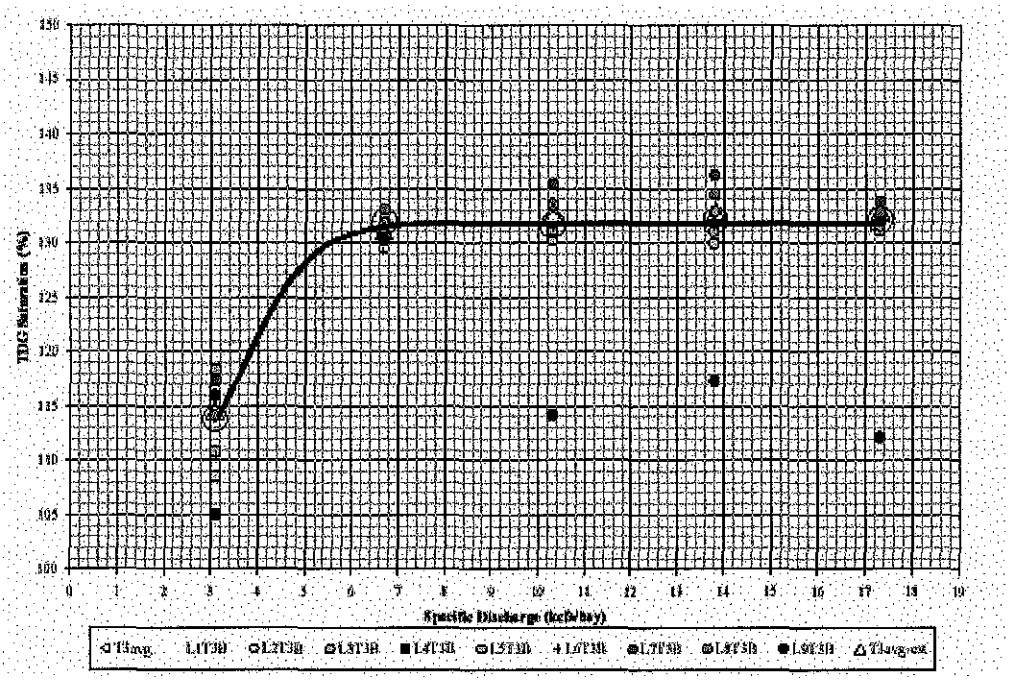

Figure 17: TDG Saturation from Non-deflectored Bays at Exit of the Bonneville Spillway Channel, February 1, 1999

The steady-state TDG saturation at nine sampling stations on transect T3 located at the mouth of the spillway channel are shown in this figure. The stations were labeled L1 through L9 from south to north along this transect. The flow-weighted TDG saturation on this transect is labeled T3avg. During the two-dog setting, the non-deflectored bays generated an average TDG saturation of 132 percent or about 12 percent greater than the comparable flows during day two. The TDG saturation associated with non deflectored bays remained constant for gate settings of two dogs and higher.

The TDG saturation response to the unit spillway discharge over only deflectored bays was nearly linear for gate settings of one through four dogs. This relationship was nearly identical to similar conditions measured during the initial Bonneville spillway performance test (Wilhelms

and Schneider, 1997b). The TDG saturation at two dogs was observed to be about 120 percent on all 11 instruments located across the spillway exit channel. Larger lateral gradients in TDG pressure were observed for higher discharges over the deflectored bays as shown in Figure 18.

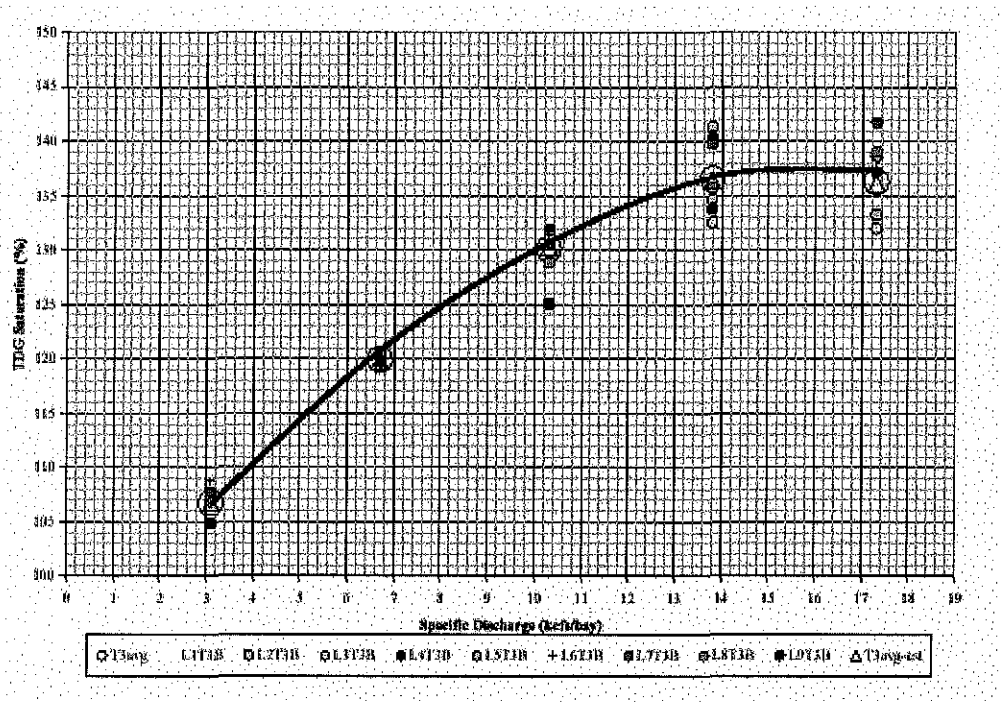

Figure 18: Observed TDG Saturation below Bonneville Spillway during Uniform Flow over Deflected Bays 8-15, February 1-4, 1999

The TDG pressures generated with deflectored spillway releases were observed to be greater than conditions for non-deflectored bays for spillway flows of four dogs and higher.

A flow-weighted specific spillway discharge was determined for the standard spill pattern because of the non-uniform distribution of flow. This representation of unit spillway discharge places more importance on flows from bays with larger discharges. The spill patterns during the five test conditions on day four are shown in Figure 19.

The initial discharge of 50 kcfs on day four had a flow-weighted discharge of over 6 kcfs/bay due to the gap-toothed pattern where a highly non-uniform flow distribution was used. The high percentage of flow over the non-deflectored bays resulted in nearly a constant TDG saturation for the first three test conditions. The slope of the TDG saturation and unit discharge curve approached conditions observed during the uniform patterns on day 3 during spill over both deflectored and non-deflectored bays. The TDG saturation associated with the standard spill pattern was 125 percent and higher for all the test conditions.

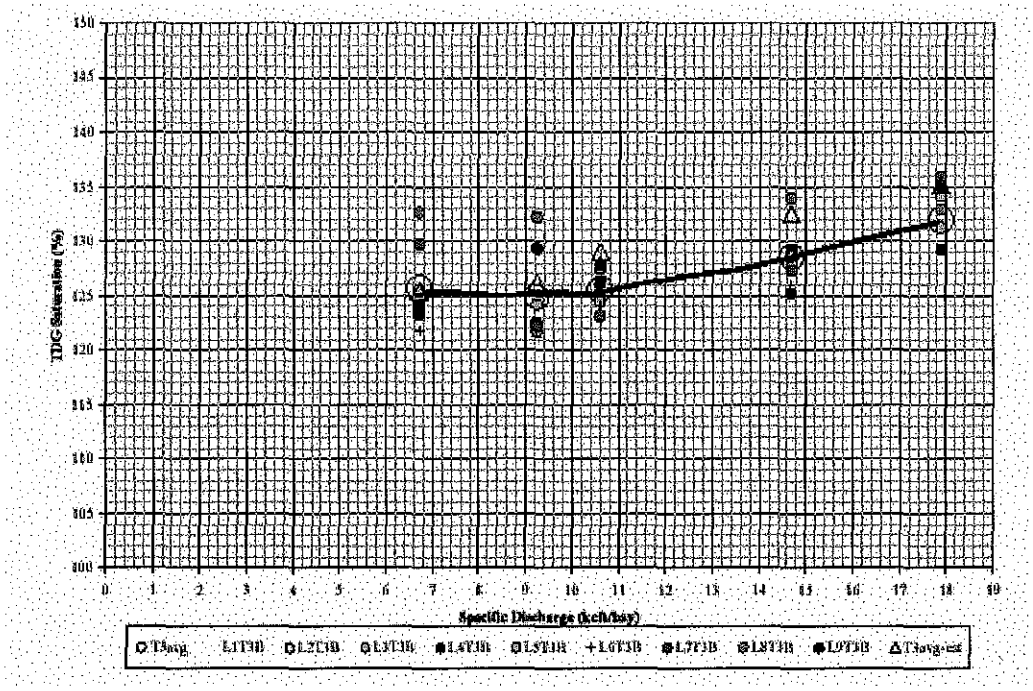

Figure 19: Observed TDG Saturation below Bonneville Spillway During Standard Spill Patterns Over Deflected Bays 4-15 and Non-Deflected Bays 2-3, 16-17, February 1-4, 1999

Regression

Empirical relationships were derived for non-deflectored and deflectored bay spill conditions. These regression equations were then applied to the individual bays used in the mixed bay spill patterns on the third and fourth day of the test to determine if these properties were additive. An exponential equation was fitted to the five flow conditions observed on the first day (non-deflectored bays only). The following equation expresses the increase in TDG pressure over barometric pressure as a function of the unit discharge. Equation 16 is applicable only to non-deflectored bays 1, 2, 3, 16, and 17 at the Bonneville spillway.

$$\Delta P = 255.58 - 1031.58e^{-0.639 q_s} \qquad \text{Equation 16}$$

Where:

ΔP = $P_{tdg} - P_{bar}$ (mmHg)

q_s = Unit spillway discharge (kcfs/bay)

q_s > 3.0 kcfs/bay

A third order polynomial was fit to the five test conditions associated with the uniform spill over deflectored bays. A third order polynomial was chosen because of the rapid change in slope of

the curve at the higher discharges. Equation 17 expresses the increase in TDG pressure over barometric pressure as a function of the unit discharge. This equation only applies to the deflectored bays four through 14 at the Bonneville spillway. This equation is not appropriate for unit discharges less than three kcfs/bay.

$$\Delta P = -0.0567q_s^3 + 0.421q_s^2 + 27.823q_s - 37.067 \qquad \text{Equation 17}$$

Where:

ΔP	=	$P_{tdg} - P_{bar}$ (mmHg)
q_s	=	Unit spillway discharge (kcfs/bay)
q_s	>	3.0 kcfs/bay

Equations 1 and 2 were applied to the individual spillway bay discharges observed during the third and fourth day of testing during the first week in February. The resulting pressures were then multiplied by the ratio of spillway bay discharge to total spillway discharge and summed to determine the flow-weighted pressure change. The barometric pressure was then applied to calculate the TDG saturation. The individual station saturations (L1T3B-L9T3B), cross-sectional average saturation (T3avg), and forecasted aggregate saturation (T3avg-est) are shown in Figure 19 for the standard spill pattern. The forecast of the TDG saturation associated with the standard pattern followed the general trend in the data. The forecasted TDG saturation overestimated the observed average conditions for the higher gate settings. The forecasted value falls within the range of observed values of TDG saturation downstream of the highly aerated flow regime.

The two-equation flow-weighted average formulation was also applied to the operations data gathered during the supplemental TDG test conducted below Bonneville from May 7-June 7. Equations 1 and 2 were applied to the observed spillway bay discharge and average TDG saturation for spillway releases was determined using a flow-weighted approach. The average spillway TDG saturation was plotted with project operations, forebay FMS TDG saturation, tailwater FMS TDG saturation, and auxiliary station TDG saturation as shown in Figure 20.

The average TDG saturation released from Bonneville was estimated using the formulation presented above for the spillway contribution. The TDG loadings associated with powerhouse releases were estimated by the product of powerhouse discharge and forebay FMS TDG saturation. The estimated loading from the spillway was determined by the product of the spillway discharge and estimated spillway TDG saturation. The flow-weighted average TDG saturation released from Bonneville is shown in Figure 19 under the heading of TDG-tw-est. The estimated average TDG saturation closely followed the observed data at the tailwater FMSs during most of the study period. The TDG distribution at the tailwater FMS is often not uniform and, therefore, cannot be used as a rigorous validation of this formulation. However, this comparison does lend additional credence to the formulation cited above.

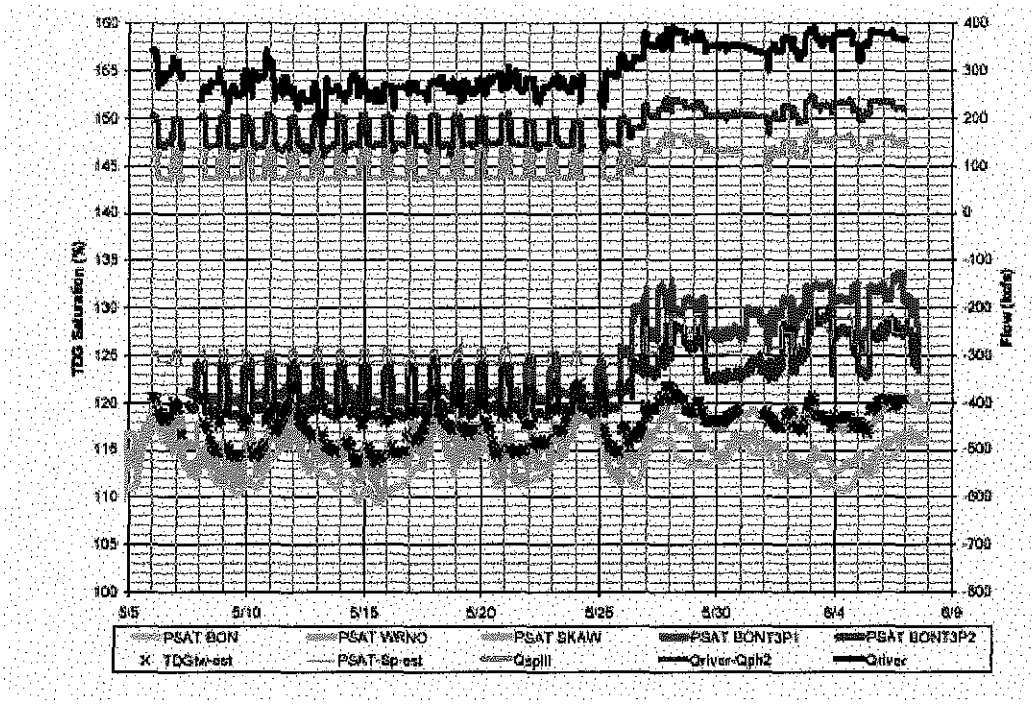

Figure 20: Observed and Estimated TDG Saturation Below Bonneville Spillway During Spill Season, May 5 – June 8, 1999

Powerhouse Entrainment

The entrainment of powerhouse flow was assumed to be zero at Bonneville because of the physical barriers created by Bradford and Cascade Islands. The TDG exchange was not found to extend below the spillway channel during near-field investigations.

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Load Allocations

For the purpose of this TMDL, each dam will be provided with a load allocation, because no NPDES permits will be issued to the dams to regulate TDG caused by spills. This approach is also reasonable for several reasons:

- Spills entrain air to reach a polluted state, much like a high-energy release of water might erode a stream bank.
- Dams are essentially very large instream structures that will require modifications to achieve compliance with water quality standards.
- The level of improvement expected from any specific structural or operational modification is uncertain, and therefore a series of modifications may be needed to achieve the desired outcome, with effectiveness monitoring to assess results.

Wasteload allocations in this TMDL are zero, because there are no NPDES-permitted point sources that contribute to elevated TDG in the Lower Columbia River.

Table 12 shows the load allocations for each of the four dams on the Lower Columbia River. Because of the unique nature of TDG, load allocations are not directly expressed in terms of mass loading. Like loading capacity, allocations are in terms of ΔP defined site-specifically for each dam, taking downstream temperature variation into account.

Table 12: Load Allocations for TDG in Lower Columbia River

Location Name	Load Allocation (as excess pressure above ambient ΔP) mm Hg
Upstream Boundary	61
Background – temperature change, upstream to McNary	14
McNary Dam spill	42
Background – temperature change, McNary to John Day	33
John Day Dam spill	67
Background – temperature change, John Day to The Dalles	8
The Dalles Dam spill	66
Background – temperature change, The Dalles to Bonneville	9
Bonneville Dam spill	75

Load allocations for spills are lower than loading capacity because part of the loading capacity is assigned to load allocations for background. Each background load allocation represents an increase in TDG percent saturation caused when ambient water temperatures increase as water moves downstream through the pool of the downstream dam. This occurs because, if gas exchange is negligible (such as occurs on windless days), an increase in water temperature will decrease the saturation concentration. As a result, a fixed mass of TDG in the pool will represent a higher TDG percent saturation if water temperature increases.

To determine the background load allocations, the potential temperature increase in each pool was evaluated. For each dam the time of travel was estimated from the application of EPA's RBM-10 model (USEPA, 2001) for a 10-year period. The 90th percentile travel time (in days) for each month was then used to determine the maximum temperature increase for that travel time. The background load allocations represent the increase in TDG for highest 90th percentile seasonal temperature increase. Below Bonneville Dam, degassing processes are expected to exceed increases in TDG percent saturation from temperature increases.

Given the clear mathematical relationship between spill quantities, the load allocations (ΔP), and TDG percent saturation, compliance with load allocations will be met by specifying operational and structural goals for spills that prevent the load allocation from being exceeded. In general, the long-term goal of meeting water quality standards must be met with structural modifications to the dam projects. In the short-term, operational methods will be used to protect beneficial uses to fullest extent and meet standards whenever possible.

Long-term Compliance with Water Quality Standards

Compliance with Standards for All Spills

Federal and state laws and rules require compliance with state water quality standards, and therefore the ultimate goal of this TMDL is to achieve compliance. However, to meet this goal, this TMDL must address several complicating factors.

In much of the literature a distinction is made between "voluntary" and "involuntary" spill. In terms of compliance with water quality standards, this distinction is misleading. Endangered Species Act requirements for spills must be considered to be just as binding as, say, disinfection requirements for wastewater. In the disinfection case, chlorine may be added to wastewater to protect public health. But chlorine can also create a problem with toxicity in the effluent. This conflict does not mean the dischargers get to stop disinfecting, it means that they either need to reduce chlorine toxicity by dechlorination or find other non-chlorine methods of disinfection. Similarly, the dams have an obligation to both meet water quality standards and Endangered Species Act requirements. If spills are necessary to protect endangered species, then those spills must also meet standards. The dam operators also have the option of finding alternative ways to protect species without spills.

The point here is that spills for fish passage are not really "voluntary"; rather they are spills required for reasons other than a lack of powerhouse capacity. If the public interest necessitates that spills be required to protect fisheries or other beneficial uses of the water, then dams must meet water quality standards under spills of any volume up to the 7Q10 flood flows. In addition, spills can occur at any time and at any volume due to lack of power demand or powerhouse maintenance or failure. Therefore, this TMDL will be applicable for all spills below 7Q10 river flood flow conditions, regardless of the cause of the spill. (See Table 14 in *Seasonal Variations* for 7Q10 flows.)

Operational versus Structural Solutions

The Lower Columbia River dams, as currently designed, are incapable of meeting the water quality standards for all spill flow levels. Therefore, compliance with this TMDL will require structural changes. The Dissolved Gas Abatement Study (DGAS) report outlines a variety of alternatives for operational and structural changes, which move in the direction of compliance under all spill levels. However, the effectiveness of these changes can only be estimated, and must be assessed after implementation. Also, implementation of structural solutions is dependent on Congressional appropriations. Therefore long-term compliance with this TMDL will take a significant length of time and must take into account a certain level of inherent uncertainty.

Point of Compliance

The compliance locations for dam spills were chose from several options, illustrated in Figure 21:

1. By a strict interpretation of state water quality standards without any consideration of applying the mixing zone provisions of the water quality standards, the point of compliance would be at the point of maximum TDG. However, this is a location that is difficult to identify and monitor in real time, and does not take into account the rapid degassing in the aerated zone.

2. If mixing zone provisions were applied to the aerated zone, then the point of compliance would be at the end of the aerated zone. This location would be easier to identify for regulatory purposes.

3. The point of compliance could be at the FMS sites, but mixing zone provisions would need to be applied to the entire river, including powerhouse flow. The location of the FMS sites area clearly identified, but are inconsistent with respect to the mixing of spills with powerhouse flows.

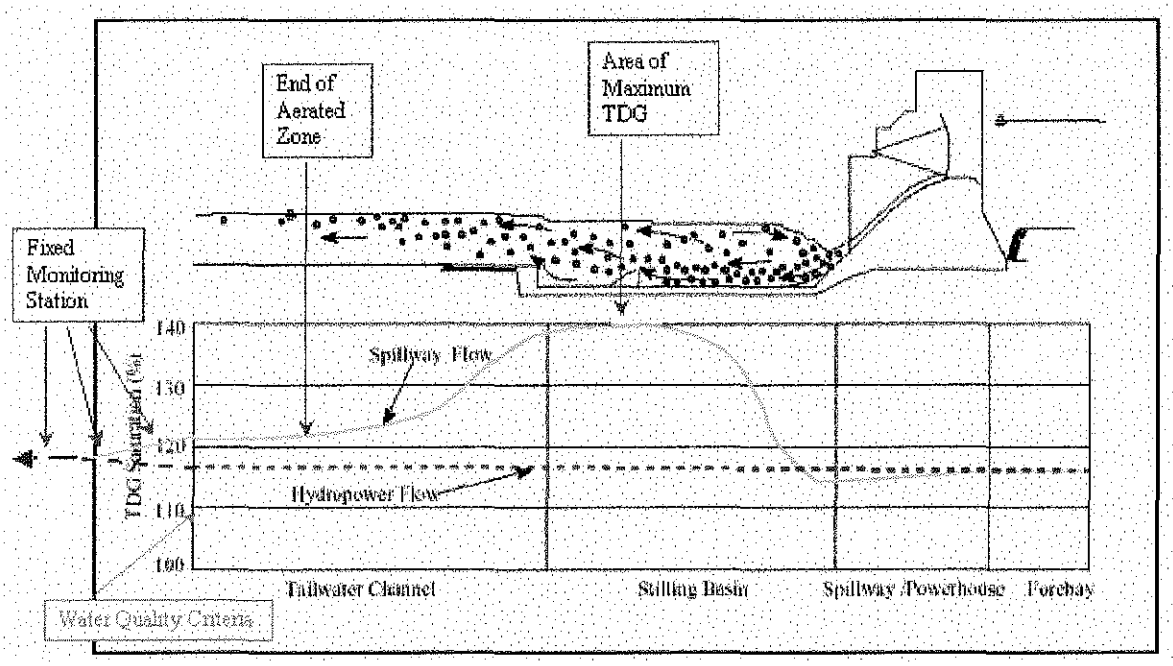

Figure 21: Possible locations of Compliance Locations with Respect to TDG Levels

The point of compliance for load allocations for the dams in this TMDL will be based on application of the mixing zone to the aerated zone immediately below the spillways of the dams. The water quality standards for the states of Washington and Oregon provide an allowance for a mixing zone, and compliance with standards is required at the boundary of the mixing zone. There are several reasons that use of a mixing zone is appropriate in this situation:

- TDG levels rise immediately below the spillway, but then degas for some distance downstream. The points of compliance were determined from U.S. Army Corps of Engineers research which identified the location where degassing was mostly complete. This is a local area of impact with very dynamic conditions.
- Because the area below the spillway is very dynamic, TDG levels are difficult to accurately assess.
- Extensive fisheries research has shown that anadromous fish are able to pass through this area below the spillway quickly without ill effects.
- Because of the turbulent flow associated with the spill, no resident fish habitat is available in this area.
- Provision of a mixing zone and deviation from the size requirements are appropriate because of the public interest in ensuring that water quality standards are applied appropriately to the dam projects.

The points of compliance for load allocations are shown in Table 13. The load allocation for the upstream boundary applies below the Snake River confluence, and will be addressed in the TMDLs for the Mid Columbia and Lower Snake rivers. The point of compliance for each spill load allocation will be at the end of the aeration zone in the tailrace of each dam, at the location specified in the Table 13. The forebay of each dam must comply with the sum of the load allocation for the upstream dam and the background load allocation for temperature in the upstream pool, which is equal to the loading capacity.

Monitoring of Compliance

For monitoring of long-term compliance, it will be necessary to monitor at the loading capacity compliance locations in the tailrace. However, it is not expected that these locations will lend themselves to a permanent remote monitoring setup. Most likely compliance will be determined by periodic synoptic surveys, especially after structural changes have been completed. This monitoring can be managed separately from monitoring for short-term operational needs.

For short-term compliance, the FMS stations can continue to be used, or new FMS stations can be established. This will allow operational management that is linked to easily accessible data, based on overall environmental management needs and the realities imposed by structural characteristics. Thus, short-term compliance can remain adaptive and flexible, while long-term compliance remains fixed to firm goals.

Table 13: Points of Compliance for TDG Load Allocations

Project	Location
Upstream Boundary	Below Snake River confluence (to be linked to upstream TDG TMDLs)
Background – temperature change, upstream to McNary	McNary Dam forebay
McNary Dam spill	1000 feet below end of McNary spillway [1]
Background – temperature change, McNary to John Day	John Day Dam forebay
John Day Dam spill	1700 feet below end of John Day spillway [2]
Background – temperature change, John Day to The Dalles	The Dalles Dam forebay
The Dalles Dam spill	600 feet below end of The Dalles spillway [3]
Background – temperature change, The Dalles to Bonneville	Bonneville Dam forebay
Bonneville Dam spill	1700 feet below end of spillway [4]

[1]Wilhelms and Schneider, 1997b
[2]Schneider and Wilhelms, 1999
[3]Schneider and Wilhelms, 1996
[4]Wilhelms and Schneider, 1997a

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Margin of Safety

The margin of safety for this TMDL is implicit in the TMDL analysis through the use of conservative assumptions. A detailed analysis of how the margin of safety is included is provided below.

Critical Conditions

No specific high- or low-flow critical conditions exist for this TMDL. Spills that generate high gas levels can occur in any season and load allocations are applicable to spills at all flow levels below the 7Q10 flood flow.

Certain parameters that are necessary to develop load allocations were established at levels equivalent to critical conditions. As described above, time of travel, temperature, and barometric pressure were all developed at critical levels. This approach introduces several conservative assumptions that provide a margin of safety to the TMDL.

Criteria versus Site-specific Conditions

Probably few river systems have been as extensively studied for the effects of TDG than the Columbia system. Extensive research has been conducted for over 40 years on TDG and aquatic life. Currently federal, state, and tribal fishery agencies all support a more lenient standard than currently in state regulation. Review of EPA guidance also suggests the criterion could be applied with an averaging period, rather than as an instantaneous value. Therefore, the current standards include an implicit margin of safety when applied to this river system.

Data Quality

A margin of safety is usually identified in a TMDL to recognize uncertainty in the data used to produce the TMDL. Due to the monitoring requirements imposed by the Oregon Environmental Quality Commission and Washington State Department of Ecology as a part of the fish passage program over the past seven years, there is a great deal of hourly data of TDG levels, barometric pressure, water temperature, tailwater elevation, forebay elevation, total river flow and spill quantity. These data are available on the Technical Management Team homepage, hosted by the Northwest Division of the U.S. Army Corps of Engineers at: http://www.nwd-wc.usace.army.mil/TMT/welcome.html.

Further, the Corps has undertaken an extensive Dissolved Gas Abatement Study (DGAS) over the past five years. The study included development of a mathematical model to describe the production, dissipation, and behavior of TDG in the Columbia system for the federal projects. The production of TDG at the four hydroelectric projects that are the identified sources in this TMDL are, therefore, well understood.

As a result of this monitoring, there are abundant data for constructing this TMDL. The margin of safety required for data and modeling variability is therefore considered to be small.

Seasonal Variations

Exceedances of the TDG standard occur most commonly during mid-April to the end of August, which is both the fish migration season and the high-flow season in conjunction with spring runoff. One of the determinants of TDG levels is total river flow. When river levels are particularly high, TDG levels rise more rapidly if there is any water spilled over the spillway. During low-flow periods, there is generally not a TDG problem, other than spill for fish passage, as long as all water is passed through the powerhouses.

Occasionally turbine units will be out of service for maintenance, either scheduled, or on an emergency basis. This may require water to be spilled, because there are insufficient turbines available to handle the water in the river. This can occur due to Bonneville Power Administration power purchasing and the sequencing of water releases from upstream storage reservoirs.

Clearly, there is little control over emergency outages. Maintenance is generally scheduled (1) to coincide with low electricity demand periods, and (2) when river flows are such that they will not cause TDG exceedances.

In summary, spills can occur at any time, although they are most likely in the spring and early summer. The TMDL has been written so that the limits apply at any season, since they are based on spill and not on river conditions. The *Margin of Safety* section describes how seasonal critical conditions were applied to the development of load allocations. TMDL limits apply year-round, but they have taken season critical conditions into consideration.

7Q10 Flows

As discussed above, Oregon and Washington's water quality standards only apply when river flows are below the 7Q10 flood flows. These flows, shown in Table 14, were calculated from flows measured and reported by the U.S. Geological Survey. Methodology followed the guidelines of the U.S. Water Resources Council (1981):

- U.S. Geological Survey flows at The Dalles were used for The Dalles Dam and as a starting point for the other three dams.
- For Bonneville Dam, flows from the major tributaries below The Dalles (Hood, Klickitat, and White Salmon rivers) were added on a day-by-day basis to create a synthetic time series for Bonneville, and then followed the process for fitting the distribution and calculating the 7Q10.
- For John Day Dam, Deschutes River flows were subtracted from The Dalles flows, lagging The Dalles data by two days. The lag was determined by the best fit to a linear regression from a series of different lags using the 90 percent highest flows.
- For Mc Nary Dam, John Day River flows and Umatilla River flows were subtracted from the John Day Dam flow series, lagging the John Day Dam and River flows by three days. The lag was determined as described above.

Annual peak 7-day average flows were calculated (using the October-September Water Year), and then the 10-year return flow was determined by the Log-Pearson Type 3 method. The skew coefficient used in the analysis was calculated from the data; the generalized and weighted skew was not determined or used, but the error introduced by this shortcut was probably small to nil.

Table 14: Lower Columbia River 7Q10 flood flows

Site	Flow (cfs)
Mc Nary Dam	446,761
John Day Dam	454,368
The Dalles Dam	461,176
Bonneville Dam	467,029

Summary Implementation Strategy

Overview

The goal of this total dissolved gas TMDL for the Lower Columbia River is to meet Oregon and Washington's water quality standards for TDG. The goal of water quality standards is to protect beneficial uses of the river. While these include such beneficial uses as hydropower generation, irrigation, drinking water, and water contact recreation, the most sensitive use is anadromous salmonids. These species are particularly vulnerable, as they navigate past the dams both as downstream migrating juveniles and as upstream returning adults.

The four dams on the river pass water by spilling over the spillway, by generating electricity through the turbines, and to a much lesser extent by passing water through special fish facilities such as adult ladders and juvenile fish passageways. TDG is generated by spilling water over the spillway. Absent considerations for fish survival, spills are considered "involuntary" since they occur due to lack of powerhouse capacity. Involuntary spills can be caused by flood flows, lack of electric load for powerhouse generation, or turbines being off-line due to maintenance or repair. However, fish survival needs necessitate spills to improve juvenile fish passage.

Up to a point, the danger to fish from exposure to high TDG is overshadowed by the dangers to fish of going through the turbines. In response, the National Marine Fisheries Service performed a comparison risk analysis that forms the basis for modifications to both Washington and Oregon's water quality standard for TDG.

In December 2000, the National Marine Fisheries Service released a Biological Opinion under the federal Endangered Species Act for 12 listed species in the Columbia River. A significant component of this Biological Opinion is the provision of spilled water at the Lower Columbia River hydropower facilities to facilitate fish passage. In addition, spill for juvenile fish passage is beneficial for non-ESA listed species. Clearly, if spilled water is the cause of elevated TDG levels but is required for fish passage, care needs to be taken not to implement gas abatement measures that may benefit water quality, while damaging the beneficial uses, such as juvenile migration, that the federal Clean Water Act was designed to protect.

This implementation strategy therefore must take into account both requirements: to reduce high TDG generated at the dams by spilling water, and to provide the levels of spill under the Biological Opinion to facilitate fish passage. Additional provision for spill is sometimes necessary for non-listed species.

Gas reduction at the four Lower Columbia River dams has been the subject of intensive research over the past six years. Federal fish agencies, tribes, the U.S. Environmental Protection Agency, Bonneville Power Administration, state fish and wildlife departments, and the U.S. Army Corps of Engineers are organized into work groups to address the TDG problems. The result of this is a much enhanced understanding of the generation and dynamics of TDG production. In addition, implementation actions designed to reduce TDG generation have already been undertaken (e.g., the installation of flow deflectors or "flip lips" at John Day Dam). Further actions are planned,

but funding is often dependent on Congressional approval and is linked to basin priorities for the Columbia River.

Implementation Plan Development

The operation of the Columbia River hydropower system is carried out through multiple agencies and governed by several regulatory authorities. The following is a list of these parties:

- The U.S. Army Corps of Engineers operates the dams and provides engineering, contracting and construction authorities (based on funding from Congress) for structural changes at these dams. The Corps provides flood control oversight and responds to the energy, environmental, transportation, and recreational needs of the public. The Corps is required to achieve a balance between these requirements where they conflict.

- The National Marine Fisheries Service and the U.S. Fish and Wildlife Service oversee the protection of endangered species, 12 of which are salmonids found in the Lower Columbia River. Several forums have been established to oversee implementation of the Biological Opinion requirements for these species. These forums include a water quality team which focuses on temperature and TDG management, a technical management team that makes decisions regarding hydropower operations, a system configuration team that makes decisions on structural modifications, and an implementation or policy team to which policy issues that cannot be resolved in the other forums are elevated.

- Tribes have treaty rights to the salmon in the Columbia and are involved on many levels of fish management and environmental protection.

- The Bonneville Power Administration oversees power production and distribution. Revenues help fund fish and environmental mitigation for the impact of the dams.

- Washington and Oregon Departments of Fish & Wildlife work within the forums detailed above, as well as protect and enhance non-listed salmon, resident fish, and wildlife.

- The U.S. Environmental Protection Agency is part of the caucus of federal agencies involved in operation and management of the federal Columbia River hydropower system. Its specific role is to ensure consistency with federal environmental laws and regulations. The agency will ultimately approve this TMDL under Section 303(d) of the federal Clean Water Act.

- Washington State's Department of Ecology and Oregon's Department of Environmental Quality will oversee implementation of this TDG TMDL. They will work collaboratively with each other, as well as with the U.S. Army Corps of Engineers, tribal, and other state and federal agencies through existing forums.

- Numerous other agencies are involved in different aspects of river management that can have a bearing on TDG generation. The most prominent include the Northwest Power Planning Council, data gatherers such as the Fish Passage Center and U.S. Geological Survey, upriver activities and interests that affect gas production such as BC Hydro and the U.S. Bureau of

Reclamation, as well as Corps storage facilities in Canada and Lake Roosevelt: the U.S./Canada Treaty power sharing and storage agreement, public utility districts on the Mid-Columbia, and the state of Idaho.

Meeting the load allocations in this TMDL will fall into two phases. Phase I will involve improving water quality, while ensuring that salmonid passage is fully protected in accordance with the National Marine Fisheries Service's Biological Opinion. Phase II will involve structural and operational changes to dams to achieve the water quality standard for TDG.

The short-term actions in Phase I will focus on meeting fish passage goals through spills that generate gas no greater than the "waiver" levels of the water quality TDG standards (Oregon variances or Washington temporary special conditions). Water quality standards are measured at existing fixed monitoring stations managed by the U.S. Army of Engineers and U.S. Geological Survey. This phase will also include short-term structural modifications at the dams to achieve TDG reductions during periods of spill, while ensuring that the fish passage requirements of the 2000 Biological Opinion are met. As part of Phase II, a Detailed Implementation Plan or equivalent will be developed (possibly through the Water Quality Plan under the Biological Opinion).

Phase II will evaluate success from the short-term actions. The second phase will also move toward further structural modifications and reductions in fish passage spill if the Biological Opinion specified fish survival rates are being met and adequate survival is provided for non-listed species.

Biological monitoring has been required by the states of Oregon and Washington in order to assess gas bubble trauma to fish as a result of spill. Based on six years of data, the results show little trauma to migrating juvenile salmon at TDG levels allowed by the states in their modified water quality standards. As a result, thought has been given to permanently modifying the water quality standards or establishing site-specific criteria for TDG for the Columbia River. The purpose of this TMDL, however, is to allocate loads to meet the existing water quality standard.

Changing water quality standards is a separate process and is not one of this TMDL's implementation strategies. However, the authors of this report support the evaluation of the appropriateness of the water quality standards for these four specific sites on the river in terms of TDG impacts to aquatic species. Any revision would proceed through the normal scientific review of the standard to ensure full beneficial use protection.

Implementation Activities

As the operator of the four Lower Columbia River dams, the U.S. Army Corps of Engineers published its Final Draft Technical Report and Appendices of the Phase II Dissolved Gas Abatement Study (DGAS) in April 2001. This study was undertaken as part of the Columbia River Fish Mitigation Program. This study has been the result of an ongoing collaborative effort between many federal and state fisheries agencies, dam operators, tribes, and environmental agencies toward reducing TDG in the river in balance with enhancing spill opportunities for juvenile salmon.

As detailed above, this implementation strategy is to be carried out in two phases.

Short Term – Phase I

This phase is already underway, as a result of actions taken by the Corps, and will continue through 2010. As detailed above, the emphasis in this phase will be taking those actions that will result in reductions of TDG, while ensuring the fish passage requirements of the 2000 Biological Opinion are met. The Biological Opinion envisions spill for fish passage under modified water quality standards of Oregon and Washington, as have been provided for the past six years. Included in this program will be the near-term actions that have been identified in the Biological Opinion. Maintenance of required spill at the modified standards to allow for fish passage will be as measured at the fixed monitoring stations both in the forebay and the tailrace of each dam.

This phase will also address the first stages of reducing gas during spills due to high-flow events, turbine outages, and during lack of demand for electrical power. This is outlined in the Corps report, "Final Draft Dissolved Gas Abatement Report," April 2001.

Table 15 includes specific structural implementation actions that will be completed during this phase.

Table 15: Short-term Implementation Activities

2000 Biological Opinion Action Item Description	Completion Date	Action Item #
Ice Harbor Deflectors	Done	134
John Day Deflectors	Done	134
Survival based spill caps at all dams (e.g. 40% at The Dalles).	Done, ongoing	68, 82
Bonneville Endbay Deflectors	2002	134
McNary Endbay Deflectors	2002	134
Lower Monumental Endbay Deflectors	2003	134
Little Goose Endbay Deflectors	2003	134
Chief Joseph Deflectors	2003	136
The Dalles Deflectors	Under Evaluation	134
John Day Endbay Deflectors	Under Evaluation	140
Divider Walls at Appropriate Dams	Under Evaluation	135

Several operational implementation actions are available to minimize involuntary spill that are already in use, or can be evaluated during Phase I and implemented if practical. These include:

- Scheduling routine turbine maintenance and repair during low-power load and river flow periods.
- Preventive maintenance of turbines to prevent breakdown.
- System management of water release from upstream storage reservoirs to minimize involuntary spills at dams in the TMDL area.
- Optimizing power purchasing to allow maximum use of powerhouse capacity and minimization of involuntary spill.

Specific implementation methods for these actions will be provided in a Detailed Implementation Plan, or equivalent.

Table 16 contains additional short-term implementation actions that are directly related to achievement of the water quality standard. Implementation of these measures, though, will improve salmonid passage and help achieve the performance standards of the Biological Opinion. Carrying out these actions will enable a decreased reliance on spilling water for fish passage in the near-term period. Voluntary spill levels for fish passage with their associated TDG will be reduced as these actions are implemented, and will result in achieving the survival performance standards contained in the 2000 Biological Opinion.

Table 16: Additional Short-Term Implementation Activities

2000 Biological Opinion Action Item Description	Completion Date	Action Item #
Bonneville Powerhouse 2 Corner Collector	2003 or 2004	66
Bonneville Powerhouse 2 Fish Guidance Efficiency Improvement	2003 - 2004	67
Lower Granite Removable Spillway Weir	2002	80
The Dalles Turbine Intake Blocks	2002 - 2004	69
Lower Monumental Bypass Outfall Relocation	2003 or 2004	76
The Dalles Sluiceway Outfall Relocation	Under Evaluation	70
Bonneville Powerhouse 1 Surface Bypass or Extended Screens	2004 or 2005	61, 62

Long Term – Phase II

This phase will begin in 2011 and proceed through 2020. Actions taken in the previous phase will be reviewed for their efficacy, both in improving TDG levels and for protecting salmonid passage. The Biological Opinion survival goals are being met through fish passage actions other

than spilling water. Reductions in gas entrainment through spill will be realized so that the required final goal of meeting the water quality standard for TDG can be met as measured at the end of the aerated zone below each dam.

Table 17 details those long-term actions that will protect fish passage while moving the system toward attainment of the water quality standard for TDG.

Table 17: Fish Passage Actions That Support TDG Water Quality Goals

2000 Biological Opinion Action Item Description	Completion Date	Action Item #
John Day Surface Bypass (may be Removable Spillway Weir)	Under Evaluation	72
Removable Spillway Weirs at Lower Monumental, Little Goose, and Ice Harbor	Under Evaluation	75, 77
McNary Bypass Improvements (outfall, temperature)	Under Evaluation	74, 142
Lower Monumental Extended Screens	Under Evaluation	78
John Day Extended Screens	Under Evaluation	73
Spill Effectiveness Studies	Ongoing	83
Predator Removal and Abatement	Ongoing	100-103
Improved Operation and Maintenance	Ongoing	58,59,63,144, 145,146
Bonneville Powerhouse 1 Minimum Gap Runners	Ongoing	64
Implement Turbine Survival Program Results	Under Evaluation	88, 90, 91, 92

The U.S. Army Corps of Engineers DGAS study identified a number of structural measures designed to abate TDG. Several of these measures should be evaluated for their efficacy in abating gas and ensuring that they do not impede fish passage. If necessary, those measures found to be effective should be identified for funding and implementation.

Reasonable Assurance

In support of this implementation strategy, structural work has already been carried out to reduce high levels of TDG at the four Lower Columbia River dams. Structural work has also been done on Snake River and Mid-Columbia River dams that can reduce high gas concentrations to the lower river. The track record for Congressional funding for these projects is good and there is reason to believe that further funding of projects will continue. Funding for the more expensive

structural modifications of the second phase is entirely dependent on Congressional will, national and regional priorities, and budgetary availability of funds. Funding to improve fish passage facilities also has a good track record, and there is reason to believe that this will continue to be funded both through Congress and energy revenues.

Both the Washington State Department of Ecology and the Oregon Department of Environmental Quality are responsible for ensuring that water quality standards are met. Both agencies are confident that the collaborative relationship with the dam operators toward reducing gas will continue and be enhanced through this TMDL. The U.S. Army Corps of Engineers has agreed to continue working through the Endangered Species Act forums established to oversee and to carry out the requirements of the Biological Opinion.

Both state environmental agencies have regulatory authority over the four federal dam projects. Washington's regulatory authority comes through the *Federal Clean Water Act*, the *Revised Code of Washington's Pollution Control Act 98-48* and the *Washington Administrative Code's Water Quality Standards 173-201A*. Oregon's authority comes through the *Federal Clean Water Act*, the *Oregon Revised Statutes' Water Pollution Control 468B*, and the *Oregon Administrative Rules' Water Quality Standards and Beneficial Uses 340-041-0001 to 0975*.

Adaptive Management

The process for reviewing the status of implementation of this TMDL will follow the timing and process for the review of the federal Biological Opinion in 2010. The Washington State Department of Ecology will convene an advisory group comprising representatives of tribes and federal and state agencies to evaluate appropriate points of compliance for this TMDL. Based on these findings, further studies may be needed, and structural and operational gas abatement activities will be redirected or accelerated if needed.

Monitoring Strategy

Short-term compliance and the effective of operational implementation actions will be monitored at existing fixed monitoring station sites. The current fixed monitoring station TDG monitoring system consists of tailrace and forebay monitoring stations at each mainstem lower Snake and Columbia River dam and at key locations in some tributaries. While most of these stations do a credible job of reporting meaningful data, some have been shown to be questionable. This system is now undergoing a thorough review by the Endangered Species Act Water Quality Team. Screening criteria will be developed and used to evaluate all existing monitoring stations. Stations that do not conform to these criteria will be relocated to more appropriate locations. This screening process will include consideration of how well the station represents TDG in a given river reach and how sensitive the station is to non-spill factors that affect TDG, such as temperature and aquatic plant respiration.

Monitoring of long-term compliance with load allocations and the effect of structural changes will include an evaluation of previous transect studies and further transect measurements at the end of the aerated zone below each dam. Load allocation compliance monitoring will occur

following major structural changes or immediately following the end of Phase I and Phase II. Prior to the initiation of a load allocation monitoring survey, a quality assurance project plan, or equivalent, must be approved by the Washington State Department of Ecology and the Oregon Department of Environmental Quality. The quality assurance project plan should address the safety and stability due to strong hydraulics below the dams. Due to these factors, it is possible that an alternate site may be needed. If so, some correlation to the load allocation compliance point will be necessary.

Potential Funding Sources

A discussion on funding is warranted, given the expensive nature of some of the suggested structural actions. Known funding sources include power generation revenues through Bonneville Power Administration, as directed by the Northwest Power Planning Council and System Configuration Team and the U.S. Congress. State, tribal, and federal agencies will continue to work with their counterparts in Canada in an attempt to reduce the TDG loading coming across the international border. Canada has shown a great willingness to invest in technologies to help reduce TDG loadings.

Summary of Public Involvement

The states of Washington and Oregon developed and implemented the Public Involvement and Outreach strategy for this TMDL project in partnership with the Columbia/Snake Rivers Mainstem TMDL Coordination Team.

These TMDL team members include the U.S. Environmental Protection Agency, Idaho Department of Environmental Quality, Oregon Department of Environmental Quality, Washington State Department of Ecology, Western Governors Association, Columbia Basin Tribes, and the Columbia River Inter-Tribal Fish Commission.

The public involvement period on this proposed TMDL will be February 18 through April 5, 2002.

Public hearings will be held:

- Monday, March 18, in Kennewick, Washington
- Tuesday, March 19, in Pendleton, Oregon
- Friday, March 22, in Portland, Oregon and in Vancouver, Washington

Individual outreach meetings were held with the appropriate watershed advisory groups and with primary stakeholders, which included:

- Spokane Tribe
- Confederated Tribes of the Colvilles
- U.S. Army Corps of Engineers (Portland, Walla Walla, and Seattle Districts, and Pacific Northwest Division)
- Grant, Chelan, and Douglas Public Utility Districts
- U.S. Bureau of Reclamation
- Bonneville Power Administration
- National Marine Fisheries Service

In addition, meetings and presentations were held with the National Marine Fisheries Service Water Quality Team that includes federal and state agencies, public utility agencies, tribes, and Bonneville Power.

The TMDL team held public meetings to receive input and comments from all interested participants. These meetings included public workshops to accept informal comments for each regional phase of the TMDL project, and public hearings for the formal public comment period.

The TMDL team used public outreach tools such as letters, focus sheets, and other printed materials; websites with short narratives and graphics, downloadable documents and relevant links; news releases and special news articles; and field visits.

Public Involvement Actions

- U.S. Environmental Protection Agency website
- Focus sheets
- News releases
- E water news – Washington State University Water Research Center newsletter article
- Monthly coordination team meetings – EPA, Idaho Department of Environmental Quality, Oregon Department of Environmental Quality, Washington State Department of Ecology, Western Governors Association, Columbia Basin Tribes, Columbia River Inter-Tribal Fish Commission (CRITFC)
- Monthly updates and discussions with the NMFS Water Quality Team
- Presentations to the NMFS Implementation Team
- Periodic meetings with Transboundary Gas Group
- Public workshop in Portland, OR – Nov. 28, 2000
- Columbia River Tribal TMDL workshop – Nov. 17 - 18, 2000
- Meeting with U.S. Army Corps of Engineers, U.S. Bureau of Reclamation, and Bonneville Power Administration – Jan. 30, 2001
- Meeting with Grant County Public Utility District – Feb. 2, 2001
- Meeting with Mid-Columbia Public Utility Districts – Feb. 14, 2001
- Meeting with Pulp & Paper Association – Feb. 27, 2001
- Meeting with East Columbia Irrigation District – March 9, 2001
- Meeting with Mid-Columbia Public Utility Districts – March 13, 2001
- Transboundary Gas Group – April 5, 2001
- Western Governors Association joins the Columbia/Snake TMDL Coordination Team – May 2001
- Public meetings in Spokane, WA and Portland, OR – July 23 - 24, 2001
- Presentations to Southwest Washington Watershed Planning Unit – Sept. 10, 13, 26, 2001
- Presentation to Lower Columbia River Fish Recovery Board – Sept. 12, 2001
- Washington Pulp & Paper – Sept. 14, 2001
- Presentations to CRITFC Tribal Water Quality Conference – Sept. 26 - 28, 2001
- Public meetings in Lewiston, Idaho and Pasco, WA – October 29 - 30, 2001
- Meetings with Spokane and Colville Tribes – Nov. 5 - 6, 2001
- Meetings with U.S. Army Corps of Engineers and U.S. Bureau of Reclamation – Nov. 5 & 15, 2001
- Meeting with CRITFC – Nov. 26, 2001
- Meeting with Washington Department of Fish and Wildlife – Dec. 11, 2001
- Meetings with Mid-Columbia Public Utility Districts – Dec. 18 - 20, 2001

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State of Oregon
Department of Environmental Quality

Director's Recommendation:	**APPROVE**
Applicant	**Georgia-Pacific West, Inc.**
Application No.	**5809**
Facility Cost	**$30,521**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**10 years**

Tax Credit Review Report

EQC 0302

Pollution Control Facility: Air
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **C Corporation**
Business: **manufacturer of linerboard and medium papers**
Taxpayer ID: **58-2142537**

The applicant's address is:

One Butler Bridge Road
Toledo, OR 97391

Facility Identification

The applicant claimed:

Foul Condensate Transfer Pipeline

The applicant is the owner of the facility located at:

One Butler Bridge Road
Toledo, OR 97391

Technical Information

The claimed facility was installed to prevent the release of hazardous air pollutants (HAPs) during the transport of foul condensate liquid from the pump house to a diffuser under the surface of the treatment lagoon. The system consists of 1000 feet of 8-inch pipe.

The previously existing pipeline had numerous cracks that allowed HAPs emissions to the atmosphere. The new pipeline meets the requirements of the applicant's air permit.

Eligibility

ORS 468.155 (1)(a)(A) The **principal purpose** of this **new condensate pipeline** is to comply with the applicants air permit to control air pollution.

The pipeline is a requirement of the applicants air permit, appendix A, for NESHAP rules, Subpart S. 10 CFR 63 requires kraft pulping process condensates be treated in this manner to reduce or destroy total HAPs emissions by 92 percent or more by weight, or to remove 6.6 pounds per ton of ODP or more of total HAP.

ORS 468.155 (1)(b)(B) The elimination of air contaminants is accomplished with the installed pipeline which meets the definition in ORS 468A.005 of an air cleaning device.

OAR 340-016-0060 (3)(k) **Replacement:** The new condensate pipeline is not a replacement facility.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Construction Started	**4/2001**
Construction Completed	**9/2001**
Placed into Operation	**9/2001**
Application Received	**11/14/2001**

Facility Cost

Claimed Cost	$30,521
Eligible Cost	**$30,521**

Invoices substantiated the claimed facility cost.

Facility Cost Allocable to Pollution Control

The facility is used exclusively for pollution control, therefore 100% of the facility cost is allocable to pollution control.

Compliance and Other Tax Credits

The applicant states the facility is in compliance with Department rules and statutes and with EQC orders. The following permits have been issued to the site:

Air Permit #21-0005, issued 11/15/1999
Water Permit #101409, issued 8/19/1998
Storm Water Permit #1200-Z, issued 7/22/1997
Solid Waste Permit #1059, issued 5/17/1999

Reviewer: Lois Payne, SJO Consulting Engineers
Dennis Cartier, Associate, SJO Consulting Engineers
Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Director's Recommendation:	**APPROVE**
Applicant	**Georgia-Pacific West, Inc.**
Application No.	**5810**
Facility Cost	**$44,988**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**10 years**

Tax Credit Review Report

EQC 0302

Pollution Control Facility: Air
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **C Corporation**
Business: **manufacturer of linerboard and medium papers**
Taxpayer ID: **58-2142537**

The applicant's address is:

One Butler Bridge Road
Toledo, OR 97391

Facility Identification

The applicant claimed:

Foul Condensate Tank Fume Collection

The applicant is the owner of the facility located at:

One Butler Bridge Road
Toledo, OR 97391

Technical Information

The claimed facility is used to collect fumes from the existing foul condensate tank then duct them to an existing incinerator. The structurally reinforcing foul condensate tank withstands vacuum conditions. The applicant added a pressure/vacuum vent seal and stainless steel ducting to the existing incinerator.

The foul condensate tank was not originally designed to withstand vacuum, was not connected to the existing system, and had no seal; therefore, the fumes could escape to the atmosphere.

Eligibility

ORS 468.155 (1)(a)(A) The **principal purpose** of this **rebuilt tank** is to comply with the applicants air permit to control air pollution.

The applicants air permit, appendix A, for NESHAP rules, Subpart S (10 CFR 63) requires collection and incineration of fumes from the foul condensate tank.

ORS 468.155 (1)(b)(B) The elimination of air contaminants is accomplished with the installed tank modifications which meet the definition in ORS 468A.005 of an air cleaning device.

OAR 340-016-0060 (3)(k) **Replacement:** The rebuilt tank is not a replacement facility.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Construction Started	**03/2001**
Construction Completed	**04/2001**
Placed into Operation	**04/2001**
Application Received	**11/14/2001**

Facility Cost

Claimed Cost	$44,988
Eligible Cost	**$44,988**

Copies of invoices and canceled checks substantiated 98.6% of the cost of the facility.

Facility Cost Allocable to Pollution Control

The facility is used exclusively for pollution control, therefore, 100% of the facility cost is allocable to pollution control.

Compliance and Other Tax Credits

The applicant states the facility is in compliance with Department rules and statutes and with EQC orders. The following permits have been issued to the site:

Air Permit #21-0005, issued 11/15/1999
Water Permit #101409, issued 8/19/1998
Storm Water Permit #1200-Z, issued 7/22/1997
Solid Waste Permit #1059, issued 5/17/1999

Reviewer: Lois Payne, SJO Consulting Engineers
Dennis Cartier, Associate, SJO Consulting Engineers
Maggie Vandehey, DEQ

APPROVALS: Field Burning

Pollution Control Facilities Tax Credit

Eligible Alternative to Open Field Burning Facilities
The Department recommends the Commission approve certification of **four** applications claiming tractors, drainage tile, equipment and straw storage buildings used as alternatives to open field burning.

The statistics for these approvals are:

	Sum	Average	Minimum	Maximum
Claimed	$340,113	$85,028	$11,200	$125,734
Certified	$337,413	$84,353	$10,000	$125,734
GF	$150,475	$37,619	$5,000	$51,590

A summary of all the alternatives to open field burning facilities is on the next page followed by the individual reports for each pollution control facility ordered by application number.

Increase or Decrease in Cost
The recommended certified facility cost on **two** of the reports is less than the applicant requested on the application. Each report explains the reason for the reduction.

Reduced Percentage Allocable
The Department recommends the Commission certify **one** application at a reduced percentage.

Eligibility
The facilities in this section are **principal purpose** because they reduce the maximum number of acres that is open-burned in compliance with acreage limitations and allocations at OAR 340-266-0060.

Eligible Alternatives to Open Field Burning

App #	Applicant	Cost Claimed	Cost Certified	+/-	%	Max. TC	GF Liability
5869	Ken W. Eichler	100,000	98,500	-1,500	100%	50%	49,250
5979	Sandau Ent. Inc.	103,179	103,179	0	100%	50%	51,590
5980	David Briggs	125,734	125,734	0	71%	50%	44,636
5981	T & P Farms LLC	11,200	10,000	-1,200	100%	50%	5,000

State of Oregon
Department of
Environmental
Quality

Director's Recommendation:	**Approve: Reduced Cost**
Applicant	**Ken W. Eichler**
Application No.	**5869**
Eligible Facility Cost	**$98,500**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**10 years**

Tax Credit Review Report

EQC 0302

Pollution Control Facility: Field Burning
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Sole Proprietor**
Business: **a grass seed farm**
Taxpayer ID: **540-76-5329**

The applicant's address is:

8250 Tucker Rd.
Amity, OR 97101

Facility Identification

The certificate will identify the facility as:

A 124' x 180' x 22' straw storage shed

The applicant is the owner of the facility located at:
8250 Tucker Rd.
Amity, OR 97101

Technical Information

The applicant claimed a 124' x 180' x 22' straw storage building. The building is a 491,040 cubic foot metal building with the capacity to store approximately 2190 tons (876 acres) of baled straw. The applicant manages 3649 acres but only 1800 acres are under grass seed production. The claimed facility and the previously certified facility together **remove 1476 acres** from being open field burned.

Eligibility

ORS 468.155 (1)(a)(A)	The **principal purpose** of this **new facility** is to reduce **air pollution** by reducing the maximum acreage to be open-burned in the Willamette Valley in compliance with OAR 340-266-0060 (Acreage Limitations, Allocations).
OAR 340-016-0060 (4)(b)(A)	The **building** is used to **store** grass straw resulting in the **reduction of open field burning.**
ORS 468.155 (3)(e)	**Replacement:** The claimed equipment does not replace any previously certified equipment.

ORS 315.304 The maximum tax credit available to the applicant is **50%** because construction
OAR 340-016-0008 of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Construction Started	**6/01**
Construction Completed	**8/01**
Facility Placed into Operation	**9/01**
Application Received	**12/5/01**

Facility Cost

Facility Cost	$100,000
Ineligible costs (unsubstantiated cost)	-1,500
Eligible Facility Cost	**$98,500**

Invoices and cancelled checks substantiated the cost of the facility.

Facility Cost Allocable to Pollution Control

The following factors were considered in determining that **100%** of the facility cost allocable to pollution control.

Factor	Applied to This Facility
ORS 468.190(1)(a) Salable or Usable Commodity	The baled straw is a salable commodity.
ORS 468.190(1)(b) Return on Investment (ROI)	The useful life of the facility used for the ROI consideration is 20 years. Calculated according to rule, the percentage of the facility cost properly allocable to pollution control is 100%.
ORS 468.190(1)(c) Alternative Methods	No alternative investigated.
ORS 468.190(1)(d) Savings or Increase in Costs	There were no savings or increase in costs.
ORS 468.190(1)(e) Other Relevant Factors	No other relevant factors.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. There are no DEQ permits issued to the facility. Other tax credits issued to this facility location:

App. #	Description of Facility	Certified Cost	Cert. #	Issue Date
3292	Straw storage shed	$34,472.50		3/11/91

Reviewers: John Hamblin, ODA
Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Director's Recommendation: **Approve**

Applicant	**Sandau Enterprises Inc.**
Application No.	**5979**
Eligible Facility Cost	**$103,179.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**10 years**

Tax Credit Review Report

EQC 0302

Pollution Control Facility: Field Burning
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **S Corporation**
Business: **a grass seed farm**
Taxpayer ID: **93-1064814**

The applicant's address is:

677 78th Ave. NE
Salem, OR 97301

Facility Identification

The certificate will identify the facility as:

A model 9600 Allen rake, serial #971163; a drainage tile installation; and a 50'x 80'x 15' straw storage building.

The applicant is the owner of the facility located at:

677 78th Ave. NE
Salem, OR 97301

Technical Information

The applicant claimed a drainage tile installation on 42 acres, a new Allen rake, and a 50' x 80' x 15' straw storage building.

At one time this applicant burned as many acres as the weather and the smoke management program would allow. Over the years the applicant has steadily reduced the amount of acreage open burned by baling and storing the straw. The applicant has one previous tax credit (certificate # 4088) for a straw storage building. The new 50' x 80' x15' straw storage building and the previously certified straw storage building have the capacity to store all the straw produced by the **1057** acres under perennial grass seed production. The Allen rake is used to windrow straw prior to baling. The drainage tile installation makes the ground more suitable for planting other crops such as wheat and legume crops which do not require thermal sanitation

Eligibility

ORS 468.155(1)(a)(A)	The **principal purpose** of this **new facility** is to reduce **air pollution** by reducing the maximum acreage to be open-burned in the Willamette Valley in compliance with OAR 340-266-0060 (Acreage Limitations, Allocations).
OAR 340-016-0060 (4)(b)(C)	The facility reduces grass seed acreage that requires open field burning and includes **drainage tile** and the **production of alternative crop** that does not require open field burning.
OAR 340-016-0060 (4)(b)(A)	**Equipment**, facilities, and land for gathering, densifying, handling, **storing**, transporting and incorporating grass straw or straw based products, which will result in reduction of open field burning.
ORS 468.155 (3)(e)	**Replacement:** The claimed equipment does not replace any previously certified equipment.
ORS 315.304 OAR 340-016-0008	The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Construction Started	**6/5/00**
Construction Completed	**11/4/00**
Facility Placed into Operation	**8/1/01**
Application Received	**1/2/02**

Facility Cost

Claimed Cost	$103,179
Eligible Cost	**$103,179**

Facility Cost Allocable to Pollution Control

The following factors were considered in determining that **100%** of the facility cost allocable to pollution control.

Factor	Applied to This Facility
ORS 468.190(1)(a) Salable or Usable Commodity	The baled straw is a salable commodity.
ORS 468.190(1)(b) Return on Investment (ROI)	The useful life of the facility used for the ROI consideration is 10 years. Calculated according to rule, the percentage of the facility cost properly allocable to pollution control is 100%.
ORS 468.190(1)(c) Alternative Methods	No alternative investigated.
ORS 468.190(1)(d) Savings or Increase in Costs	There were no savings or increase in costs.
ORS 468.190(1)(e) Other Relevant Factors	No other relevant factors.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. There are no DEQ permits issued to the facility.

Other tax credits issued to this facility location:

App. #	Description of Facility	Certified Cost	Cert. #	Issue Date
5124	A straw storage building	$171,734	4088	12/11/98

Reviewers: John Hamblin, ODA
Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Director's
Recommendation: **Approve - Reduced Percentage**

Applicant	**David R. Briggs**
Application No.	**5980**
Eligible Facility Cost	**$125,734**
Percentage Allocable	**71%**
Maximum Tax Credit	**50%**
Useful Life	**10 years**

Tax Credit Review Report

EQC 0302

Pollution Control Facility: Field Burning
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**
Business: **a grass seed farm**
Taxpayer ID: **541-48-3299**

The applicant's address is:

92001 N. Coburg Road
Eugene, OR 97408

Facility Identification

The certificate will identify the facility as:

One model 8410 John Deere tractor, Serial # RW84IOP015087

One Rears 15' Chopper, serial # F 00-404;

The applicant is the owner of the facility located at:

92001 N. Coburg Road
Eugene, OR 97408

Technical Information

The applicant claimed a new John Deere 8410 tractor and a Rear's 15' flail chopper used as an alternative to open field burning.

The applicant currently manages 1078 acres. All 1078 acres under annual grass production. Over the years the applicant has steadily reduced the amount of acreage open field burned by baling and flail chopping. As a result of continued alternative practices and tax credits the applicant has **removed all 1078 acres from being open burned.**

Eligibility

ORS 468.155 (1)(a)(A)	The **principal purpose** of this **new facility** is to reduce **air pollution** by reducing the maximum acreage to be open-burned in the Willamette Valley in compliance with OAR 340-266-0060 (Acreage Limitations, Allocations).
OAR 340-016-0060 (4)(b)(A)	**Equipment**, facilities, and land for gathering, densifying, handling, storing, transporting and incorporating grass straw or straw based products that will result in **reduction of open field burning**.
ORS 468.155 (3)(e)	**Replacement:** The claimed equipment does not replace any previously certified equipment.
ORS 315.304 OAR 340-016-0008	The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Construction Started	**9/5/00**
Construction Completed (flail)	**9/5/00**
Construction Completed (tractor)	**8/7/01**
Facility Placed into Operation	**8/7/01**
Application Received	**1/03/02**

Facility Cost

Claimed Cost	$125,734
Eligible Cost	**$125,734**

Facility Cost Allocable to Pollution Control

According to ORS 468.190 (1), the following factors were considered in determining the percentage of the facility cost allocable to pollution control.

Factor	Applied to This Facility
ORS 468.190(1)(a) Salable or Usable Commodity	The baled straw is a salable commodity
ORS 468.190(1)(b) Return on Investment	The useful life used for the return on investment is 10 years. The average annual cash flow for the tractor is negative.
ORS 468.190(1)(c) Alternative Methods	No alternative investigated.
ORS 468.190(1)(d) Savings or Increase in Costs	No savings or increase in costs.
ORS 468.190(1)(e) Other Relevant Factors	The eligible facility cost allocable to pollution control is 71% because the flail cost ($13,088) is 100% allocable and the tractor cost ($112,646) is 68% allocable to pollution control. The established method for determining that 68% of the tractor is allocable to pollution control is based on the

sum of the annual operating hours for all pollution control implements used with the claimed tractor as shown below.

Implement	Acres Worked	Acres per hour	Annual Operating Hours
7-bottom plow	1078	7	154
Flail	1078	7	154
Total annual operating hours			308
Average annual operating hours for tractor			÷ 450
% of operating hours allocated to pollution control			68%

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. There are no DEQ permits issued to the facility.

Other tax credits issued to this facility location:

App. #	Description of Facility	Certified Cost	Cert. #	Issue Date
3742	JD 2810 plow	$7,100	2856	4-23-92
4672	JD 8400 tractor, JD 2810 plow	$32,142.65	3736	2-28-97

Reviewers: John Hamblin, ODA
Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Director's Recommendation:	**Approve - Reduced Cost**
Applicant	**T&P Farms LLC**
Application No.	**5981**
Eligible Facility Cost	**$10,000**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**3 years**

Tax Credit Review Report

EQC 0302

Pollution Control Facility: Field Burning
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Limited Liability Corp.**
Business: **a grass seed farm**
Taxpayer ID: **93-6084519**

The applicant's address is:

4925 Rockdale Street NE
P.O. Box 9068
Brooks, OR 97305

Facility Identification

The certificate will identify the facility as:

Rear's Flail Chopper, serial # FOO-278

The applicant is the owner of the facility located at:

4925 Rockdale Street NE
Brooks, OR 97305

Technical Information

The applicant claimed a new Rear's Flail Chopper used to mow the full straw load back into the field. This has allowed the applicant to **remove all 245 acres** under perennial grass seed production from being open field burned. The applicant currently manages a total of 256 acres. The applicant burned and baled their straw in the past.

Eligibility

ORS 468.155 (1)(a)	The **sole purpose** of this **new equipment** is to prevent a substantial quantity of **air pollution**.
OAR 340-016-0060 (4)(b)(A)	**Equipment**, facilities, and land for gathering, densifying, handling, storing, transporting and incorporating grass straw or straw based products which will result in **reduction of open field burning**.
ORS 468.155 (3)(e)	**Replacement:** The claimed equipment does not replace any previously certified equipment.
ORS 315.304 OAR 340-016-0008	The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Construction Started	**5/3/00**
Construction Completed	**5/3/00**
Facility Placed into Operation	**7/30/00**
Application Received	**12/31/01**

Facility Cost

Claimed Cost	$11,200
Ineligible costs (trade-in)	-1,200
Eligible Cost	**$10,000**

Facility Cost Allocable to Pollution Control

The only factor used to determine that **100%** of the cost is allocable to pollution control is the percentage of time the facility is used for pollution control. [ORS 468.190 (3)]

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. There are no DEQ permits issued to the facility.

Reviewers: John Hamblin, ODA
Maggie Vandehey, DEQ

Material Recovery Facilities
The Department recommends the Commission approve **17** material recovery facilities for certification as pollution control facilities. All 17 recovered material that would otherwise be solid waste. The statistics for these approvals are:

	Sum	Average	Minimum	Maximum
Claimed	$1,306,330	$76,843	$1,250	$242,737
Certified	$1,285,649	$75,626	$1,250	$242,737
GF	$642,825	$37,813	$625	$121,369

A summary of all the material recovery facilities is on the next page followed by the individual reports for each pollution control facility ordered by application number.

Increase or Decrease in Cost
The recommended certified facility cost on **two** of the reports is less than the applicant requested on the application. Each report explains the reason for the reduction.

Eligibility
The material recovery facilities in this section are eligible for the pollution control facilities tax credit because they have a pollution control purpose and the control is accomplished as required by ORS 468.155 (1)(b)(D) as described below.

1. The facilities have the **sole purpose** of reducing or eliminating a substantial quantity of **solid waste**.

2. The facilities reduce or eliminate solid waste through a material recovery process. These processes obtain useful material from solid waste as defined in ORS 4595. They produce an end product that has a real economic value that is competitive with an end product produced in another state.

   The end products are produced by mechanical processing, chemical processing; or through the production, processing, pre-segregation, or use of materials that:
   a. Have useful chemical or physical properties and that may be used for the same or other purposes; or
   b. May be used in the same kind of application as its prior use without change in identity.

Eligible Material Recovery: Solid Waste Facilities

App #	Applicant	Cost			%	Max. TC	GF Liability
		Claimed	Certified	+/-			
5621	Container Recovery, Inc.	49,560	49,560		100%	50%	24,780
5626	Clackamas Garbage Company, Inc.	81,381	77,025	-4,456	100%	50%	38,513
5796	Smith Seed Services	6,440	6,440		100%	50%	3,220
5801	Premier West Bank	235,780	235,780		100%	50%	117,890
5800	Premier West Bank	242,737	242,737		100%	50%	121,369
5804	Willamette Industries, Inc	49,990	49,990		100%	50%	24,995
5807	Western Bank,	220,671	220,671		100%	50%	110,336
5818	Garbarino Disposal & Recycling Service	9,739	9,739		100%	50%	4,870
5819	Garbarino Disposal & Recycling Service	4,204	4,204		100%	50%	2,102
5820	Garbarino Disposal & Recycling Service	1,250	1,250		100%	50%	625
5821	Global Leasing, Inc.	40,274	40,274		100%	50%	20,137
5822	Global Leasing, Inc.	40,382	40,382		100%	50%	20,191
5823	Global Leasing, Inc.	4,973	4,973		100%	50%	2,487
5824	Global Leasing, Inc.	46,554	30,228	-16,326	100%	50%	15,114
5830	Rockwood Solid Waste, Inc.	109,838	109,838		100%	50%	54,919
5913	Global Leasing, Inc.	123,458	123,458		100%	50%	61,729
5956	Cottage Grove Garbage Service Inc.	39,100	39,100		100%	50%	19,550

State of Oregon
Department of
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Director's
Recommendation: **APPROVE**
Applicant: **Container Recovery Inc.**
Application No.: **5621**
Facility Cost: **$49,560**
Percentage Allocable: **100%**
Maximum Tax Credit: **50%**
Useful Life: **5 years**

Tax Credit Review Report

EQC 0302

Pollution Control Facility: Solid Waste
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0050

Applicant Identification

Organized as: **a C corporation**
Business: **a beverage container collection company**
Taxpayer ID: **93-0961383**

The applicant's address is:

3900 NW Yeon Avenue
Portland, OR 97210

Facility Identification

The certificate will identify the facility as:

Five Envipco reverse vending machines, serial # 050913, 40635, 30686, 040764, and 30655

The applicant is the owner of the facility located at:

401 West Columbia River Hwy.
Clatskanie, OR 97016

Technical Information

The claimed equipment is used to redeem deposit beverage containers directly from customers at a retail location.

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of the equipment is to prevent, control or reduce a substantial quantity of **solid waste**.

OAR 340-016-0025(g)(B) **Replacement:** The new equipment does not replace any previously certified equipment.

ORS 468.155 (1)(b)(D) The equipment is used to process beverage containers and is part of a **material recovery process** that obtains useful material from material that would otherwise be solid waste as defined in ORS 459.005.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165(6).

Construction Started	**08/27/1999**
Construction Completed	**08/27/1999**
Facility Placed into Operation	**08/27/1999**
Application Received	**08/27/2001**

Facility Cost

Claimed Cost	$49,560
Eligible Cost	**$49,560**

Invoices and canceled checks substantiated the cost for the claimed equipment.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the claimed facility cost is allocable to pollution control is the percentage of time the facility is used for pollution control. [ORS 468.190 (3)]

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. There were no DEQ permits issued to this facility.

Reviewer: William R Bree, DEQ
Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Director's Recommendation:	**APPROVE - Reduced Cost**
Applicant:	**Clackamas Garbage Company**
Application No.:	**5626**
Facility Cost:	**$77,025**
Percentage Allocable:	**100%**
Maximum Tax Credit	**50%**
Useful Life:	**10 years**

Tax Credit Review Report

EQC 0302

Pollution Control Facility: Solid Waste
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized As: **an S corporation**
Business: **solid waste collection and recycling facility**
Taxpayer ID: **93-0581479**

The applicant's address is:

8123 SE Roots Road
Milwaukie, OR 97267

Facility Identification

The certificate will identify the facility as:

400 - 14-gallon recycling bins, no serial numbers
2075 – 65-gal yard debris collection containers, serial numbers CG/51-CG/2100 (25 with no serial numbers)

The applicant is the owner of the facility located at:

8123 SE Roots Road
Milwaukie, OR 97267

Technical Information

The claimed containers are used to collect recyclable materials and yard debris from residential customers in Clackamas County. The applicant collects the recyclable material and delivers it to a processing facility for additional sorting and subsequent shipment to recycling mills. The material is converted into products of real economic value at the recycling mills. The applicant sends the yard debris to a composting facility.

Eligibility

ORS 468.155 (1)(a) The **sole purpose** of this **new equipment** is to prevent, control, or reduce a substantial quantity of **solid waste**.

OAR 340-16-0070(3)(k)	**Replacement:** The new equipment did **not** replace any previously certified equipment.
ORS 468.155 (1)(b)(D)	This equipment is used to collect source-separated recyclable material and is part of a **material recovery process** that obtains useful material from material that would otherwise be solid waste as defined in ORS 459.005.
ORS 315.304 OAR 340-016-0008	The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165(6).

Construction Started	**06/01/99**
Construction Completed	**06/01/01**
Facility Placed into Operation	**06/01/01**
Application Received	**08/31/01**

Facility Cost

Claimed Cost	$81,481
Ineligible costs - Repairs to old cardboard containers	-$4,456
Eligible Facility Cost	**$77,025**

Invoices substantiated the cost of the facility.

Facility Cost Allocable to Pollution Control

The factors listed below were considered in determining that **100%** of the facility cost is allocable to pollution control.

Factor	Applied to This Facility
ORS 468.190(1)(a) Salable or Usable Commodity	Recyclable materials are subsequently made into a salable and usable commodity.
ORS 468.190(1)(b) Return on Investment	The useful life of the facility used for the return on investment consideration is 10 years. The portion of cost allocable to pollution control is 100% when calculated according to rule.
ORS 468.190(1)(c) Alternative Methods	No alternative investigated.
ORS 468.190(1)(d) Savings or Increase in Costs	No savings or increase in costs.
ORS 468.190(1)(e) Other Relevant Factors	No other relevant factors.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. There were no DEQ permits issued to this facility.

Reviewer: William R Bree, DEQ
Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Director's Recommendation:	**APPROVE**
Applicant:	**Smith Seed Services**
Application No.:	**5796**
Facility Cost:	**$6,440**
Percentage Allocable:	**100%**
Maximum Tax Credit:	**50%**
Useful Life:	**7 years**

Tax Credit Review Report

EQC 0302

Pollution Control Facility: Solid Waste
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0050

Applicant Identification

Organized as: **a Partnership**
Business: **a seed cleaning service**

The applicant's address is:

26890 Powerline Road
Halsey, OR 97348

Facility Identification

The certificate will identify the facility as:

One Philadelphia Tramrail bailer, model 2300 HD, serial # 98P3057

The applicant is the owner of the facility located at:

26890 Powerline Road
Halsey, OR 97348

Technical Information

The claimed equipment is used to bale plastic bags and seed sacks generated from repackaging seed. The plastic is subsequently processed into new products.

Eligibility

ORS 468.155 (1)(a)(B) — The **sole purpose** of the equipment is to prevent, control or reduce a substantial quantity of **solid waste**.

OAR 340-016-0025(g)(B) — **Replacement:** The new equipment does **not** replace any previously certified equipment.

ORS 468.155 (1)(b)(D) — The equipment is used to bale plastic and is part of a **material recovery process** that obtains useful material from material that would otherwise be solid waste as defined in ORS 459.005.

ORS 315.304
OAR 340-016-0008

The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165(6).

Construction Started	**05/25/01**
Construction Completed	**06/01/01**
Facility Placed into Operation	**06/01/01**
Application Received	**11/02/01**

Facility Cost

Claimed Cost	$6,440
Eligible Cost	**$6,440**

Invoices and canceled checks substantiated the cost of the claimed equipment.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the claimed facility cost is allocable to pollution control is the percentage of time the facility is used for pollution control. [ORS 468.190 (3)]

Compliance and Other Tax Credits

The facility is in compliance with Department of Environmental Quality (DEQ) rules and statutes and with Environmental Quality Commission orders. There were no DEQ permits issued to this facility.

Reviewer: William R Bree, DEQ
Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Director's Recommendation:	**APPROVE**
Applicant:	**Premier-West Bank**
Application No.:	**5800**
Facility Cost:	**$242,737**
Percentage Allocable:	**100%**
Maximum Tax Credit:	**50%**
Useful Life:	**5 years**

Tax Credit Review Report

EQC 0302

Pollution Control Facility: Solid Waste
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized As: **a C corporation**
Business: Financial institution
Taxpayer ID: **93-1007653**

The applicant's address is:

6400 SW Corbett Avenue
Portland, OR 97201

Facility Identification

The certificate will identify the facility as:

One 2001 Model 320, Peterbilt truck, VIN # 1NPZLDOX21D713245
One Labrie 27-yard Automizer Side Loader serial # SF01102RAS
One 2000 Model 2000E, Nissan UD truck, VIN # JNAMB43H4YGE55219
One Wayne 10-yard Tom Cat Side Loader, serial # 15112

The applicant is the owner of the facility located at:

Oak Grove Disposal Company, Inc.
16915 SE Oatfield Road
Milwaukie, OR 97267

Technical Information

This claimed facility is used to collect recyclable materials and yard debris from residential and commercial collection customers in Clackamas County. The applicant collects the recyclable material and delivers it to a processing facility for additional sorting and subsequent shipment to recycling mills. The material is converted into products of real economic value at the recycling mills.

Eligibility

ORS 468.155 (1)(a)	The **sole purpose** of this **new equipment** is to prevent, control, or reduce a substantial quantity of **solid waste**.
OAR 340-16-0070(3)(k)	**Replacement:** The new equipment did **not** replace any previously certified equipment.
ORS 468.155 (1)(b)(D)	This equipment is used to collect source-separated recyclable material and is part of a **material recovery process** that obtains useful material from material that would otherwise be solid waste as defined in ORS 459.005.
ORS 315.304 OAR 340-016-0008	The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165(6).

Construction Started	**10/18/01**
Construction Completed	**10/18/01**
Facility Placed into Operation	**10/18/01**
Application Received	**11/05/01**

Facility Cost

Claimed Cost	$242,737
Eligible Cost	**$242,737**

Invoices for purchase of the equipment substantiated the cost of the facility.

Facility Cost Allocable to Pollution Control

The factors listed below were considered in determining that **100%** of the facility cost is allocable to pollution control.

Factor	Applied to This Facility
ORS 468.190(1)(a) Salable or Usable Commodity	Recyclable materials are subsequently made into a salable and usable commodity.
ORS 468.190(1)(b) Return on Investment	The useful life of the facility used for the return on investment consideration is 5 years. The portion of cost allocable to pollution control is 100% when calculated according to rule.
ORS 468.190(1)(c) Alternative Methods	No alternative investigated.
ORS 468.190(1)(d) Savings or Increase in Costs	No savings or increase in costs.
ORS 468.190(1)(e) Other Relevant Factors	No other relevant factors.

Compliance

The facility is in compliance with Department of Environmental Quality (DEQ) rules and statutes and with Environmental Quality Commission orders. There were no DEQ permits issued to this facility.

Reviewer: William R Bree, DEQ
Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Director's Recommendation:	**APPROVE**
Applicant:	**Premier-West Bank**
Application No.:	**5801**
Facility Cost:	**$235,780**
Percentage Allocable:	**100%**
Maximum Tax Credit:	**50%**
Useful Life:	**7 years**

Tax Credit Review Report

EQC 0302

Pollution Control Facility: Solid Waste
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized As: **a C corporation**
Business: **Financial institution**
Taxpayer ID: **93-1007653**

The applicant's address is:

6400 SW Corbett Av.
Portland, OR 97201

Facility Identification

The certificate will identify the facility as:

500 – 14-gallon recycling bins
6400 – 65-gallon yard debris recycling carts, serial numbers 10001-16400
200 – 35-gallon recycling carts, serial numbers 101950 – 101249

The applicant is the owner of the facility located at:

Oak Grove Disposal Company, Inc.
16915 SE Oatfield Road
Milwaukie, OR 97267

Technical Information

This facility is used to collect recyclable materials and yard debris from residential and commercial collection customers in Clackamas County. The applicant collects the recyclable material and delivers it to a processing facility for additional sorting and subsequent shipment to recycling mills. The material is converted into products of real economic value at the recycling mills.

Eligibility

ORS 468.155 (1)(a) The **sole purpose** of this **new equipment** is to prevent, control, or reduce a substantial quantity of **solid waste**.

OAR 340-16-0070(3)(k) **Replacement:** The new equipment did **not** replace any previously-certified equipment.

ORS 468.155 (1)(b)(D) This equipment is used to collect source-separated recyclable material and is part of a **material recovery process** that obtains useful material from material that would otherwise be solid waste as defined in ORS 459.005.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165(6).

Construction Started	**10/18/01**
Construction Completed	**10/18/01**
Facility Placed into Operation	**10/18/01**
Application Received	**11/05/01**

Facility Cost

Claimed Cost	$235,780
Eligible Cost	**$235,780**

Invoices for purchase of the equipment substantiated the cost of the facility.

Facility Cost Allocable to Pollution Control

The factors listed below were considered in determining that **100%** of the facility cost is allocable to pollution control.

Factor	Applied to This Facility
ORS 468.190(1)(a) Salable or Usable Commodity	Recyclable materials are subsequently made into a salable and usable commodity.
ORS 468.190(1)(b) Return on Investment	The useful life of the facility used for the return on investment consideration is 7 years. The portion of cost allocable to pollution control is 100% when calculated according to rule.
ORS 468.190(1)(c) Alternative Methods	No alternative investigated
ORS 468.190(1)(d) Savings or Increase in Costs	No savings or increase in costs
ORS 468.190(1)(e) Other Relevant Factors	No other relevant factors

Compliance and Other Tax Credits

The facility is in compliance with Department of Environmental Quality (DEQ) rules and statutes and with Environmental Quality Commission orders. There were no DEQ permits issued to this facility.

Reviewer: William R Bree, DEQ
Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Director's Recommendation:	**APPROVE**
Applicant:	**Willamette Industries, Inc. Albany Paper Mill**
Application No.:	**5804**
Facility Cost:	**$49,990**
Percentage Allocable:	**100%**
Maximum Tax Credit:	**50%**
Useful Life:	**7 years**

Tax Credit Review Report

EQC 0302

Pollution Control Facility: Solid Waste
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0050

Applicant Identification

Organized as: **a C Corporation**
Business: **a paper mill**
Taxpayer ID: **93-0312940**

The applicant's address is:

1300 SW Fifth Ave, Suite 3800
Portland, OR 97201

Facility Identification

The certificate will identify the facility as:

One wood fines collection and screening system

The applicant is the owner of the facility located at:

3251 Old Salem Road
Albany, OR 97321

Technical Information

The claimed equipment is used to collect fine wood fiber generated through the handling of wood chips. The applicant stores the collected wood fiber for subsequent use in fiberboard manufacture.

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of the equipment is to prevent, control or reduce a substantial quantity of **solid waste**.

OAR 340-016-0025(g)(B) **Replacement:** The new equipment does **not** replace any previously certified equipment.

ORS 468.155 (1)(b)(D) The equipment is used to collect wood fiber fines and is part of a **material recovery process** that obtains useful material from material that would otherwise be solid waste as defined in ORS 459.005.

ORS 315.304
OAR 340-016-0008

The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165(6).

Construction Started	**05/01/00**
Construction Completed	**10/31/00**
Facility Placed into Operation	**10/31/00**
Application Received	**11/06/01**

Facility Cost

Claimed Cost	$49,990
Eligible Cost	**$49,990**

Invoices and canceled checks substantiated the cost for the claimed equipment.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the claimed facility cost is allocable to pollution control is the percentage of time the facility is used for pollution control. [ORS 468.190 (3)]

Compliance and Other Tax Credits

The facility is in compliance with Department of Environmental Quality (DEQ) rules and statutes and with Environmental Quality Commission orders. There were no DEQ permits issued to this facility.

Reviewer: William R Bree, DEQ
Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Director's Recommendation:	**APPROVE**
Applicant:	**Western Bank**
Application No.:	**5807**
Facility Cost:	**$220,671**
Percentage Allocable:	**100%**
Maximum Tax Credit:	**50%**
Useful Life:	**7 years**

Tax Credit Review Report

EQC 0302

Pollution Control Facility: Solid Waste
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized As: **a C corporation**
Business: **Financial institution**
Taxpayer ID: **91-1660453**

The applicant's address is:

6400 SW Corbett Avenue
Portland, OR 97201

Facility Identification

The certificate will identify the facility as:

50 – 35-gallon gray recycling carts, serial numbers 001 – 050
3500 – 65-gallon brown yard debris collection carts, serial numbers 60001 – 63500
50 – 65-gallon gray commercial recycling carts, serial numbers R6000001 – R6000050
2300 – 95-gallon gray recycling collection carts, serial numbers 1 – 2300

The applicant is the owner of the facility located at:

Sunset Garbage Collection Inc.
9035 SE Henderson Street
Portland, OR 97266

Technical Information

The claimed containers are used to collect recyclable materials and yard debris from residential customers in Clackamas County. The applicant collects the recyclable material and delivers it to a processing facility for additional sorting and subsequent shipment to recycling mills. The material is converted into products of real economic value at the recycling mills.

Eligibility

ORS 468.155 (1)(a)	The **sole purpose** of this **new equipment** is to prevent, control, or reduce a substantial quantity of **solid waste**.
OAR 340-16-0070(3)(k)	**Replacement:** The new equipment did **not** replace any previously certified equipment.
ORS 468.155 (1)(b)(D)	This equipment is used to collect source-separated recyclable material and is part of a **material recovery process** that obtains useful material from material that would otherwise be solid waste as defined in ORS 459.005.
ORS 315.304 OAR 340-016-0008	The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165(6).

Construction Started	**09/11/01**
Construction Completed	**10/03/01**
Facility Placed into Operation	**10/03/01**
Application Received	**11/07/01**

Facility Cost

Claimed Cost	$220,671
Eligible Cost	**$220,671**

Invoices for purchase of the equipment substantiated the cost of the facility.

Facility Cost Allocable to Pollution Control

The factors listed below were considered in determining that **100%** of the facility cost is allocable to pollution control.

Factor	Applied to This Facility
ORS 468.190(1)(a) Salable or Usable Commodity	Recyclable materials are subsequently made into a salable and usable commodity.
ORS 468.190(1)(b) Return on Investment	The useful life of the facility used for the return on investment consideration is 7 years. The portion of cost allocable to pollution control is 100% when calculated according to rule.
ORS 468.190(1)(c) Alternative Methods	No alternative investigated.
ORS 468.190(1)(d) Savings or Increase in Costs	No savings or increase in costs.
ORS 468.190(1)(e) Other Relevant Factors	No other relevant factors.

Compliance and Other Tax Credits

The facility is in compliance with Department of Environmental Quality (DEQ) rules and statutes and with Environmental Quality Commission orders. There were no DEQ permits issued to this facility.

Reviewer: William R Bree, DEQ
Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Director's Recommendation:	**APPROVE**
Applicant:	**Garbarino Disposal & Recycling Services, Inc.**
Application No.:	**5818**
Facility Cost:	**$9,739**
Percentage Allocable:	**100%**
Maximum Tax Credit:	**50%**
Useful Life:	**7 years**

Tax Credit Review Report

EQC 0302

Pollution Control Facility: Solid Waste
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0050

Applicant Identification

Organized as: **an S corporation**
Business: **a solid waste and recycling collection company**
Taxpayer ID: **93-0563390**

The applicant's address is:

PO Box 250
North Plains, OR 97133

Facility Identification

The certificate will identify the facility as:

1000 – 14-gallon residential recycling bins
116 – 65-gallon yard debris collection containers

The applicant is the owner of the facility located at:

30966 NW Hillcrest St.
North Plains, OR 97133

Technical Information

The claimed containers are used to provide collection of recyclable materials and yard debris from residential customers.

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of the equipment is to prevent, control or reduce a substantial quantity of **solid waste**.

OAR 340-016-0025(g)(B) **Replacement:** The new equipment does **not** replace any previously certified equipment.

ORS 468.155 (1)(b)(D)	The equipment is used to collect recyclable materials and yard debris and is part of a **material recovery process** that obtains useful material from material that would otherwise be solid waste as defined in ORS 459.005.
ORS 315.304 OAR 340-016-0008	The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165(6).

Construction Started	**04/28/00**
Construction Completed	**10/31/00**
Facility Placed into Operation	**10/31/00**
Application Received	**11/13/01**

Facility Cost

Claimed Cost	$9,739
Eligible Cost	**$9,739**

The applicant provided invoices and canceled checks to substantiate the cost for the claimed equipment.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the claimed facility cost is allocable to pollution control is the percentage of time the facility is used for pollution control. [ORS 468.190 (3)]

Compliance and Other Tax Credits

The facility is in compliance with Department of Environmental Quality (DEQ) rules and statutes and with Environmental Quality Commission orders. There were no DEQ permits issued to this facility.

Reviewer: William R Bree, DEQ
Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Director's Recommendation:	**APPROVE**
Applicant:	**Garbarino Disposal & Recycling Services, Inc.**
Application No.:	**5819**
Facility Cost:	**$4,204**
Percentage Allocable:	**100%**
Maximum Tax Credit:	**50%**
Useful Life:	**7 years**

Tax Credit Review Report

EQC 0302

Pollution Control Facility: Solid Waste
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0050

Applicant Identification

Organized as: **an S corporation**
Business: **a solid waste and recycling collection company**
Taxpayer ID: **93-0563390**

The applicant's address is:

PO Box 250
North Plains, OR 97133

Facility Identification

The certificate will identify the facility as:

60 – 60-gallon commercial recycling carts
34 – 65-gallon yard debris collection containers

The applicant is the owner of the facility located at:

30966 NW Hillcrest Street
North Plains, OR 97133

Technical Information

The claimed containers are used to provide collection of recyclable materials and yard debris from residential and commercial customers.

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of the equipment is to prevent, control or reduce a substantial quantity of **solid waste**.

OAR 340-016-0025(g)(B) **Replacement:** The new equipment does **not** replace any previously certified equipment.

ORS 468.155 (1)(b)(D) The equipment is used to collect recyclable materials and yard debris and is part of a **material recovery process** that obtains useful material from material that would otherwise be solid waste as defined in ORS 459.005.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165(6).

Construction Started	**02/09/00**
Construction Completed	**11/04/00**
Facility Placed into Operation	**11/04/00**
Application Received	**11/13/01**

Facility Cost

Claimed Cost	$4,204
Eligible Cost	**$4,204**

Invoices and canceled checks substantiated the cost of the claimed equipment.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the claimed facility cost is allocable to pollution control is the percentage of time the facility is used for pollution control. [ORS 468.190 (3)]

Compliance and Other Tax Credits

The facility is in compliance with Department of Environmental Quality (DEQ) rules and statutes and with Environmental Quality Commission orders. There were no DEQ permits issued to this facility.

Reviewer: William R Bree, DEQ
Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Director's
Recommendation: **APPROVE**
Applicant: **Garbarino Disposal & Recycling Services, Inc.**
Application No. **5820**
Facility Cost **$1,250**
Percentage Allocable **100%**
Maximum Tax Credit **50%**
Useful Life **7 years**

Tax Credit Review Report

EQC 0302

Pollution Control Facility: Solid Waste
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0050

Applicant Identification

Organized as: **an S corporation**
Business: **a solid waste and recycling collection company**
Taxpayer ID: **93-0563390**

The applicant's address is:

PO Box 250
North Plains, OR 97133

Facility Identification

The certificate will identify the facility as:

One 4-yard high side dump compartment

The applicant is the owner of the facility located at:

30966 NW Hillcrest St.
North Plains, OR 97133

Technical Information

The claimed equipment is used to provide collection of glass from residential and commercial customers.

Eligibility

ORS 468.155 (1)(a)(B) — The **sole purpose** of the equipment is to prevent, control or reduce a substantial quantity of **solid waste**.

OAR 340-016-0025(g)(B) — **Replacement:** The new equipment does **not** replace any previously certified equipment.

ORS 468.155 (1)(b)(D) — The equipment is used to collect cardboard and is part of a **material recovery process** that obtains useful material from material that would otherwise be solid waste as defined in ORS 459.005.

ORS 315.304
OAR 340-016-0008

The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165(6).

Construction Started	**08/27/01**
Construction Completed	**08/27/01**
Facility Placed into Operation	**08/27/01**
Application Received	**11/13/01**

Facility Cost

Claimed Cost	$1,250
Eligible Cost	**$1,250**

Invoices and canceled checks substantiated the cost of the claimed equipment.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the claimed facility cost is allocable to pollution control is the percentage of time the facility is used for pollution control. [ORS 468.190 (3)]

Compliance and Other Tax Credits

The facility is in compliance with Department of Environmental Quality (DEQ) rules and statutes and with Environmental Quality Commission orders. There were no DEQ permits issued to this facility.

Reviewer: William R Bree, DEQ
Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Director's Recommendation:	**APPROVE**
Applicant:	**Global Leasing, Inc.**
Application No.:	**5821**
Facility Cost:	**$40,274**
Percentage Allocable:	**100%**
Maximum Tax Credit:	**50%**
Useful Life:	**7 years**

Tax Credit Review Report

EQC 0302

Pollution Control Facility: Solid Waste
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0050

Applicant Identification

Organized as: **an S corporation**
Business: **a leasing company**
Taxpayer ID: **93-1097105**

The applicant's address is:

PO Box 250
North Plains, OR 97133

Facility Identification

The certificate will identify the facility as:

1152 – 65-gallon yard debris collection containers, serial numbers 650577 - 651728

The applicant is the owner of the facility operated by Garbarino Disposal and Recycling Services located at:

30966 NW Hillcrest St.
North Plains, OR 97133

Technical Information

The claimed containers are used to provide collection of yard debris to residential customers.

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of the equipment is to prevent, control or reduce a substantial quantity of **solid waste**. This equipment is used for collecting yard debris that is subsequently processed into new products.

OAR 340-016-0025(g)(B) **Replacement:** The new equipment does **not** replace any previously certified equipment.

ORS 468.155 (1)(b)(D) The equipment is used to collect yard debris and is part of a **material recovery process** that obtains useful material from material that would otherwise be solid waste as defined in ORS 459.005.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165(6).

Construction Started	**02/26/01**
Construction Completed	**02/26/01**
Facility Placed into Operation	**02/26/01**
Application Received	**11/13/01**

Facility Cost

Claimed Cost	$40,274
Eligible Cost	**$40,274**

Invoices and canceled checks substantiated the cost for the claimed equipment.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the claimed facility cost is allocable to pollution control is the percentage of time the facility is used for pollution control. [ORS 468.190 (3)]

Compliance and Other Tax Credits

The facility is in compliance with Department of Environmental Quality (DEQ) rules and statutes and with Environmental Quality Commission orders. There were no DEQ permits issued to this facility.

Reviewer: William R Bree, DEQ
Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Director's Recommendation:	**APPROVE**
Applicant:	**Global Leasing, Inc.**
Application No.:	**5822**
Facility Cost:	**$40,382**
Percentage Allocable:	**100%**
Maximum Tax Credit:	**50%**
Useful Life:	**7 years**

Tax Credit Review Report

EQC 0302

Pollution Control Facility: Solid Waste
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0050

Applicant Identification

Organized as: **an S corporation**
Business: **a leasing company**
Taxpayer ID: **93-1097105**

The applicant's address is:

PO Box 250
North Plains, OR 97133

Facility Identification

The certificate will identify the facility as:

1149 – 65-gallon yard debris collection containers

The applicant is the owner of the facility operated by Garbarino Disposal and Recycling Services located at:

30966 NW Hillcrest Street
North Plains, OR 97133

Technical Information

The claimed containers are used to provide collection of yard debris to residential customers.

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of the equipment is to prevent, control or reduce a substantial quantity of **solid waste**.

OAR 340-016-0025(g)(B) **Replacement:** The new equipment does **not** replace any previously certified equipment.

ORS 468.155 (1)(b)(D) The equipment is used to collect yard debris and is part of a **material recovery process** that obtains useful material from material that would otherwise be solid waste as defined in ORS 459.005.

ORS 315.304
OAR 340-016-0008

The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165(6).

Construction Started	**02/27/01**
Construction Completed	**02/27/01**
Facility Placed into Operation	**02/27/01**
Application Received	**11/13/01**

Facility Cost

Claimed Cost	$40,382
Eligible Cost	**$40,382**

The applicant provided invoices and canceled checks to substantiate the cost for the claimed equipment.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the claimed facility cost is allocable to pollution control is the percentage of time the facility is used for pollution control. [ORS 468.190 (3)]

Compliance and Other Tax Credits

The facility is in compliance with Department of Environmental Quality (DEQ) rules and statutes and with Environmental Quality Commission orders. There were no DEQ permits issued to this facility.

Reviewer: William R Bree, DEQ
Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Director's Recommendation:	**APPROVE**
Applicant:	**Global Leasing, Inc**
Application No.:	**5823**
Facility Cost:	**$4,973**
Percentage Allocable:	**100%**
Maximum Tax Credit	**50%**
Useful Life:	**7 years**

Tax Credit Review Report

EQC 0302

Pollution Control Facility: Solid Waste
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0050

Applicant Identification

Organized as: **an S corporation**
Business: **a leasing company**
Taxpayer ID: **93-1097105**

The applicant's address is:

PO Box 250
North Plains, OR 97133

Facility Identification

The certificate will identify the facility as:

10 – 4-yard cardboard collection containers

The applicant is the owner of the facility operated by Garbarino Disposal and Recycling Services located at:

30966 NW Hillcrest Street
North Plains, Oregon 97133

Technical Information

The claimed containers are used to provide collection of cardboard to commercial customers.

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of the equipment is to prevent, control or reduce a substantial quantity of **solid waste**.

OAR 340-016-0025(g)(B) **Replacement:** The new equipment does **not** replace any previously certified equipment.

ORS 468.155 (1)(b)(D) The equipment is used to collect cardboard and is part of a **material recovery process** that obtains useful material from material that would otherwise be solid waste as defined in ORS 459.005.

ORS 315.304 The maximum tax credit available to the applicant is **50%** because construction

OAR 340-016-0008 of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165(6).

Construction Started	**10/19/01**
Construction Completed	**10/19/01**
Facility Placed into Operation	**10/19/01**
Application Received	**11/13/01**

Facility Cost

Claimed Cost	$4,973
Eligible Cost	**$4,973**

The applicant provided invoices and canceled checks to substantiate the cost for the claimed equipment.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the claimed facility cost is allocable to pollution control is the percentage of time the facility is used for pollution control. [ORS 468.190 (3)]

Compliance and Other Tax Credits

The facility is in compliance with Department of Environmental Quality (DEQ) rules and statutes and with Environmental Quality Commission orders. There were no DEQ permits issued to this facility.

Reviewer: William R Bree, DEQ
Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Director's Recommendation:	**APPROVE - Reduced Cost**
Applicant:	**Global Leasing, Inc.**
Application No.:	**5824**
Facility Cost:	**$30,228**
Percentage Allocable:	**100%**
Maximum Tax Credit:	**50%**
Useful Life:	**7 years**

Tax Credit Review Report

EQC 0302

Pollution Control Facility: Solid Waste
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0050

Applicant Identification

Organized as: **an S Corporation**
Business: **a leasing company**
Taxpayer ID: **93-1097105**

The applicant's address is:

PO Box 250
North Plains, OR 97133

Facility Identification

The certificate will identify the facility as:

- **27 – 4-yard cardboard collection containers**
- **500 - 14-gallon residential curbside collection bins**
- **96 – 65-gallon yard debris collection containers**
- **100 – 65-gallon commercial recycling collection containers**
- **5 – 6-yard commercial recycling collection containers**
- **1 – 4-section recycling container set up as a recycling depot**

The applicant is the owner of the facility operated by Garbarino Disposal and Recycling Services located at:

30966 NW Hillcrest St.
North Plains, OR 97133

Technical Information

The claimed containers are used to provide collection of source-separated recyclable materials and yard debris from commercial and residential customers.

Eligibility

ORS 468.155 (1)(a)(B)	The **sole purpose** of the equipment is to prevent, control or reduce a substantial quantity of **solid waste**. This equipment is used for collecting recyclable materials that are subsequently remanufactured into new products.
OAR 340-016-0025(g)(B)	**Replacement:** The new equipment does **not** replace any previously certified equipment.
ORS 468.155 (1)(b)(D)	The equipment is used to collect recyclable material and is part of a **material recovery process** that obtains useful material from material that would otherwise be solid waste as defined in ORS 459.005.
ORS 315.304 OAR 340-016-0008	The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The applicant claimed some bins and containers purchased more than two years before the date of the application as required in ORS 468.165(6). The remaining portion of the claimed facility was submitted within the timing requirements of ORS 468.165(6).

Construction Started	**11/14/99**
Construction Completed	**11/14/99**
Facility Placed into Operation	**11/14/99**
Application Received	**11/13/01**

Facility Cost

Claimed Cost			$46,554
Undocumented		$ 2,859	
Missed Filing Period:			
7	4-yard containers (7/16/99)	$ 3,481	
10	4-yard containers (10/05/99)	$ 4,869	
500	14-gallon bins (8/7/99)	$ 2,195	
72	65-gallon containers (8/4/99)	$ 2,922	
	Total ineligible costs	$16,326	-$16,326
Eligible Cost			**$30,228**

The applicant provided invoices and canceled checks to substantiate the cost for the claimed equipment.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the claimed facility cost is allocable to pollution control is the percentage of time the facility is used for pollution control. [ORS 468.190 (3)]

Compliance and Other Tax Credits

The facility is in compliance with Department of Environmental Quality (DEQ) rules and statutes and with Environmental Quality Commission orders. No DEQ permits have been issued to this facility.

Reviewer: William R Bree, DEQ
Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Director's Recommendation:	**APPROVE**
Applicant:	**Rockwood Solid Waste, Inc.**
Application No.:	**5830**
Facility Cost:	**$109,838**
Percentage Allocable:	**100%**
Maximum Tax Credit:	**50%**
Useful Life:	**5 years**

Tax Credit Review Report

EQC 0302

Pollution Control Facility: Solid Waste
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized As: **a C corporation**
Business: **Garbage collection company**
Taxpayer ID: **93-0642835**

The applicant's address is:

PO Box 605
Gresham, OR 97030

Facility Identification

The certificate will identify the facility as:

One 1999 Peterbilt truck model 320, VIN #1NP2HD7X6YO712147
One Labrie Top Select loader, serial # TS99101NAE

The applicant is the owner of the facility located at:

2550 NW Burnside Ct.
Gresham, OR 97030

Technical Information

This facility is used to collect recyclable materials from residential and commercial customers in the City of Gresham and Multnomah County. The applicant collects the recyclable material and delivers it to a processing facility for additional sorting and subsequent shipment to recycling mills. The material is converted into products of real economic value at the recycling mills.

Eligibility

ORS 468.155 (1)(a) The **sole purpose** of this **new equipment** is to prevent, control, or reduce a substantial quantity of **solid waste**.

OAR 340-16-0070(3)(k) **Replacement:** The new equipment does **not** replace any previously certified equipment.

ORS 468.155 (1)(b)(D) This equipment is used to collect source-separated recyclable material and is part of a **material recovery process** that obtains useful material from material that would otherwise be solid waste as defined in ORS 459.005.

ORS 315.304 The maximum tax credit available to the applicant is **50%** because construction
OAR 340-016-0008 of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165(6).

Construction Started	**11/18/99**
Construction Completed	**12/13/99**
Facility Placed into Operation	**12/14/99**
Application Received	**11/16/01**

Facility Cost

Claimed Cost	$109,838
Eligible Cost	$109,838

Invoices for purchase of the equipment substantiated the cost of the facility.

Facility Cost Allocable to Pollution Control

The factors listed below were considered in determining that **100%** of the facility cost is allocable to pollution control.

Factor	Applied to This Facility
ORS 468.190(1)(a) Salable or Usable Commodity	Recyclable materials are subsequently made into a salable and usable commodity.
ORS 468.190(1)(b) Return on Investment	The useful life of the facility used for the return on investment consideration is 5 years. The portion of cost allocable to pollution control is 100% when calculated according to rule.
ORS 468.190(1)(c) Alternative Methods	No alternative investigated.
ORS 468.190(1)(d) Savings or Increase in Costs	No savings or increase in costs.
ORS 468.190(1)(e) Other Relevant Factors	No other relevant factors.

Compliance and Other Tax Credits

The facility is in compliance with Department of Environmental Quality (DEQ) rules and statutes and with Environmental Quality Commission orders. No DEQ permits have been issued to this facility.

Reviewer: William R Bree, DEQ
Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Director's Recommendation:	**APPROVE**
Applicant:	**Global Leasing, Inc.**
Application No.:	**5913**
Facility Cost:	**$123,458**
Percentage Allocable:	**100%**
Maximum Tax Credit:	**50%**
Useful Life:	**7 years**

Tax Credit Review Report

EQC 0302

Pollution Control Facility: Solid Waste
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0050

Applicant Identification

Organized as: **an S corporation**
Business: **a leasing company**
Taxpayer ID: **93-1097105**

The applicant's address is:

PO Box 250
North Plains, OR 97133

Facility Identification

The certificate will identify the facility as:

One, 2000 International, model # 4900, serial # 1HTSDAANOYH247886

One Labrie Top Select Side Loader, serial # CL99101ERS

The applicant is the owner of the facility operated by Garbarino Disposal and Recycling Services located at:

30966 NW Hillcrest Street
North Plains, OR 97133

Technical Information

This facility is used to collect recyclable materials from residential and commercial customers in Washington County. The applicant collects the recyclable material and delivers it to a processing facility for additional sorting and subsequent shipment to recycling mills. The material is converted into products of real economic value at the recycling mills.

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of the equipment is to prevent, control or reduce a substantial quantity of **solid waste**.

OAR 340-016-0025(g)(B)	**Replacement:** The new equipment does **not** replace any previously certified equipment.
ORS 468.155 (1)(b)(D)	The equipment is used to collect yard debris and is part of a **material recovery process** that obtains useful material from material that would otherwise be solid waste as defined in ORS 459.005.
ORS 315.304 OAR 340-016-0008	The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165(6).

Construction Started	**01/10/00**
Construction Completed	**02/10/00**
Facility Placed into Operation	**02/10/00**
Application Received	**12/17/01**

Facility Cost

Claimed Cost	$123,458
Eligible Cost	**$123,458**

The applicant provided invoices and canceled checks to substantiate the cost for the claimed equipment.

Facility Cost Allocable to Pollution Control

The factors listed below were considered in determining that **100%** of the facility cost is allocable to pollution control.

Factor	Applied to This Facility
ORS 468.190(1)(a) Salable or Usable Commodity	Recyclable materials are subsequently made into a salable and usable commodity.
ORS 468.190(1)(b) Return on Investment	The useful life of the facility used for the return on investment consideration is 7 years. The portion of cost allocable to pollution control is 100% when calculated according to rule.
ORS 468.190(1)(c) Alternative Methods	No alternative investigated.
ORS 468.190(1)(d) Savings or Increase in Costs	No savings or increase in costs.
ORS 468.190(1)(e) Other Relevant Factors	No other relevant factors.

Compliance and Other Tax Credits

The facility is in compliance with Department of Environmental Quality (DEQ) rules and statutes and with Environmental Quality Commission orders. There were no DEQ permits issued to this facility.

Reviewer: Maggie Vandehey, DEQ
Bill Bree, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 0302

Director's Recommendation:	**APPROVE**
Applicant:	**Cottage Grove Garbage Service, Inc**
Application No.:	**5956**
Facility Cost:	**$39,100**
Percentage Allocable:	**100%**
Maximum Tax Credit:	**50%**
Useful Life:	**5 years**

Pollution Control Facility: Solid Waste
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0050

Applicant Identification

Organized as: **an S corporation**
Business: **a garbage collection company**
Taxpayer ID: **93-1192884**

The applicant's address is:

PO Box 442
Cottage Grove, OR 97424

Facility Identification

The certificate will identify the facility as:

One 2000 Freightliner truck with custom sub frame, serial # 1FV3GJAC2YHH10383

The applicant is the owner of the facility located at:

77932 Highway 99 South
Cottage Grove, OR 07424

Technical Information

The claimed truck is used to collect recyclable materials from commercial and residential customers.

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of the equipment is to prevent, control or reduce a substantial quantity of **solid waste**.

OAR 340-016-0025(g)(B) **Replacement:** The new equipment does **not** replace any previously certified equipment.

ORS 468.155 (1)(b)(D)	The equipment is used to collect recyclable material and is part of a **material recovery process** that obtains useful material from material that would otherwise be solid waste as defined in ORS 459.005.
ORS 315.304 OAR 340-016-0008	The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165(6).

Construction Started	**12/03/01**
Construction Completed	**12/03/01**
Facility Placed into Operation	**12/15/01**
Application Received	**12/27/01**

Facility Cost

Claimed Cost	$39,100
Eligible Cost	**$39,100**

The applicant provided invoices and canceled checks to substantiate the cost for the claimed equipment.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the claimed facility cost is allocable to pollution control is the percentage of time the facility is used for pollution control. [ORS 468.190(3)]

Compliance and Other Tax Credits

The facility is in compliance with Department of Environmental Quality (DEQ) rules and statutes and with Environmental Quality Commission orders. There were no DEQ permits issued to this facility.

Reviewer: William R Bree, DEQ
Maggie Vandehey, DEQ

APPROVALS: NPS Wood Chippers

Pollution Control Facilities Tax Credit

Nonpoint Source Pollution Control Facilities: Wood Chippers

The Department recommends the Commission approve **122** nonpoint source (NPS) wood chippers for certification as pollution control facilities. The statistics for the wood chipper approvals are:

	Sum	Average	Minimum	Maximum
Claimed	$470,758	$3,859	$450	$22,695
Certified	$469,111	$3,845	$450	$22,695
GF	$234,301	$1,920	$225	$11,348

A list of all the NPS facilities is on the next five pages followed by the review reports for each pollution control facility. The reports are in application number order.

Increase or Decrease in Cost

The recommended certified facility cost on **six** reports is less than the applicant requested on the application. **One** report shows and increased recommended facility cost. The reports explain the reason for the adjusted cost.

Eligibility

The wood chippers in this section are eligible for the pollution control facilities tax credit because they have the **sole purpose** of reducing a significant amount of NPS pollution as provided in ORS 468.155 (2).

Eligible Nonpoint Source Facilities

App #	Applicant	Cost Claimed	Cost Certified	+/-	%	Max. TC	GF Liability
5873	Allen R. Schoenfeld	2,177	2,177	0	100%	50%	1,089
5874	David A. Cook	1,449	1,449	0	100%	50%	725
5875	James A. Christensen	1,199	1,199	0	100%	50%	600
5876	Rodney J. Bardell	2,248	2,089	-159	100%	50%	1,045
5877	Russ Burger	596	596	0	100%	50%	298
5879	Alan Mohr	4,495	4,495	0	100%	50%	2,248
5880	Gary Anderson	2,400	2,400	0	100%	50%	1,200
5881	Jack Heffington	450	450	0	100%	50%	225
5882	Jacob Bergquist	22,200	22,200	0	100%	50%	11,100
5883	Lawrence Martin	2,700	2,700	0	100%	50%	1,350
5884	Vaughn Slavin	892	892	0	100%	50%	446
5891	Michael Hill	596	596	0	100%	50%	298
5892	Wayne Van Dyke	2,214	2,214	0	100%	50%	1,107
5895	Richard Rambo	2,252	2,252	0	100%	50%	1,126
5896	Thomas & Susan Petterson	918	918	0	100%	50%	459
5899	Anne Hernandez	1,700	1,700	0	100%	50%	850
5900	Dale Shostrom	1,498	1,498	0	100%	50%	749
5901	Donald Shields	2,209	2,416	207	100%	50%	1,208
5902	Gary McAlister	2,299	2,299	0	100%	50%	1,150
5903	James Kunst	899	899	0	100%	50%	450
5904	Jeff Graff	9,600	9,600	0	100%	50%	4,800
5905	John Walsh	4,500	4,500	0	100%	50%	2,250
5906	Jon Peasley	5,000	5,000	0	100%	50%	2,500
5907	Lund Diversified Inc.	10,444	10,444	0	100%	50%	5,222
5908	Paul Duden	1,400	1,400	0	100%	50%	700
5909	Richard Thompson	562	562	0	100%	50%	281
5910	Richard O'Brien	2,800	2,800	0	100%	50%	1,400
5911	Timothy Moore	2,099	2,099	0	100%	50%	1,050
5914	Tom & Carol Barnes	579	579	0	100%	50%	290

Eligible Nonpoint Source Facilities continued

App #	Applicant	Cost Claimed	Cost Certified	+/-	%	Max. TC	GF Liability
5917	John & Robin Hammond	1,500	1,500	0	100%	50%	750
5918	Paul A. Nys	4,641	4,641	0	100%	50%	2,321
5919	Steve Ramsey	999	999	0	100%	50%	500
5920	Dave Dunlap	1,700	1,700	0	100%	50%	850
5921	Altamira Vijan	1,435	1,435	0	100%	50%	718
5925	Charles & Barbara Cookson	1,631	1,631	0	100%	50%	816
5926	Clarence Wangle	13,000	13,000	0	100%	50%	6,500
5927	Douglas Brown	450	450	0	100%	50%	225
5928	Glenn Woods/Mitch Gibson	1,399	1,399	0	100%	50%	700
5929	J-Cad Equipment Leasing, LLC.	21,500	21,500	0	100%	50%	10,750
5930	Richard Compton	1,499	1,499	0	100%	50%	750
5931	Spectrum Industries, Inc.	21,465	21,465	0	100%	50%	10,733
5932	West Coast Tree Care Inc.	17,326	17,326	0	100%	50%	8,663
5933	John & Carol Singleton	580	580	0	100%	50%	290
5934	George Anzinger	5,595	5,595	0	100%	50%	2,798
5935	John C. Dower	719	719	0	100%	50%	360
5936	Mike Bartlett	14,500	14,500	0	100%	50%	7,250
5937	Alsea Bay Power Products, Inc.	9,839	9,615	-224	100%	50%	4,808
5938	Ben Watts Logging	9,700	9,700	0	100%	50%	4,850
5939	Bruce Lee Casey	1,550	1,550	0	100%	50%	775
5940	Craig M. Eucken	4,895	4,895	0	100%	50%	2,448
5941	D. Lee Eisner	2,436	2,436	0	100%	50%	1,218
5943	H. Fred Mickelson	2,227	2,227	0	100%	50%	1,114
5944	Herman Jackson Bryant	7,900	7,900	0	100%	50%	3,950
5945	John A. Wagoner	1,500	1,500	0	100%	50%	750
5946	John Clymer	1,823	1,823	0	100%	50%	912
5947	Kathy Larson	580	580	0	100%	50%	290
5962	Leroy Kuntzmann	5,800	4,500	-1,300	100%	50%	2,900
5963	W.C. Watt	567	567	0	100%	50%	284
5964	Michael R. Joyce	630	630	0	100%	50%	315

Eligible Nonpoint Source Facilities continued

App #	Applicant	Cost Claimed	Cost Certified	+/-	%	Max. TC	GF Liability
5965	Richard & Shirley Kemper	2,250	2,250	0	100%	50%	1,125
5966	Scott Thibert	4,000	4,000	0	100%	50%	2,000
5968	Robert W. Hammond	900	900	0	100%	50%	450
5969	Daniel Snyder	890	890	0	100%	50%	445
5970	Don & Renee Blom	2,995	2,995	0	100%	50%	1,498
5971	Sean Hodgson	10,000	10,000	0	100%	50%	5,000
5972	Gary Wells	2,376	2,376	0	100%	50%	1,188
5973	Maria Paola	900	900	0	100%	50%	450
5975	John Crisan	630	630	0	100%	50%	315
5976	Patricia & Richard Harper	630	630	0	100%	50%	315
5977	Bret Q. Paris	810	810	0	100%	50%	405
5978	Bruce Allen Ziegler	13,615	13,615	0	100%	50%	6,808
5982	Carl Eugene Jennings	630	630	0	100%	50%	315
5983	Denise & Joe Dwan	1,399	1,399	0	100%	50%	700
5984	Dick Aften	899	899	0	100%	50%	450
5985	Oliver J. Roman	595	595	0	100%	50%	298
5986	Paul Schroeder,MD	1,499	1,499	0	100%	50%	750
5987	Stephen J. Peacock	16,636	16,636	0	100%	50%	8,318
5988	Charles H. Seagraves Jr.	2,250	2,250	0	100%	50%	1,125
5989	Eric Martin	1,399	1,399	0	100%	50%	700
5990	Geoff J. Dawson	1,580	1,580	0	100%	50%	790
5991	Glenn W. Betts	1,499	1,499	0	100%	50%	750
5992	James Nolan	567	567	0	100%	50%	284
5993	James W. Prater	1,850	1,850	0	100%	50%	925
5994	Kim Brumby	899	899	0	100%	50%	450
5995	Larry C. Hovland	5,505	5,505	0	100%	50%	2,753
5996	Lois D. Summers	980	980	0	100%	50%	490
5997	Michael W. Breiholz	1,680	1,680	0	100%	50%	840
5998	Nancy Bachmann	749	749	0	100%	50%	375
5999	Steffen V. Brocks	659	659	0	100%	50%	330

Eligible Nonpoint Source Facilities continued

App #	Applicant	Cost Claimed	Cost Certified	+/-	%	Max. TC	GF Liability
6000	Steven E. Poet	750	750	0	100%	50%	375
6001	Whitetail Tree Farm, LLC.	6,969	6,900	-69	100%	50%	3,450
6002	Barbara A. Rowe	1,299	1,299	0	100%	50%	650
6003	Emmett A. Bigby	630	630	0	100%	50%	315
6004	Eric & Elise Hamner	630	630	0	100%	50%	315
6005	John M. Waddill/ Susan P. Smith	1,500	1,500	0	100%	50%	750
6006	Michael Greenbaum	677	630	-47	100%	50%	315
6007	Nicholas M. Mausen	4,115	4,115	0	100%	50%	2,058
6008	Norman E. Kaldahl	4,500	4,500	0	100%	50%	2,250
6009	Richard L. Smith	15,000	15,000	0	100%	50%	7,500
6010	Timothy Neal Mangin	2,995	2,995	0	100%	50%	1,498
6011	Anya N. Malbin	4,500	4,500	0	100%	50%	2,250
6012	Lawrence E. Varney	1,555	1,500	-55	100%	50%	750
6013	Shelby A. Frazier	4,400	4,400	0	100%	50%	2,200
6014	Michael W. Jantzer	1,249	1,249	0	100%	50%	625
6016	Glen M. Andresen	999	999	0	100%	50%	500
6017	LBD Landscaping, LLC	22,695	22,695	0	100%	50%	11,348
6018	Leona Brooks Brown	950	950	0	100%	50%	475
6019	Frederick G. Kallien	1,739	1,739	0	100%	50%	870
6020	Arnold C. Jirkovsky	4,500	4,500	0	100%	50%	2,250
6021	Bob E. Lile	596	596	0	100%	50%	298
6022	Rucker Interprises, Inc.	8,522	8,522	0	100%	50%	4,261
6023	RMF Too, LLC	8,795	8,795	0	100%	50%	4,398
6024	Wilma R. & Chalton A. Munyon	450	450	0	100%	50%	225
6025	Property Repair & Maintence, LLC	650	650	0	100%	50%	325
6027	Charles Potter	2,434	2,434	0	100%	50%	1,217
6028	David M. Grant	4,695	4,695	0	100%	50%	2,348
6030	Eldin Joel Vanestreek	8,200	8,200	0	100%	50%	4,100
6031	Cathy Bergen	600	600	0	100%	50%	300
6032	The Caddisfly Resort, LLC.	1,700	1,700	0	100%	35%	595

Eligible Nonpoint Source Facilities continued

App #	Applicant	Cost Claimed	Cost Certified	+/-	%	Max. TC	GF Liability
6033	Robert A. Stineman	7,500	7,500	0	100%	50%	3,750
6034	Arthur G. Outler	2,550	2,550	0	100%	50%	1,275
6039	Rich's Tree Service, INC.	9,382	9,382	0	100%	50%	4,691

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Allen R. Schoenfeld**
Application No.	**5873**
Facility Cost	**$2,177.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

PO Box 679
Murphy, OR 97533

Facility Identification

The applicant identified the facility as:

One 18 HP DR Chipper, Model 18.0, Serial # 117220, 4" capacity

The applicant is the owner of the **mobile** facility garaged at:

12430 N Applegate Road
Grants Pass, OR 97533

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**3/5/2001**
Application Received	**12/6/2001**

Facility Cost

Claimed Cost	$2,177.00
Eligible Cost	**$2,177.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**David A. Cook**
Application No.	**5874**
Facility Cost	**$1,449.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

677 Pleasantville Way
Grants Pass, OR 97526

Facility Identification

The applicant identified the facility as:

One 8 HP BearCat, Model 70180, Serial # Y05262, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

677 Pleasantville Way
Grants Pass, OR 97526

Eligibility

ORS 468.155 (1)(a)(B) — The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) — The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 — The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**9/29/2001**
Application Received	**12/6/2001**

Facility Cost

Claimed Cost	$1,449.00
Eligible Cost	**$1,449.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**James A. Christensen**
Application No.	**5875**
Facility Cost	**$1,199.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

400 Cumberland Drive
Grants Pass, OR 97527

Facility Identification

The applicant identified the facility as:

One 8 HP BearCat chipper shredder, Model 70080, Serial # X01984, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

400 Cumberland Drive
Grants Pass, OR 97527

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**5/3/2001**
Application Received	**12/6/2001**

Facility Cost

Claimed Cost	$1,199.00
Eligible Cost	**$1,199.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve: Reduced Cost**
Applicant	**Rodney J. Bardell**
Application No.	**5876**
Facility Cost	**$2,089.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

38887 Mt. Home Drive
Lebanon, OR 97355

Facility Identification

The applicant identified the facility as:

One 18 HP DR Chipper, Model C18 NH-CHP, Serial # 01141N, 4.5" capacity

The applicant is the owner of the **mobile** facility garaged at:

38887 Mt. Home Drive
Lebanon, OR 97355

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

OAR 340-016-0070 (3)(d) Spare parts are ineligible.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**9/10/2001**
Application Received	**12/6/2001**

Facility Cost

Claimed Cost	$2,248.00
Ineligible Cost: spare parts	-159.00
Eligible Cost	**$2,089.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Russ Burger**
Application No.	**5877**
Facility Cost	**$596.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

PO Box 7172
Eugene, OR 97401

Facility Identification

The applicant identified the facility as:

One 10HP Yard Machine chipper, Model 465E, Serial # 11PXS3582BA, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

89857 Armitage Road
Eugene, OR 97401

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**8/25/2001**
Application Received	**12/6/2001**

Facility Cost

Claimed Cost	$596.00
Eligible Cost	**$596.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Alan Mohr**
Application No.	**5879**
Facility Cost	**$4,495.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**3 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

4567 Arerill Drive
Grants Pass, OR 97526

Facility Identification

The applicant identified the facility as:

One 20 HP BearCat, Model 71020, Serial # X01175, 5" capacity

The applicant is the owner of the **mobile** facility garaged at:

4567 Arerill Drive
Grants Pass, OR 97526

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**1/26/2001**
Application Received	**12/10/2001**

Facility Cost

Claimed Cost	$4,495.00
Eligible Cost	**$4,495.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Gary Anderson**
Application No.	**5880**
Facility Cost	**$2,400.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

980 Kincaid Road
Williams, OR 97544

Facility Identification

The applicant identified the facility as:

One Valby PTO chipper, Model CH140, Serial # 351008, 4" capacity

The applicant is the owner of the **mobile** facility garaged at:

980 Kincaid Road
Williams, OR 97544

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/1/2001**
Application Received	**12/10/2001**

Facility Cost

Claimed Cost	$2,400.00
Eligible Cost	**$2,400.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Jack Heffington**
Application No.	**5881**
Facility Cost	**$450.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

PO Box 1998
Cave Junction, OR 97523

Facility Identification

The applicant identified the facility as:

One 6.5 HP Sears Craftsman chipper, Model 247.775870, Serial # 1K090C1006, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

5715 Rockydale Road
Cave Junction, OR 97523

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**6/6/2001**
Application Received	**12/12/2001**

Facility Cost

Claimed Cost	$450.00
Eligible Cost	**$450.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Jacob Bergquist**
Application No.	**5882**
Facility Cost	**$22,200.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**5 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

35 SW Eastern Avenue
Grants Pass, OR 97526

Facility Identification

The applicant identified the facility as:

One 125HP Mornbark, Model 13 Tornado brush chipper, Serial # 23399, 13" capacity

The applicant is the owner of the **mobile** facility garaged at:

35 SW Eastern Avenue
Grants Pass, OR 97526

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**8/23/2001**
Application Received	**12/10/2001**

Facility Cost

Claimed Cost	$22,200.00
Eligible Cost	**$22,200.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Lawrence Martin**
Application No.	**5883**
Facility Cost	**$2,700.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

PO Box 870
Rouge River, OR 97537

Facility Identification

The applicant identified the facility as:

One BearCat PTO, Model 71854, Serial # 15626, 4" capacity

The applicant is the owner of the **mobile** facility garaged at:

7502 E Evans Creek Road
Rouge River, OR 97537

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**4/11/2001**
Application Received	**12/10/2001**

Facility Cost

Claimed Cost	$2,700.00
Eligible Cost	**$2,700.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Vaughn Slavin**
Application No.	**5884**
Facility Cost	**$892.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

4184 Dick George Road
Cave Junction, OR 97523

Facility Identification

The applicant identified the facility as:

One 10 HP Troy-bilt, Model 47330, Serial # 1100838, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

4184 Dick George Road
Cave Junction, OR 97523

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**8/25/2001**
Application Received	**12/10/2001**

Facility Cost

Claimed Cost	$892.00
Eligible Cost	**$892.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Michael Hill**
Application No.	**5891**
Facility Cost	**$596.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

4810 Coloma Drive SE
Salem, OR 97302

Facility Identification

The applicant identified the facility as:

One 10HP Yard Machine chipper, Model 465E, Serial # 1F041C0372, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

4810 Coloma Drive SE
Salem, OR 97302

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**9/2/2001**
Application Received	**12/13/2001**

Facility Cost

Claimed Cost	$596.00
Eligible Cost	**$596.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Wayne Van Dyke**
Application No.	**5892**
Facility Cost	**$2,214.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

747 Peco Road
Grants Pass, OR 97526

Facility Identification

The applicant identified the facility as:

One 18HP DR Chipper, Model C18NHCHP, Serial # 01552N, 4.5" capacity

The applicant is the owner of the **mobile** facility garaged at:

747 Peco Road
Grants Pass, OR 97526

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/14/2001**
Application Received	**12/10/2001**

Facility Cost

Claimed Cost	$2,214.00
Eligible Cost	**$2,214.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Richard Rambo**
Application No.	**5895**
Facility Cost	**$2,252.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

PO Box 393
Keno, OR 97627

Facility Identification

The applicant identified the facility as:

One Goosen PTO, Model CS-1000, Serial # 2304, 5" capacity

The applicant is the owner of the **mobile** facility garaged at:

11989 Keno Worden Road
Keno, OR 97627

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/1/2001**
Application Received	**12/14/2001**

Facility Cost

Claimed Cost	$2,252.00
Eligible Cost	**$2,252.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Thomas & Susan Petterson**
Application No.	**5896**
Facility Cost	**$918.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

PO Box 708
Merrill, OR 97633

Facility Identification

The applicant identified the facility as:

One 8HP Simplicity, Model 8/14, Serial # 910005, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

24770 Old Malin Highway
Malin, OR 97633

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/5/2001**
Application Received	**12/14/2001**

Facility Cost

Claimed Cost	$918.00
Eligible Cost	**$918.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Anne Hernandez**
Application No.	**5899**
Facility Cost	**$1,700.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

12883 Woodpecker Drive SE
Turner, OR 97392

Facility Identification

The applicant identified the facility as:

One BearCat PTO chipper, Model 70554, Serial # 11008, 5" capacity

The applicant is the owner of the **mobile** facility garaged at:

12883 Woodpecker Drive SE
Turner, OR 97392

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**11/15/2001**
Application Received	**12/17/2001**

Facility Cost

Claimed Cost	$1,700.00
Eligible Cost	**$1,700.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Dale Shostrom**
Application No.	**5900**
Facility Cost	**$1,498.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

1240 Tolman Creek Road
Ashland, OR 97520

Facility Identification

The applicant identified the facility as:

One 8HP BearCat chipper, Model 70180, Serial # 104329, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

1240 Tolman Creek Road
Ashland, OR 97520

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/3/2001**
Application Received	**12/17/2001**

Facility Cost

Claimed Cost	$1,498.00
Eligible Cost	**$1,498.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve - Increased Cost**
Applicant	**Donald Shields**
Application No.	**5901**
Facility Cost	**$2,416.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

89009 Dahlin Road
Florence, OR 97439

Facility Identification

The applicant identified the facility as:

One 18HP DR Chipper, Model CH18, Serial #116910, 4.5" capacity

The applicant is the owner of the **mobile** facility garaged at:

89009 Dahlin Road
Florence, OR 97439

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**3/3/2001**
Application Received	**12/17/2001**

Facility Cost

Claimed Cost	$2,109.00
Allowable Cost: freight	227.00
Erroneous reduction of salvage value for claimed chipper and calculation errors	80.00
Eligible Cost	**$2,416.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Gary McAlister**
Application No.	**5902**
Facility Cost	**$2,299.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

1086 Cantrall Road
Jacksonville, OR 97530

Facility Identification

The applicant identified the facility as:

One Tractor mount BearCat PTO chipper, Model 70554, Serial # Y03263, 6" capacity

The applicant is the owner of the **mobile** facility garaged at:

1086 Cantrall Road
Jacksonville, OR 97530

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**9/30/2001**
Application Received	**12/17/2001**

Facility Cost

Claimed Cost	$2,299.00
Eligible Cost	**$2,299.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**James Kunst**
Application No.	**5903**
Facility Cost	**$899.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

10250 Lady Marion Drive
Tigard, OR 97224

Facility Identification

The applicant identified the facility as:

One 10HP Troy-bilt chipper, Model B47321, Serial # 1500278, 4" capacity

The applicant is the owner of the **mobile** facility garaged at:

10250 Lady Marion Drive
Tigard, OR 97224

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**10/16/2001**
Application Received	**12/17/2001**

Facility Cost

Claimed Cost	$899.00
Eligible Cost	**$899.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Jeff Graff**
Application No.	**5904**
Facility Cost	**$9,600.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**5 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

38215 S Sawtell Road
Molalla, OR 97038

Facility Identification

The applicant identified the facility as:

One Bandit PTO, Model 65, Serial # 004918, 6" capacity

The applicant is the owner of the **mobile** facility garaged at:

38215 S Sawtell Road
Molalla, OR 97038

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**3/15/2001**
Application Received	**12/17/2001**

Facility Cost

Claimed Cost	$9,600.00
Eligible Cost	**$9,600.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**John Walsh**
Application No.	**5905**
Facility Cost	**$4,500.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**3 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

PO Box 3506
Ashland, OR 97520

Facility Identification

The applicant identified the facility as:

One Valby PTO chipper, Model CH160, Serial # 3510789, 6" capacity

The applicant is the owner of the **mobile** facility garaged at:

1945 Hyatt Prairie Road
Ashland, OR 97520

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/3/2001**
Application Received	**12/17/2001**

Facility Cost

Claimed Cost	$4,500.00
Eligible Cost	**$4,500.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Jon Peasley**
Application No.	**5906**
Facility Cost	**$5,000.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**3 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

PO Box 773
Yamhill, OR 97148

Facility Identification

The applicant identified the facility as:

One Tractor mount PTO GME chipper, Model 24P, Serial # 19096, 6" capacity

The applicant is the owner of the **mobile** facility garaged at:

2140 NW Coyote Drive
Yamhill, OR 97148

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**11/8/2001**
Application Received	**12/17/2001**

Facility Cost

Claimed Cost	$5,000.00
Eligible Cost	**$5,000.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Lund Diversified Inc.**
Application No.	**5907**
Facility Cost	**$10,444.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**3 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **S. Corp**

The applicant's address is:

123 South 7th Street
Cottage Grove, OR 97424

Facility Identification

The applicant identified the facility as:

One 25HP Vermeer brush chipper, Model BC625A, Serial # 1VRU091S211004973, 6" capacity

The applicant is the owner of the **mobile** facility garaged at:

123 South 7th Street
Cottage Grove, OR 97424

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/11/2001**
Application Received	**12/17/2001**

Facility Cost

Claimed Cost	$10,444.00
Eligible Cost	**$10,444.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Paul Duden**
Application No.	**5908**
Facility Cost	**$1,400.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

250 SW Carey Lane
Portland, OR 97219

Facility Identification

The applicant identified the facility as:

One 8HP BearCat chipper, Model 70180, Serial # 01938, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

250 SW Carey Lane
Portland, OR 97219

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**4/8/2000**
Application Received	**12/17/2001**

Facility Cost

Claimed Cost	$1,400.00
Eligible Cost	**$1,400.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Richard Thompson**
Application No.	**5909**
Facility Cost	**$562.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

3701 Coal Mine Road
Medford, OR 97504

Facility Identification

The applicant identified the facility as:

One 8.5HP Sears Craftsman chipper, Model 247.775880, Serial # 1I1211G20244, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

3701 Coal Mine Road
Medford, OR 97504

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/8/2001**
Application Received	**12/17/2001**

Facility Cost

Claimed Cost	$562.00
Eligible Cost	**$562.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Richard O'Brien**
Application No.	**5910**
Facility Cost	**$2,800.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

24060 Nichols Road
Monroe, OR 97456

Facility Identification

The applicant identified the facility as:

One 23HP Doskocil chipper, Model 946, Serial # HCP1111971037, 6" capacity

The applicant is the owner of the **mobile** facility garaged at:

24060 Nichols Road
Monroe, OR 97456

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/7/2001**
Application Received	**12/17/2001**

Facility Cost

Claimed Cost	$2,800.00
Eligible Cost	**$2,800.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Timothy Moore**
Application No.	**5911**
Facility Cost	**$2,099.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

PO Box 373
Brownsville, OR 97327-0373

Facility Identification

The applicant identified the facility as:

One 8HP BearCat chipper, Model 70380, Serial # 105250, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

28045 Pine View Road
Brownsville, OR 97327-0373

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/4/2001**
Application Received	**12/17/2001**

Facility Cost

Claimed Cost	$2,099.00
Eligible Cost	**$2,099.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Tom & Carol Barnes**
Application No.	**5914**
Facility Cost	**$579.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

835 Old Ferry Road
Shady Cove, OR 97539

Facility Identification

The applicant identified the facility as:

One 8.5 HP Sears Craftsman chipper, Model 247.775880, Serial # 1H221G20182, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

835 Old Ferry Road
Shady Cove, OR 97539

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**11/8/2001**
Application Received	**12/18/2001**

Facility Cost

Claimed Cost	$579.00
Eligible Cost	**$579.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**John & Robin Hammond**
Application No.	**5917**
Facility Cost	**$1,500.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

4820 SW Humphrey Park Crest
Portland, OR 97221

Facility Identification

The applicant identified the facility as:

One 8.5HP BearCat chipper, Model 70180, Serial # 104009, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

4820 SW Humphrey Park Crest
Portland, OR 97221

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**11/10/2001**
Application Received	**12/19/2001**

Facility Cost

Claimed Cost	$1,500.00
Eligible Cost	**$1,500.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Paul A. Nys**
Application No.	**5918**
Facility Cost	**$4,641.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**3 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

68800 Meissner Road
Rainer, OR 97048

Facility Identification

The applicant identified the facility as:

One used 25HP BC-RAM chipper, Model 30/25H, Serial # C2500191RE, 7" capacity

The applicant is the owner of the **mobile** facility garaged at:

68800 Meissner Road
Rainer, OR 97048

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**11/21/2001**
Application Received	**12/19/2001**

Facility Cost

Claimed Cost	$4,641.00
Eligible Cost	**$4,641.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Steve Ramsey**
Application No.	**5919**
Facility Cost	**$999.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

3140 NE 29th
Portland, OR 97212

Facility Identification

The applicant identified the facility as:

One 5HP BearCat chipper, Model 70050, Serial # 104900, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

3140 NE 29th
Portland, OR 97212

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**11/17/2001**
Application Received	**12/19/2001**

Facility Cost

Claimed Cost	$999.00
Eligible Cost	**$999.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Dave Dunlap**
Application No.	**5920**
Facility Cost	**$1,700.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

1744 Pleasant Valley Road
Merlin, OR 97532

Facility Identification

The applicant identified the facility as:

One 9HP Mighty Mac chipper, Model PTE-9, Serial # 515225, 3.5" capacity

The applicant is the owner of the **mobile** facility garaged at:

1744 Pleasant Valley Road
Merlin, OR 97532

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**5/8/2001**
Application Received	**12/18/2001**

Facility Cost

Claimed Cost	$1,700.00
Eligible Cost	**$1,700.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Altamira Vijan**
Application No.	**5921**
Facility Cost	**$1,435.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

106 Ruby Avenue
Eugene, OR 97404

Facility Identification

The applicant identified the facility as:

One 9HP Mighty Mac chipper, Model 12P-8, Serial # 00577, 3.5" capacity

The applicant is the owner of the **mobile** facility garaged at:

106 Ruby Avenue
Eugene, OR 97404

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/13/2001**
Application Received	**12/18/2001**

Facility Cost

Claimed Cost	$1,435.00
Eligible Cost	**$1,435.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Charles & Barbara Cookson**
Application No.	**5925**
Facility Cost	**$1,631.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

86299 Lorane Highway
Eugene, OR 97405

Facility Identification

The applicant identified the facility as:

One 10HP MightyMac chipper, Model 12PT-10, Serial # 00455Z, 4" capacity

The applicant is the owner of the **mobile** facility garaged at:

86299 Lorane Highway
Eugene, OR 97405

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**11/27/2001**
Application Received	**12/21/2001**

Facility Cost

Claimed Cost	$1,631.00
Eligible Cost	**$1,631.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Clarence Wangle**
Application No.	**5926**
Facility Cost	**$13,000.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**5 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Partnership**

The applicant's address is:

270 Wilson Road
Central Point, OR 97502

Facility Identification

The applicant identified the facility as:

One 200 HP Bandit Brush chipper, Model 200XP, Serial # 11649, 12" capacity

The applicant is the owner of the **mobile** facility garaged at:

270 Wilson Road
Central Point, OR 97502

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**6/19/2001**
Application Received	**12/21/2001**

Facility Cost

Claimed Cost	$13,000.00
Eligible Cost	**$13,000.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Douglas Brown**
Application No.	**5927**
Facility Cost	**$450.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

05547 South Shore Drive
Florence, OR 97439

Facility Identification

The applicant identified the facility as:

One 6.5 HP Sears Craftsman chipper, Model 247.775870, Serial #1K13AC10195, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

05547 South Shore Drive
Florence, OR 97439

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**8/27/2001**
Application Received	**12/21/2001**

Facility Cost

Claimed Cost	$450.00
Eligible Cost	**$450.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Glenn Woods/Mitch Gibson**
Application No.	**5928**
Facility Cost	**$1,399.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Partnership**

The applicant's address is:

3132 Old Military Road
Central Point, OR 97502

Facility Identification

The applicant identified the facility as:

One 8HP BearCat chipper, Model 70080, Serial# Y05098, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

3132 Old Military Road
Central Point, OR 97502

Eligibility

ORS 468.155 (1)(a)(B) — The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) — The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 — The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/7/2001**
Application Received	**12/21/2001**

Facility Cost

Claimed Cost	$1,399.00
Eligible Cost	**$1,399.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**J-Cad Equipment Leasing, LLC.**
Application No.	**5929**
Facility Cost	**$21,500.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**5 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **LLC**

The applicant's address is:

PO Box 4397
Salem, OR 97302-8397

Facility Identification

The applicant identified the facility as:

One 65HP Brush Bandit chipper, Model 90, Serial # 4088, Engine # 304531, 9" capacity

The applicant is the owner of the **mobile** facility garaged at:

2665 Turner Road SE
Salem, OR 97302-8397

Eligibility

ORS 468.155 (1)(a)(B) — The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) — The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 — The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/17/2001**
Application Received	**12/21/2001**

Facility Cost

Claimed Cost	$21,500.00
Eligible Cost	**$21,500.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Richard Compton**
Application No.	**5930**
Facility Cost	**$1,499.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

6745 SW 209th Avenue
Beaverton, OR 97007

Facility Identification

The applicant identified the facility as:

One 8HP BearCat chipper, Model 70180, Serial # Y04401, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

6745 SW 209th Avenue
Beaverton, OR 97007

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**10/5/2001**
Application Received	**12/21/2001**

Facility Cost

Claimed Cost	$1,499.00
Eligible Cost	**$1,499.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Spectrum Industries, Inc.**
Application No.	**5931**
Facility Cost	**$21,465.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**5 years**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **S. Corp**

The applicant's address is:

PO Box 2541
White City, OR 97503

Facility Identification

The applicant identified the facility as:

One 89HP Morbark Twister chipper, Model 2070 XL, Serial # 70186, 10" capacity

The applicant is the owner of the **mobile** facility garaged at:

1710 Antelope
White City, OR 97503

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/11/2001**
Application Received	**12/21/2001**

Facility Cost

Claimed Cost	$21,465.00
Eligible Cost	**$21,465.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**West Coast Tree Care Inc.**
Application No.	**5932**
Facility Cost	**$17,326.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**3 years**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **S. Corp**

The applicant's address is:

6312 SW Capitol Highway
Suite 184
Portland, OR 97201

Facility Identification

The applicant identified the facility as:

One 122HP Vermeer brush chipper, Model BC1400, CAT3054DITA, Serial # 0102, 14" capacity

The applicant is the owner of the **mobile** facility garaged at:

6312 SW Capitol Highway
Suite 184
Portland, OR 97201

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**8/23/2001**
Application Received	**12/21/2001**

Facility Cost

Claimed Cost	$17,326.00
Eligible Cost	**$17,326.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**John & Carol Singleton**
Application No.	**5933**
Facility Cost	**$580.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

4709 Laverne Avenue
Klamath Falls, OR 97603

Facility Identification

The applicant identified the facility as:

One 8.5 Sears Craftsman chipper, Model P24A-4950099, Serial # S1F191C10222, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

4709 Laverne Avenue
Klamath Falls, OR 97603

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/7/2001**
Application Received	**12/20/2001**

Facility Cost

Claimed Cost	$580.00
Eligible Cost	**$580.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**George Anzinger**
Application No.	**5934**
Facility Cost	**$5,595.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**3 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

PO Box 82
Williams, OR 97544

Facility Identification

The applicant identified the facility as:

One BearCat PTO, Model 74554, Serial # 105310, 5" capacity

The applicant is the owner of the **mobile** facility garaged at:

16282 Water Gap Road
Williams, OR 97544

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**11/26/2001**
Application Received	**12/20/2001**

Facility Cost

Claimed Cost	$5,595.00
Eligible Cost	**$5,595.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**John C. Dower**
Application No.	**5935**
Facility Cost	**$719.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

3165 Beach Loop Drive
Bandon, OR 97411

Facility Identification

The applicant identified the facility as:

One 6.5HP Troy-bilt chipper, Model 47329, Serial # 0104201D, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

3165 Beach Loop Drive
Bandon, OR 97411

Eligibility

ORS 468.155 (1)(a)(B) — The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) — The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 — The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**9/25/2001**
Application Received	**12/20/2001**

Facility Cost

Claimed Cost	$719.00
Eligible Cost	**$719.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Mike Bartlett**
Application No.	**5936**
Facility Cost	**$14,500.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**5 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Sole Proprietor**

The applicant's address is:

3265 Blackhorn Drive
Medford, OR 97504

Facility Identification

The applicant identified the facility as:

One Morbark Twister Chipper, Model 2070XL, Serial # 2696, 66HP Wisconsin Model V465D1, Serial # 99030150, 7" capacity

The applicant is the owner of the **mobile** facility garaged at:

3265 Blackhorn Drive
Medford, OR 97504

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**9/23/2000**
Application Received	**12/20/2001**

Facility Cost

Claimed Cost	$14,500.00
Eligible Cost	**$14,500.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve: Reduced Cost**
Applicant	**Alsea Bay Power Products, Inc.**
Application No.	**5937**
Facility Cost	**$9,615.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**3 years**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **S. Corp**

The applicant's address is:

PO Box 1945
Waldport, OR 97394

Facility Identification

The applicant identified the facility as:

One 25HP Vermeer Brush chipper, Model BC625A, Serial # 5146, 6" capacity

The applicant is the owner of the **mobile** facility garaged at:

2470 E Alsea Highway
Waldport, OR 97394

Eligibility

ORS 468.155 (1)(a)(B)	The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.
OAR 340-016-0070(3)	The hitch makes an **insignificant contribution** to the purpose of the wood chipper.
ORS 468.155 (2)(b)	The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.
ORS 315.304 OAR 340-016-0008	The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/17/2001**
Application Received	**12/24/2001**

Facility Cost

Claimed Cost	$9,839.00
Ineligible Cost: hitch	-224.00
Eligible Cost	**$9,615.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Ben Watts Logging**
Application No.	**5938**
Facility Cost	**$9,700.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**2 years**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

16780 Water Gap Road
Williams, OR 97544

Facility Identification

The applicant identified the facility as:

One Morbark Cyclone Chipper, Model 2060D, Serial # 60099, 35HP Wisconsin Model W41770, Serial # 465829, 6" capacity

The applicant is the owner of the **mobile** facility garaged at:

16780 Water Gap Road
Williams, OR 97544

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/21/2001**
Application Received	**12/26/2001**

Facility Cost

Claimed Cost	$9,700.00
Eligible Cost	**$9,700.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Bruce Lee Casey**
Application No.	**5939**
Facility Cost	**$1,550.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

4466 Azalea Drive
Grants Pass, OR 97526

Facility Identification

The applicant identified the facility as:

One 9HP MightyMac chipper, Model 12PT9, Serial # 005878Z, 3.5 Capacity

The applicant is the owner of the **mobile** facility garaged at:

4466 Azalea Drive
Grants Pass, OR 97526

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/17/2001**
Application Received	**12/26/2001**

Facility Cost

Claimed Cost	$1,550.00
Eligible Cost	**$1,550.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Craig M. Eucken**
Application No.	**5940**
Facility Cost	**$4,895.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**3 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

38276 Franklin Butte Road
Scio, OR 97374

Facility Identification

The applicant identified the facility as:

One PTO BearCat chipper, Model 71854, Serial # 100069, 8" capacity

The applicant is the owner of the **mobile** facility garaged at:

38276 Franklin Butte Road
Scio, OR 97374

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/14/2001**
Application Received	**12/26/2001**

Facility Cost

Claimed Cost	$4,895.00
Eligible Cost	**$4,895.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**D. Lee Eisner**
Application No.	**5941**
Facility Cost	**$2,436.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**2 years**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

31780 Edson Creek Road
Gold Beach, OR 97444

Facility Identification

The applicant identified the facility as:

One 18HP DR chipper, Model 18HP V-Twin, Serial # 135270, 4.5" capacity

The applicant is the owner of the **mobile** facility garaged at:

31780 Edson Creek Road
Gold Beach, OR 97444

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/19/2001**
Application Received	**12/26/2001**

Facility Cost

Claimed Cost	$2,436.00
Eligible Cost	**$2,436.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**H. Fred Mickelson**
Application No.	**5943**
Facility Cost	**$2,227.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**2 years**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Sole Proprietor**

The applicant's address is:

32520 NE Corral Creek Road
Newberg, OR 97132

Facility Identification

The applicant identified the facility as:

One 18 HP DR chipper, Model C18-CHP, Serial #105480, 4.5" capacity

The applicant is the owner of the **mobile** facility garaged at:

32520 NE Corral Creek Road
Newberg, OR 97132

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**2/29/2000**
Application Received	**12/26/2001**

Facility Cost

Claimed Cost	$2,227.00
Eligible Cost	**$2,227.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Herman Jackson Bryant**
Application No.	**5944**
Facility Cost	**$7,900.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**3 years**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Sole Proprietor**

The applicant's address is:

207 Kings Way
Central Point, OR 97502

Facility Identification

The applicant identified the facility as:

One Used 77HP Morbark chipper, Model 13 E-Z Beever, Serial # 22238, 13" capacity

The applicant is the owner of the **mobile** facility garaged at:

207 Kings Way
Central Point, OR 97502

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/17/2001**
Application Received	**12/26/2001**

Facility Cost

Claimed Cost	$7,900.00
Eligible Cost	**$7,900.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**John A. Wagoner**
Application No.	**5945**
Facility Cost	**$1,500.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

17765 SW Cooper Mountain Lane
Beaverton, OR 97007

Facility Identification

The applicant identified the facility as:

One 8HP BearCat chipper, Model BEQ70180, Serial # 104817, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

17765 SW Cooper Mountain Lane
Beaverton, OR 97007

Eligibility

ORS 468.155 (1)(a)(B) — The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) — The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 — The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/15/2001**
Application Received	**12/26/2001**

Facility Cost

Claimed Cost	$1,500.00
Eligible Cost	**$1,500.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**John Clymer**
Application No.	**5946**
Facility Cost	**$1,823.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

PO Box 3026
La Grande, OR 97850

Facility Identification

The applicant identified the facility as:

One 12HP DR Chipper, Model C1120TEA, Serial # 01691E, 4.5" capacity

The applicant is the owner of the **mobile** facility garaged at:

60472 Wood Road
La Grande, OR 97850

Eligibility

ORS 468.155 (1)(a)(B) — The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) — The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 — The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/18/2001**
Application Received	**12/26/2001**

Facility Cost

Claimed Cost	$1,823.00
Eligible Cost	**$1,823.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Kathy Larson**
Application No.	**5947**
Facility Cost	**$580.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

PO Box 7923
Klamath Falls, OR 97602

Facility Identification

The applicant identified the facility as:

One 8.5HP Sears Craftsman wood chipper, Model 247.775880, Serial # 1F191C10176, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

3407 Altamont Drive
Klamath Falls, OR 97602

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/7/2001**
Application Received	**12/26/2001**

Facility Cost

Claimed Cost	$580.00
Eligible Cost	**$580.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve - Reduced Cost**
Applicant	**Leroy Kuntzmann**
Application No.	**5962**
Facility Cost	**$4,500.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**3 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

1603 NE 116th Place
Portland, OR 97220

Facility Identification

The applicant identified the facility as:

One used 24HP Bandit wood chipper, Model 65 , Serial # 4FMUS1117TR003617, 9" capacity

The applicant is the owner of the **mobile** facility garaged at:

1603 NE 116th Place
Portland, OR 97220

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**3/16/2001**
Application Received	**12/26/2001**

Facility Cost

Claimed Cost	$5,800.00
Cash Discounts	-1,300
Eligible Cost	**$4,500.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**W.C. Watt**
Application No.	**5963**
Facility Cost	**$567.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Sole Proprietor**

The applicant's address is:

05929 Mercer Lake Road
Florence, OR 97439

Facility Identification

The applicant identified the facility as:

One 8HP Sears Craftsman wood chipper, Model 247-775880, Serial # 1F221C10005, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

05929 Mercer Lake Road
Florence, OR 97439

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**8/31/2001**
Application Received	**12/26/2001**

Facility Cost

Claimed Cost	$567.00
Eligible Cost	**$567.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Michael R. Joyce**
Application No.	**5964**
Facility Cost	**$630.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

PO Box 3378
Applegate, OR 97530

Facility Identification

The applicant identified the facility as:

One 8.5HP Sears Craftsman wood chipper, Model 24A495D099, Serial # 1F191C10090, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

14710 Highway 238
Applegate, OR 97530

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**11/24/2001**
Application Received	**12/26/2001**

Facility Cost

Claimed Cost	$630.00
Eligible Cost	**$630.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Richard & Shirley Kemper**
Application No.	**5965**
Facility Cost	**$2,250.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**2 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

8155 NW Evers Road
Forest Grove, OR 97116

Facility Identification

The applicant identified the facility as:

One PTO Goosen chipper, Model CS1000, Serial #2233, 5" capacity

The applicant is the owner of the **mobile** facility garaged at:

8155 NW Evers Road
Forest Grove, OR 97116

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/5/2001**
Application Received	**12/26/2001**

Facility Cost

Claimed Cost	$2,250.00
Eligible Cost	**$2,250.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Scott Thibert**
Application No.	**5966**
Facility Cost	**$4,000.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**3 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

587 Sacre Lane
Monmouth, OR 97361

Facility Identification

The applicant identified the facility as:

One 25HP Vermeer chipper, Model BC625, Serial # 1VRK08162W1002085, 6" capacity

The applicant is the owner of the **mobile** facility garaged at:

587 Sacre Lane
Monmouth, OR 97361

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**11/8/2001**
Application Received	**12/26/2001**

Facility Cost

Claimed Cost	$4,000.00
Eligible Cost	**$4,000.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Robert W. Hammond**
Application No.	**5968**
Facility Cost	**$900.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

8455 SW Brookings Street
Portland, OR 97225

Facility Identification

The applicant identified the facility as:

One 10HP Troy-bilt chipper, Model 47321, Serial # 1500258, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

8455 SW Brookings Street
Portland, OR 97225

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**10/13/2001**
Application Received	**12/26/2001**

Facility Cost

Claimed Cost	$900.00
Eligible Cost	**$900.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Daniel Snyder**
Application No.	**5969**
Facility Cost	**$890.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

2941 NE 34th Avenue
Portland, OR 97212

Facility Identification

The applicant identified the facility as:

One 5HP BearCat chipper, Model 70050, Serial # 101952, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

2941 NE 34th Avenue
Portland, OR 97212

Eligibility

ORS 468.155 (1)(a)(B) — The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) — The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 — The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/22/2001**
Application Received	**12/27/2001**

Facility Cost

Claimed Cost	$890.00
Eligible Cost	**$890.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Don & Renee Blom**
Application No.	**5970**
Facility Cost	**$2,995.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

PO Box 265
Allegany, OR 97407

Facility Identification

The applicant identified the facility as:

One PTO BearCat chipper, Model 73454, Serial # 105734, 4" capacity

The applicant is the owner of the **mobile** facility garaged at:

67854 W Fork Millicoma Road
Allegany, OR 97407

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/18/2001**
Application Received	**12/27/2001**

Facility Cost

Claimed Cost	$2,995.00
Eligible Cost	**$2,995.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Sean Hodgson**
Application No.	**5971**
Facility Cost	**$10,000.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**5 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Sole Proprietor**

The applicant's address is:

PO Box 21902
Eugene, OR 97402

Facility Identification

The applicant identified the facility as:

One 126HP WoodChuck wood chipper, Model WC17, Serial # 1W9B71214T5200696, 12" capacity

The applicant is the owner of the **mobile** facility garaged at:

4100 Country Farm Road
Eugene, OR 97402

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**11/15/2000**
Application Received	**12/27/2001**

Facility Cost

Claimed Cost	$10,000.00
Eligible Cost	**$10,000.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Gary Wells**
Application No.	**5972**
Facility Cost	**$2,376.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**2 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

77100 High Prairie Road
Oakridge, OR 97463

Facility Identification

The applicant identified the facility as:

One BearCat PTO chipper, Model 70554, Serial # YO2649, 5" capacity

The applicant is the owner of the **mobile** facility garaged at:

77100 High Prairie Road
Oakridge, OR 97463

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**9/28/2001**
Application Received	**12/28/2001**

Facility Cost

Claimed Cost	$2,376.00
Eligible Cost	**$2,376.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Maria Paola**
Application No.	**5973**
Facility Cost	**$900.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

9700 SE Castle Court
Gresham, OR 97080

Facility Identification

The applicant identified the facility as:

One 5HP BearCat chipper, Model 70050, Serial # 103876, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

9700 SE Castle Court
Gresham, OR 97080

Eligibility

ORS 468.155 (1)(a)(B) — The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) — The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 — The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/27/2001**
Application Received	**12/28/2001**

Facility Cost

Claimed Cost	$900.00
Eligible Cost	**$900.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**John Crisan**
Application No.	**5975**
Facility Cost	**$630.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

11320 SW Clifford Street
Beaverton, OR 97008

Facility Identification

The applicant identified the facility as:

One 8.5HP Sears Craftsman chipper, Model 247.775880, Serial # 1H241620226, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

11320 SW Clifford Street
Beaverton, OR 97008

Eligibility

ORS 468.155 (1)(a)(B) — The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) — The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 — The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**9/9/2001**
Application Received	**1/2/2002**

Facility Cost

Claimed Cost	$630.00
Eligible Cost	**$630.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Patricia & Richard Harper**
Application No.	**5976**
Facility Cost	**$630.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

19 Frontage Road
Gold Hill, OR 97525

Facility Identification

The applicant identified the facility as:

One 8.5 HP Sears Craftsman chipper, Model 77588, Serial # 1I211G20027, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

19 Frontage Road
Gold Hill, OR 97525

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/3/2001**
Application Received	**1/2/2002**

Facility Cost

Claimed Cost	$630.00
Eligible Cost	**$630.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Bret Q. Paris**
Application No.	**5977**
Facility Cost	**$810.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

1685 Powell Creek Road
Williams, OR 97544

Facility Identification

The applicant identified the facility as:

One 5HP BearCat chipper, Model 70050, Serial # 104957, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

1685 Powell Creek Road
Williams, OR 97544

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/6/2001**
Application Received	**1/2/2002**

Facility Cost

Claimed Cost	$810.00
Eligible Cost	**$810.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Bruce Allen Ziegler**
Application No.	**5978**
Facility Cost	**$13,615.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**5 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Sole Proprietor**

The applicant's address is:

310 Marion Lane
Grants Pass, OR 97527

Facility Identification

The applicant identified the facility as:

One 89HP Morbark Twister chipper, Model 2070XL, Serial # 70079, 10" capacity

The applicant is the owner of the **mobile** facility garaged at:

310 Marion Lane
Grants Pass, OR 97527

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**5/15/2001**
Application Received	**1/2/2002**

Facility Cost

Claimed Cost	$13,615.00
Eligible Cost	**$13,615.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Carl Eugene Jennings**
Application No.	**5982**
Facility Cost	**$630.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

771 14th Avenue
Coos Bay, OR 97420

Facility Identification

The applicant identified the facility as:

One 8.5HP Sears Craftsman chipper, Model 247.775880, Serial # 1H091G20207, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

771 14th Avenue
Coos Bay, OR 97420

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/24/2001**
Application Received	**12/31/2001**

Facility Cost

Claimed Cost	$630.00
Eligible Cost	**$630.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Denise & Joe Dwan**
Application No.	**5983**
Facility Cost	**$1,399.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**2 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

22285 S Leslie
Beavercreek, OR 97004

Facility Identification

The applicant identified the facility as:

One 8HP BearCat chipper, Model 70080, Serial # 101501, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

22285 S Leslie
Beavercreek, OR 97004

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/22/2001**
Application Received	**12/31/2001**

Facility Cost

Claimed Cost	$1,399.00
Eligible Cost	**$1,399.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Dick Aften**
Application No.	**5984**
Facility Cost	**$899.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

8335 Redstone SE
Salem, OR 97306

Facility Identification

The applicant identified the facility as:

One 10HP Troy-bilt chipper, Model TB47321, Serial # 47321-2, 4" capacity

The applicant is the owner of the **mobile** facility garaged at:

8335 Redstone SE
Salem, OR 97306

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**10/19/2001**
Application Received	**12/31/2001**

Facility Cost

Claimed Cost	$899.00
Eligible Cost	**$899.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Oliver J. Roman**
Application No.	**5985**
Facility Cost	**$595.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

602 E 8th Street
The Dalles, OR 97058

Facility Identification

The applicant identified the facility as:

One 5HP Mighty Mac chipper, Model SC705, Serial # 502367, 2" capacity

The applicant is the owner of the **mobile** facility garaged at:

602 E 8th Street
The Dalles, OR 97058

Eligibility

ORS 468.155 (1)(a)(B) — The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) — The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 — The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/23/2001**
Application Received	**12/31/2001**

Facility Cost

Claimed Cost	$595.00
Eligible Cost	**$595.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Paul Schroeder,MD**
Application No.	**5986**
Facility Cost	**$1,499.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

1239 Gardner Way
Medford, OR 97504

Facility Identification

The applicant identified the facility as:

One 5HP BearCat chipper, Model 70080, Serial # 104222, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

1239 Gardner Way
Medford, OR 97504

Eligibility

ORS 468.155 (1)(a)(B) — The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) — The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 — The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/26/2001**
Application Received	**12/31/2001**

Facility Cost

Claimed Cost	$1,499.00
Eligible Cost	**$1,499.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Stephen J. Peacock**
Application No.	**5987**
Facility Cost	**$16,636.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**5 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **LLC**

The applicant's address is:

PO Box 19783
Portland, OR 97280

Facility Identification

The applicant identified the facility as:

One 35HP Vermeer brush chipper, Model BC935, Serial # 1Vrd1015XW1003080, 9" capacity

The applicant is the owner of the **mobile** facility garaged at:

3011 SW Canby Street
Portland, OR 97280

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/5/2001**
Application Received	**12/31/2001**

Facility Cost

Claimed Cost	$16,636.00
Eligible Cost	**$16,636.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Charles H. Seagraves Jr.**
Application No.	**5988**
Facility Cost	**$2,250.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**2 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

900 Breezy Lane
Grants Pass, OR 97527

Facility Identification

The applicant identified the facility as:

One PTO BearCat, Model 70554, Serial # 103563, 5" capacity

The applicant is the owner of the **mobile** facility garaged at:

900 Breezy Lane
Grants Pass, OR 97527

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/29/2001**
Application Received	**1/3/2002**

Facility Cost

Claimed Cost	$2,250.00
Eligible Cost	**$2,250.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Eric Martin**
Application No.	**5989**
Facility Cost	**$1,399.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

3780 Devils Garden Road
Medford, OR 97504

Facility Identification

The applicant identified the facility as:

One 8HP BearCat chipper, Model 70080, Serial # 233710, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

3780 Devils Garden Road
Medford, OR 97504

Eligibility

ORS 468.155 (1)(a)(B) — The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) — The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 — The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/28/2001**
Application Received	**1/3/2002**

Facility Cost

Claimed Cost	$1,399.00
Eligible Cost	**$1,399.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Geoff J. Dawson**
Application No.	**5990**
Facility Cost	**$1,580.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

1700 Neil Creek Road
Ashland, OR 97520

Facility Identification

The applicant identified the facility as:

One 12HP Troy-bilt chipper, Model 47044, Serial # 1200198, 4" capacity

The applicant is the owner of the **mobile** facility garaged at:

1700 Neil Creek Road
Ashland, OR 97520

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/7/2001**
Application Received	**1/2/2002**

Facility Cost

Claimed Cost	$1,580.00
Eligible Cost	**$1,580.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Glenn W. Betts**
Application No.	**5991**
Facility Cost	**$1,499.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

33202 Primrose Road
Corvallis, OR 97333

Facility Identification

The applicant identified the facility as:

One 8HP BearCat chipper, Model 70080, Serial # 102937, 4" capacity

The applicant is the owner of the **mobile** facility garaged at:

33202 Primrose Road
Corvallis, OR 97333

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/28/2001**
Application Received	**1/3/2002**

Facility Cost

Claimed Cost	$1,499.00
Eligible Cost	**$1,499.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**James Nolan**
Application No.	**5992**
Facility Cost	**$567.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

5304 Summit
Klamath Falls, OR 97603

Facility Identification

The applicant identified the facility as:

One 8HP Sears Craftsman chipper, Model 247.775880, Serial # 1F191C10161, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

5304 Summit
Klamath Falls, OR 97603

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**11/24/2001**
Application Received	**1/3/2002**

Facility Cost

Claimed Cost	$567.00
Eligible Cost	**$567.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**James W. Prater**
Application No.	**5993**
Facility Cost	**$1,850.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

24879 Bellfountain Road
Monroe, OR 97456

Facility Identification

The applicant identified the facility as:

One PTO BearCat chipper, Model 70554, Serial# 19642, 5" capacity

The applicant is the owner of the **mobile** facility garaged at:

24879 Bellfountain Road
Monroe, OR 97456

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**11/10/2001**
Application Received	**1/2/2002**

Facility Cost

Claimed Cost	$1,850.00
Eligible Cost	**$1,850.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Kim Brumby**
Application No.	**5994**
Facility Cost	**$899.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

18265 Mountain Home Road
Sherwood, OR 97140

Facility Identification

The applicant identified the facility as:

One 10HP Troy-bilt chipper, Model 47321, Serial # 1500284, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

18265 Mountain Home Road
Sherwood, OR 97140

Eligibility

ORS 468.155 (1)(a)(B) — The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) — The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 — The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**11/13/2001**
Application Received	**1/2/2002**

Facility Cost

Claimed Cost	$899.00
Eligible Cost	**$899.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Larry C. Hovland**
Application No.	**5995**
Facility Cost	**$5,505.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**3 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

24985 Sturtevant Drive
Veneta, OR 97487

Facility Identification

The applicant identified the facility as:

One PTO Valby chipper, Model CH140, Serial # 3510785, 6" capacity

The applicant is the owner of the **mobile** facility garaged at:

24985 Sturtevant Drive
Veneta, OR 97487

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/7/2001**
Application Received	**1/3/2002**

Facility Cost

Claimed Cost	$5,505.00
Eligible Cost	**$5,505.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Lois D. Summers**
Application No.	**5996**
Facility Cost	**$980.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

1625 SE 282nd Avenue
Gresham, OR 97080

Facility Identification

The applicant identified the facility as:

One 10HP Troy-bilt chipper, Model 47330, Serial # 1100877, 3"capacity

The applicant is the owner of the **mobile** facility garaged at:

1625 SE 282nd Avenue
Gresham, OR 97080

Eligibility

ORS 468.155 (1)(a)(B)	The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.
ORS 468.155 (2)(b)	The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.
ORS 315.304 OAR 340-016-0008	The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/31/2001**
Application Received	**1/3/2002**

Facility Cost

Claimed Cost	$980.00
Eligible Cost	**$980.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Michael W. Breiholz**
Application No.	**5997**
Facility Cost	**$1,680.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

15644 Crater Lake Highway
Eagle Point, OR 97524

Facility Identification

The applicant identified the facility as:

One 12HP Troy-bilt chipper, Model 47044, Serial # 1200233, 4" capacity

The applicant is the owner of the **mobile** facility garaged at:

15644 Crater Lake Highway
Eagle Point, OR 97524

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/27/2001**
Application Received	**1/2/2002**

Facility Cost

Claimed Cost	$1,680.00
Eligible Cost	**$1,680.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Nancy Bachmann**
Application No.	**5998**
Facility Cost	**$749.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

3869 Jacksonville Highway
Medford, OR 97501

Facility Identification

The applicant identified the facility as:

One 6.5HP Troy-bilt chipper, Model 47399, Serial # 473291500652, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

3869 Jacksonville Highway
Medford, OR 97501

Eligibility

ORS 468.155 (1)(a)(B) — The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) — The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 — The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/22/2001**
Application Received	**1/3/2002**

Facility Cost

Claimed Cost	$749.00
Eligible Cost	**$749.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Steffen V. Brocks**
Application No.	**5999**
Facility Cost	**$659.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

2772 SW Hume Street
Portland, OR 97219

Facility Identification

The applicant identified the facility as:

One 10HP Yard Machine chipper, Model 24A-465E129, Serial # 1G110C10184, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

2772 SW Hume Street
Portland, OR 97219

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**1/15/2001**
Application Received	**1/3/2002**

Facility Cost

Claimed Cost	$659.00
Eligible Cost	**$659.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Steven E. Poet**
Application No.	**6000**
Facility Cost	**$750.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

1470 Angelcrest Drive
Medford, OR 97504

Facility Identification

The applicant identified the facility as:

One 6.5HP Troy-bilt chipper, Model 47329, Serial #1500973, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

1470 Angelcrest Drive
Medford, OR 97504

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**11/25/2001**
Application Received	**1/2/2002**

Facility Cost

Claimed Cost	$750.00
Eligible Cost	**$750.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve: Reduced Cost**
Applicant	**Whitetail Tree Farm, LLC.**
Application No.	**6001**
Facility Cost	**$6,900.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**5 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **LLC**

The applicant's address is:

2826 Colonial Road
Roseburg, OR 97470

Facility Identification

The applicant identified the facility as:

One 25HP Kohler Morbark chipper, Model 2060, Serial # 2723316957, 6" capacity

The applicant is the owner of the **mobile** facility garaged at:

2826 Colonial Road
Roseburg, OR 97470

Eligibility

ORS 468.155 (1)(a)(B)	The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.
OAR 340-016-0070(3)	The hitch makes an **insignificant contribution** to the purpose of the wood chipper.
ORS 468.155 (2)(b)	The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.
ORS 315.304 OAR 340-016-0008	The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**2/6/2001**
Application Received	**1/3/2002**

Facility Cost

Claimed Cost	$6,969.00
Ineligible Cost: hitch	-69.00
Eligible Cost	**$6,900.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Barbara A. Rowe**
Application No.	**6002**
Facility Cost	**$1,299.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

PO Box 1296
Shady Cove, OR 97539

Facility Identification

The applicant identified the facility as:

One 8HP BearCat chipper, Model 70080, Serial # 105749, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

2181 Old Ferry Road
Shady Cove, OR 97539

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/28/2001**
Application Received	**1/4/2002**

Facility Cost

Claimed Cost	$1,299.00
Eligible Cost	**$1,299.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Emmett A. Bigby**
Application No.	**6003**
Facility Cost	**$630.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

2838 Logan Street
Klamath Falls, OR 97603

Facility Identification

The applicant identified the facility as:

One 8.5HP Sears Craftsman chipper, Model 247.775880, Serial #1I221620066, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

2838 Logan Street
Klamath Falls, OR 97603

Eligibility

ORS 468.155 (1)(a)(B) — The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) — The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 — The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/26/2001**
Application Received	**1/4/2002**

Facility Cost

Claimed Cost	$630.00
Eligible Cost	**$630.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Eric & Elise Hamner**
Application No.	**6004**
Facility Cost	**$630.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

PO Box 1551
Coos Bay, OR 97420

Facility Identification

The applicant identified the facility as:

One 8.5 HP Sears Craftsman chipper, Model 247.775880, Serial # 1H091G20197, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

60174 Highway 101
Coos Bay, OR 97420

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**11/30/2001**
Application Received	**1/4/2002**

Facility Cost

Claimed Cost	$630.00
Eligible Cost	**$630.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**John M. Waddill/ Susan P. Smith**
Application No.	**6005**
Facility Cost	**$1,500.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

PO Box1464
Coos Bay, OR 97420

Facility Identification

The applicant identified the facility as:

One 8HP BearCat chipper, Model 70180, Serial # 0104809, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

62295 Crown Point Road
Coos Bay, OR 97420

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/22/2001**
Application Received	**1/4/2002**

Facility Cost

Claimed Cost	$1,500.00
Eligible Cost	**$1,500.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve: Reduced Cost**
Applicant	**Michael Greenbaum**
Application No.	**6006**
Facility Cost	**$630.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

50208 McKenzie Highway
Vida, OR 97488

Facility Identification

The applicant identified the facility as:

One 8.5HP Sears Craftsman chipper, Model 247.775880, Serial # 1H231G9254, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

50208 McKenzie Highway
Vida, OR 97488

Eligibility

ORS 468.155 (1)(a)(B)	The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.
OAR 340-016-0070(3)	California sales tax makes an **insignificant contribution** to the purpose of the wood chipper.
ORS 468.155 (2)(b)	The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.
ORS 315.304 OAR 340-016-0008	The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/31/2001**
Application Received	**1/4/2002**

Facility Cost

Claimed Cost	$677.00
Ineligible Cost: sales tax	-47.00
Eligible Cost	**$630.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Nicholas M. Mausen**
Application No.	**6007**
Facility Cost	**$4,115.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**3 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

290 Hillcrest Drive
Baker City, OR 97814

Facility Identification

The applicant identified the facility as:

One PTO GME chipper, Model 18P, Serial # 80052, 4" capacity

The applicant is the owner of the **mobile** facility garaged at:

5943 Wilina Court SE
Salem, OR 97814

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/26/2001**
Application Received	**1/4/2002**

Facility Cost

Claimed Cost	$4,115.00
Eligible Cost	**$4,115.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Norman E. Kaldahl**
Application No.	**6008**
Facility Cost	**$4,500.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**3 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

39058 Trillium Lane
Corvallis, OR 97330

Facility Identification

The applicant identified the facility as:

One Pete HJ 6.5 M woodchipper,Serial # 653, 10" capacity

The applicant is the owner of the **mobile** facility garaged at:

39058 Trillium Lane
Corvallis, OR 97330

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**11/28/2001**
Application Received	**1/4/2002**

Facility Cost

Claimed Cost	$4,500.00
Eligible Cost	**$4,500.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Richard L. Smith**
Application No.	**6009**
Facility Cost	**$15,000.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**5 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

47500 NW Strohmayer Road
Forest Grove, OR 97116

Facility Identification

The applicant identified the facility as:

One 110HP Vermeer chipper, Model 1230, Serial # 662, 12" capacity

The applicant is the owner of the **mobile** facility garaged at:

47500 NW Strohmayer Road
Forest Grove, OR 97116

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/20/2001**
Application Received	**1/4/2002**

Facility Cost

Claimed Cost	$15,000.00
Eligible Cost	**$15,000.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Timothy Neal Mangin**
Application No.	**6010**
Facility Cost	**$2,995.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**2 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

500 Haven Road
Jacksonville, OR 97530

Facility Identification

The applicant identified the facility as:

One PTO BearCat chipper, Model 73454, Serial # 103585, 4" capacity

The applicant is the owner of the **mobile** facility garaged at:

500 Haven Road
Jacksonville, OR 97530

Eligibility

ORS 468.155 (1)(a)(B) — The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) — The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 — The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/13/2001**
Application Received	**1/4/2002**

Facility Cost

Claimed Cost	$2,995.00
Eligible Cost	**$2,995.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Anya N. Malbin**
Application No.	**6011**
Facility Cost	**$4,500.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**3 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

PO Box 1191
St. Helens, OR 97051

Facility Identification

The applicant identified the facility as:

One Used 180HP Asplundh, Model Whisper Drum Chipper, Serial # 2F4000310, 16" capacity

The applicant is the owner of the **mobile** facility garaged at:

65172 McDermott Road
Deer Island, OR 97051

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/27/2001**
Application Received	**1/7/2002**

Facility Cost

Claimed Cost	$4,500.00
Eligible Cost	**$4,500.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve: Reduced Cost**
Applicant	**Lawrence E. Varney**
Application No.	**6012**
Facility Cost	**$1,500.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

3021 NE 29th Avenue
Portland, OR 97212

Facility Identification

The applicant identified the facility as:

One 8HP BearCat chipper, Model 70180, Serial # 102903, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

3021 NE 29th Avenue
Portland, OR 97212

Eligibility

ORS 468.155 (1)(a)(B)	The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.
OAR 340-016-0070(3)	Spare parts make an **insignificant contribution** to the purpose of the wood chipper.
ORS 468.155 (2)(b)	The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.
ORS 315.304 OAR 340-016-0008	The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/29/2001**
Application Received	**1/7/2002**

Facility Cost

Claimed Cost	$1,555.00
Ineligible Cost: spare parts	-55.00
Eligible Cost	**$1,500.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Shelby A. Frazier**
Application No.	**6013**
Facility Cost	**$4,400.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**3 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

6900 Lost Creek Road
Eagle Point, OR 97524

Facility Identification

The applicant identified the facility as:

One PTO Valby, Model CH160, Serial # 3510790, 6.25" capacity

The applicant is the owner of the **mobile** facility garaged at:

6900 Lost Creek Road
Eagle Point, OR 97524

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/31/2001**
Application Received	**1/7/2002**

Facility Cost

Claimed Cost	$4,400.00
Eligible Cost	**$4,400.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Michael W. Jantzer**
Application No.	**6014**
Facility Cost	**$1,249.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

1701 Panorama Drive
Medford, OR 97504

Facility Identification

The applicant identified the facility as:

One 8HP BearCat chipper, Model 70080, Serial # 105266, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

1701 Panorama Drive
Medford, OR 97504

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/19/2001**
Application Received	**1/8/2002**

Facility Cost

Claimed Cost	$1,249.00
Eligible Cost	**$1,249.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Glen M. Andresen**
Application No.	**6016**
Facility Cost	**$999.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

3580 NE Alberta Court
Portland, OR 97211

Facility Identification

The applicant identified the facility as:

One 5.5HP BearCat chipper, Model 70050, Serial # 104934, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

3580 NE Alberta Court
Portland, OR 97211

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/21/2001**
Application Received	**1/9/2002**

Facility Cost

Claimed Cost	$999.00
Eligible Cost	**$999.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**LBD Landscaping, LLC**
Application No.	**6017**
Facility Cost	**$22,695.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**5 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **LLC**

The applicant's address is:

7220 SE Alder
Portland, OR 97215

Facility Identification

The applicant identified the facility as:

One Vermeer PTO, Model BC1000, Serial # BC1000/803, 10" capacity

The applicant is the owner of the **mobile** facility garaged at:

15338 S Hattan Road
Oregon City, OR 97045

Eligibility

ORS 468.155 (1)(a)(B) — The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) — The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 — The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**11/15/2001**
Application Received	**1/9/2002**

Facility Cost

Claimed Cost	$22,695.00
Eligible Cost	**$22,695.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Leona Brooks Brown**
Application No.	**6018**
Facility Cost	**$950.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

50650 Bankston Road
Scappoose, OR 97056

Facility Identification

The applicant identified the facility as:

One 8HP Troy-bilt Supper Tomahawk, Model 47267, Serial # 0202444, 4" capacity

The applicant is the owner of the **mobile** facility garaged at:

50650 Bankston Road
Scappoose, OR 97056

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/30/2001**
Application Received	**1/9/2002**

Facility Cost

Claimed Cost	$950.00
Eligible Cost	**$950.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Frederick G. Kallien**
Application No.	**6019**
Facility Cost	**$1,739.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

28674 Sutherlin Lane
Eugene, OR 97405

Facility Identification

The applicant identified the facility as:

One 8HP BearCat chipper, Model 70085, Serial # 102497, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

28674 Sutherlin Lane
Eugene, OR 97405

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/28/2001**
Application Received	**1/10/2002**

Facility Cost

Claimed Cost	$1,739.00
Eligible Cost	**$1,739.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Arnold C. Jirkovsky**
Application No.	**6020**
Facility Cost	**$4,500.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

90232 Eaton Lane
Junction City, OR 97448

Facility Identification

The applicant identified the facility as:

One 25HP Vermeer chipper, Model 625, Serial # 1VRK0816651000530, 6"capacity

The applicant is the owner of the **mobile** facility garaged at:

90232 Eaton Lane
Junction City, OR 97448

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/31/2001**
Application Received	**1/11/2002**

Facility Cost

Claimed Cost	$4,500.00
Eligible Cost	**$4,500.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Bob E. Lile**
Application No.	**6021**
Facility Cost	**$596.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

87984 Running Springs Drive
Springfield, OR 97478

Facility Identification

The applicant identified the facility as:

One 10HP Yard Machine chipper, Model 24A-4656E129, Serial # 1J231G20372, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

87984 Running Springs Drive
Springfield, OR 97478

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/31/2001**
Application Received	**1/11/2002**

Facility Cost

Claimed Cost	$596.00
Eligible Cost	**$596.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Rucker Interprises, Inc.**
Application No.	**6022**
Facility Cost	**$8,522.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**3 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **S. Corp**

The applicant's address is:

4340 Franklin Boulevard
Eugene, OR 97403

Facility Identification

The applicant identified the facility as:

One 25HP Vermeer chipper, Model BC625, Serial # 1VRU09153Y1004264, 6" capacity

The applicant is the owner of the **mobile** facility garaged at:

4340 Franklin Boulevard
Eugene, OR 97403

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**3/26/2001**
Application Received	**1/11/2002**

Facility Cost

Claimed Cost	$8,522.00
Eligible Cost	**$8,522.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**RMF TOO, LLC**
Application No.	**6023**
Facility Cost	**$8,795.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**3 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **LLC**

The applicant's address is:

2920 NE 24th Avenue
Portland, OR 97212

Facility Identification

The applicant identified the facility as:

One 25HP trailer mount GME chipper, Model 24MF, Serial # 170056, 5" capacity

The applicant is the owner of the **mobile** facility garaged at:

13471 SW Dupee Valley Road
Sheridan, OR 97378

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**11/21/2001**
Application Received	**1/14/2002**

Facility Cost

Claimed Cost	$8,795.00
Eligible Cost	**$8,795.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Wilma R. & Chalton A. Munyon**
Application No.	**6024**
Facility Cost	**$450.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

106 Gateway Lane
Glendale, OR 97442

Facility Identification

The applicant identified the facility as:

One6.5HP Sears Craftsman chipper, Model 247-775870, Serial # 1H310C10194, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

106 Gateway Lane
Glendale, OR 97442

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**6/16/2001**
Application Received	**1/14/2002**

Facility Cost

Claimed Cost	$450.00
Eligible Cost	**$450.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Director's Recommendation: **Approve**
Applicant **Property Repair & Maintence, LLC**
Application No. **6025**
Facility Cost **$650.00**
Percentage Allocable **100%**
Maximum Tax Credit **50%**
Useful Life **1 year**

Tax Credit Review Report

EQC 3/8/2002

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **LLC**

The applicant's address is:

2393 Loch Drive
Springfield, OR 97477

Facility Identification

The applicant identified the facility as:

One 5.5HP Simplicity chipper, Model 1692902, Serial # 50242, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

2393 Loch Drive
Springfield, OR 97477

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**9/10/2001**
Application Received	**1/11/2002**

Facility Cost

Claimed Cost	$650.00
Eligible Cost	**$650.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Charles Potter**
Application No.	**6027**
Facility Cost	**$2,434.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

PO Box 538
Wilderville, OR 97543

Facility Identification

The applicant identified the facility as:

One BearCat PTO, Model 70554, Serial # 104761, 5" capacity

The applicant is the owner of the **mobile** facility garaged at:

525 Ingalls Lane
Wilderville, OR 97543

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/28/2001**
Application Received	**1/15/2002**

Facility Cost

Claimed Cost	$2,434.00
Eligible Cost	**$2,434.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**David M. Grant**
Application No.	**6028**
Facility Cost	**$4,695.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**2 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

1135 Fern Street
Ashland, OR 97520

Facility Identification

The applicant identified the facility as:

One 13HP BearCat chipper, Model 73413, Serial # GCAA-3175613, 4" capacity

The applicant is the owner of the **mobile** facility garaged at:

1135 Fern Street
Ashland, OR 97520

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/26/2001**
Application Received	**1/15/2002**

Facility Cost

Claimed Cost	$4,695.00
Eligible Cost	**$4,695.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Eldin Joel Vanestreek**
Application No.	**6030**
Facility Cost	**$8,200.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**5 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

11670 SW 77th Street
Beaverton, OR 97005

Facility Identification

The applicant identified the facility as:

One 25HP Gravely chipper, Model 993029, Serial# 000200, 6" capacity

The applicant is the owner of the **mobile** facility garaged at:

11670 SW 77th Street
Beaverton, OR 97005

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**6/29/2001**
Application Received	**1/22/2002**

Facility Cost

Claimed Cost	$8,200.00
Eligible Cost	**$8,200.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Cathy Bergen**
Application No.	**6031**
Facility Cost	**$600.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

311 Terrace Street
Ashland, OR 97520

Facility Identification

The applicant identified the facility as:

One 5HP Simplicity chipper, Model 5/14, Serial # 70107, 3" capacity

The applicant is the owner of the **mobile** facility garaged at:

311 Terrace Street
Ashland, OR 97520

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**5/6/2000**
Application Received	**1/23/2002**

Facility Cost

Claimed Cost	$600.00
Eligible Cost	**$600.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**The Caddisfly Resort, LLC.**
Application No.	**6032**
Facility Cost	**$1,700.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**35%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **LLC**

The applicant's address is:

56404 McKenzie Highway
McKenzie Bridge, OR 97413

Facility Identification

The applicant identified the facility as:

One 9HP Mighty Mac chipper, Model 12PT9, Serial # 00535, 3.5" capacity

The applicant is the owner of the **mobile** facility garaged at:

56404 McKenzie Highway
McKenzie Bridge, OR 97413

Eligibility

ORS 468.155 (1)(a)(B) — The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) — The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 (3)(a)
OAR 340-016-0008 — The maximum tax credit available to the applicant is **35%** because the wood chipper was purchased on or after January 1, 2002 and the facility is a nonpoint source pollution control facility.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**1/14/2002**
Application Received	**1/23/2002**

Facility Cost

Claimed Cost	$1,700.00
Eligible Cost	**$1,700.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
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Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Robert A. Stineman**
Application No.	**6033**
Facility Cost	**$7,500.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**3 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Sole Proprietor**

The applicant's address is:

383 W. Lexington
Astoria, OR 97103

Facility Identification

The applicant identified the facility as:

One used 50HP Vermeer chipper, Model 935B, Serial # 1VRD10150X1003333, 9" capacity

The applicant is the owner of the **mobile** facility garaged at:

383 W. Lexington
Astoria, OR 97103

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**12/24/2001**
Application Received	**1/22/2002**

Facility Cost

Claimed Cost	$7,500.00
Eligible Cost	**$7,500.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Arthur G. Outler**
Application No.	**6034**
Facility Cost	**$2,550.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**1 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

9115 Blackwell Road
Central Point, OR 97502

Facility Identification

The applicant identified the facility as:

One PTO BearCat chipper, Model 70554, Serial # 102833, 5" capacity

The applicant is the owner of the **mobile** facility garaged at:

9115 Blackwell Road
Central Point, OR 97502

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**9/26/2001**
Application Received	**1/24/2002**

Facility Cost

Claimed Cost	$2,550.00
Eligible Cost	**$2,550.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Tax Credit Review Report

EQC 3/8/2002

Director's Recommendation:	**Approve**
Applicant	**Rich's Tree Service, INC.**
Application No.	**6039**
Facility Cost	**$9,382.00**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**3 year**

Pollution Control Facility: NPS
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **Individual**

The applicant's address is:

PO Box 308
Fairview, OR 97024

Facility Identification

The applicant identified the facility as:

One 80HP Vermeer Chipper, Model BC1250, Serial # 1VRC14138T1005455, 12" capacity

The applicant is the owner of the **mobile** facility garaged at:

20321 NE Sandy Boulevard
Fairview, OR 97024

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Purchase Date	**3/7/2000**
Application Received	**1/25/2002**

Facility Cost

Claimed Cost	$9,382.00
Eligible Cost	**$9,382.00**

An invoice substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining that **100%** of the cost of the wood chipper is allocable to air pollution control is the percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this location. No other tax credits have been issued to the applicant.

Reviewer: Maggie Vandehey, DEQ

APPROVALS: Water

Pollution Control Facilities Tax Credit

Eligible Water Pollution Control Facilities

The Department recommends the Commission issue certificates to **5** water pollution control facilities. The statistics for these approvals are:

	Sum	Average	Minimum	Maximum
Claimed	$2,705,231	$541,046	$19,263	$2,194,647
Certified	$2,703,227	$540,645	$19,263	$2,194,647
GF	$1,351,614	$270,323	$9,632	$1,097,324

A summary is on the next page followed by the individual reports for each pollution control facility that are ordered by application number.

Increase or Decrease in Cost

The recommended certified facility cost on **one** report is less than each applicant requested on the application. The report explains the reason for the reduction.

Eligibility

Some facilities in this section have a **principal purpose** meaning they comply with an EPA or DEQ requirement to prevent, control or reduce water pollution. If the facilities in this section are not constructed or installed due to a requirement then they have a **sole purpose** meaning they prevent, control or reduce a substantial quantity of water pollution. The water pollution control or reduction is accomplished by the disposal or elimination of or redesign to eliminate industrial waste and the use of treatment works for industrial waste as defined in ORS 468B.005.

Eligible Water Pollution Control Facilities

App #	Applicant	Cost			%	Max.	GF
		Claimed	Certified	+/-		TC	Liability
5599	Road & Driveway Company	49,442	47,438	-2,004	100%	50%	23,719
5738	The Amalgamated Sugar Company	2,194,647	2,194,647	0	100%	50%	1,097,324
5783	Willamette Industries, Inc.	123,933	123,933	0	100%	50%	61,967
5802	Synthetech, Inc	317,946	317,946	0	100%	50%	158,973
5811	Georgia-Pacific West, Inc	19,263	19,263	0	100%	50%	9,632

State of Oregon
Department of
Environmental
Quality

Director's Recommendation:	**APPROVE - Reduced Cost**
Applicant	**Road & Driveway Co.**
Application No.	**5599**
Facility Cost	**$47,438**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**10 years**

Tax Credit Review Report

EQC 0302

Pollution Control Facility: Water
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **an S Corporation**
Business: **road and driveway construction**
Taxpayer ID: **93-0495713**

The applicant's address is:

#2 AC Plant
PO Box 730
Newport, OR 97365

Facility Identification

The applicant identified the facility as:

A bermed asphalt pad, a catch basin, and an oil/water separator

The applicant is the owner of the facility located at:

Fisher Quarry
Immonen Road
Lincoln City, OR 97367

Technical Information

The claimed facility is a sloped and bermed 21,240 square foot containment pad placed under the applicant's asphalt plant, oil storage and preheating area, and refueling station. The applicant did not claim parking areas or roadways. Waters contaminated with oil or spilled petroleum products drain to a catch basin and a two-chambered oil/water separator measuring 4' x 4' x 10'. The water is discharged into a fractured rock ground filter. The trapped oil and sediment is disposed of in accordance to DEQ regulations.

Eligibility

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new installation of equipment** is to reduce a substantial quantity of water pollution.

ORS.468.155. (1)(b)(A) The **prevention** is accomplished by disposal or elimination of industrial waste with the use of **treatment works** for industrial waste as defined in ORS 468B.005.

ORS 468.155 (3)(e) **Replacement:** This system does not replace any previously certified equipment.

ORS 315.304
OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Construction Started	**01/2000**
Construction Completed	**06/2000**
Placed into Operation	**07/2000**
Application Received	**07/20/2001**

Facility Cost

Claimed Cost	$ 49,442
Applicant Correction	-2,004
Eligible Costs	**$ 47,438**

Invoices substantiated the facility cost.

Facility Cost Allocable to Pollution Control

The only factor used in determining the percentage allocable to pollution control is the **100%** percentage of time the facility is used for pollution control.

Compliance and Other Tax Credits

The facility is in compliance with Department rules and statutes and with EQC orders.
DEQ permits issued to the applicant:
NPDES 1200-A #110727, issued 10/28/1999
Air Discharge #37-0321, issued 12/20/1999

Other tax credits issued to **Road & Driveway Co.**:

App. #	Description of Facility	Certified Cost	% Allocable	Cert. #	Issue Date
174	A spiral tube air washer and a conversion unit on a raw material dryer to allow the use of gas instead of oil as a fuel.	$8,805.00	100	133	1/7/71
2212	Variable throat Venturi scrubber & accessories, scrubber water recirculation ponds, sound attenuation system & paving of yard & haul roads.	$137,691.00	100	2081	12/1/89

Reviewer: Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 0302

Pollution Control Facility: Water
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Directors Recommendation:	**APPROVE**
Applicant	**The Amalgamated Sugar Company, LLC**
Application No.	**5738**
Facility Cost	**$2,194,647**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**10 years**

Applicant Identification

Organized As: **Limited Liability Corporation**
Business: **manufacturer of refined beet sugar**
Taxpayer ID: **87-0568755**

The applicant's address is:

105 East Main Street
Nyssa, OR 97913

Facility Identification

The applicant claimed:

Spent Lime Handling System

The applicant is the owner of the facility located at:

105 East Main Street
Nyssa, OR 97913

Technical Information

The applicant processes domestic sugar beets into refined sugar. The process involves extracting the raw sugar from the sliced sugar beets using warm water; purifying the extracted beet juice and water solution; evaporating the excess water; and finally crystallizing and granulating the sugar. Slurry waste from the purification step consists of calcium carbonate precipitate. This slurry was concentrated and pumped to a lime slurry evaporation pond before the installation of the claimed facility. The applicant discontinued use of the lime pond because it failed.

The claimed facility eliminated the need for the spent lime evaporation pond by using an alternative method of filtration to remove all the solids produced by the purification step of the production of sugar. Approximately 495 tons per day of solids are generated, consisting primarily of calcium carbonate precipitate. Prior to the installation of the claimed facility, a vacuum drum filter was used to concentrate the solids. It produced a concentrated slurry that was pumped to a 37 acre evaporation pond. A Mutual

Agreement and Order issued by the DEQ (08/22/97) required the applicant to close the unlined pond to stop seepage. The applicant installed a membrane type filter press to comply with the Order. The press removes water from the calcium carbonate precipitate and the resulting filter-cake is handled as dry material.

The claimed facility consists of the following:

1. Three Putsch filter presses, Model 5-14615.18, that extract water and a high percentage of any sugar remaining in the spent lime cake, and dry the cake using compressed air.
2. Pumps and motors that transport the spent calcium carbonate slurry to fill the filter presses.
3. Three Quincy Northwest Compressors, Model QNW-373-D/A, that provide compressed dry air to operate the presses and dry the filter cakes.
4. Conveyors that transport the dried cake from the presses to a staging area east of the ash pond where they are temporarily stored and hauled away later for agricultural use.
5. A building that houses the membrane filters to protect them from the environment. The filters cannot freeze and should not be exposed to the elements.

Eligibility

ORS 468.155 (1)(a)(A)	The **principal purpose** of the new **Spent Lime Handling System** is to comply with the applicants Wastewater Discharge Permit to **prevent** water pollution. Mutual Agreement and Order No. WQIW-ER-97-097 stipulated the terms of agreement between the applicant and DEQ that required the elimination of the spent lime evaporation pond.
ORS 468.155 (1)(b)(A)	The elimination of industrial wastewater is accomplished with the installed filter presses that meet the definition in ORS 468B.005 of an industrial waster treatment works.
ORS 468.155 (3)(e)	The new spent lime handling system is not a replacement facility.
ORS 315.304 OAR 340-016-0008	The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Construction Started	**6/13/2000**
Construction Completed	**10/9/2000**
Facility Placed into Operation	**10/12/2000**
Application Received	**10/15/2001**

Facility Cost

Claimed Cost	$ 2,194,647
Eligible Cost	**$ 2,194,647**

Copies of invoices and a project summary report substantiated the claimed facility cost.

Facility Cost Allocable to Pollution Control

The following factors were used to determine that **100%** of the facility cost is allocable to pollution control.

Factor	Applied to This Facility
ORS 468.190(1)(a) Salable or Usable Commodity	The dry spent lime filter cake materials are being sold for $1 per ton. The applicant is exploring other uses for the filter cakes.
ORS 468.190(1)(b) Return on Investment	The useful life of the facility used for the return on investment consideration is 10 years. No gross annual revenues were associated with this facility.
ORS 468.190(1)(c) Alternative Methods	The applicant investigated the Eimco rotary drum filters but the Putsch filters were considered the best solution.
ORS 468.190(1)(d) Savings or Increase in Costs	No savings or increases in costs were identified.
ORS 468.190(1)(e) Other Relevant Factors	No other relevant factors.

Compliance and Other Tax Credits

The applicant states that the facility is in compliance with Department rules and statutes and with EQC orders. The following permits have been issued to the site:

NPDES No 101174 issued December 27, 1993
Oregon Title V No. 23-0002, issued May 18, 1998

Reviewers: Lois L. Payne, SJO Consulting Engineers
Dennis E. Cartier, SJO Consulting Engineers
Maggie Vandehey, DEQ

State of Oregon
Department of Environmental Quality

Director's Recommendation: **APPROVE**

Applicant	**Willamette Industries, Inc.**
Application No.	**5783**
Facility Cost	**$123,933**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**7 years**

Tax Credit Review Report

EQC 0302

Pollution Control Facility: Water
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **a C corporation**
Business: **producer of linerboard, corrugating medium, and bag paper.**
Taxpayer ID: **93-0312940**

The applicant's address is:

1300 SW Fifth Avenue, Suite 3800
Portland, OR 97201

Facility Identification

The certificate will identify the facility as:

Oil Spill Containment System and an Oil-Water Separator

The applicant is the owner of the facility located at:

Albany Paper Mill
3251 Old Salem Road
Albany, OR 97321

Technical Information

The applicant claimed a secondary containment system used to capture and filter oily water from around the paper machine lubrication reservoirs and sumps. The system is located in the basement of the paper machine building and includes:

- Collection curbs enclosing the No. 3 Paper Machine area,
- Reconfiguration of the drainage system to direct industrial wastes to sumps,
- Installation of 3 sumps and sump pumps designed for 100 gallons per minute with a 5 horsepower motor used to pump the wastewater to the oil-water separator,
- Installation of an oil-water separator with a capacity of 8,000 gallons, and
- Electrical connections.

The largest spill that occurred prior to the installation of the secondary containment was approximately 700 gallons. The new system prevents oil spills from reaching the paper mill sewer and ultimately the Willamette River.

Eligibility

ORS 468.155 (1)(a)(A) The **principal purpose** of this **new installation of equipment** is to reduce water pollution in compliance with a DEQ NPDES permit. The installation of this system was part of an action plan developed to improve the performance of the wastewater treatment system and to comply with DEQ requirements.

ORS 468.155 (1)(b) The **prevention** is accomplished by the elimination of industrial waste and the use of treatment works for industrial waste as defined in ORS 468B.005.

OAR 340-016-0025 (2)(g) The installation of this facility will prevent spills or unauthorized releases on land or waters of the state.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Construction Started	**11/15/1999**
Construction Completed	**4/30/2000**
Placed into Operation	**4/30/2000**
Application Received	**10/25/2001**

Facility Cost

Claimed Cost	$ 123,933
Eligible Cost	**$ 123,933**

Invoices substantiated 99% of the claimed facility cost.

Facility Cost Allocable to Pollution Control

The following factors were considered in determining that **100%** of the facility cost allocable to pollution control.

Factor	Applied to This Facility
ORS 468.190(1)(a) Salable or Usable Commodity	No salable or usable commodity. The oil is not reused, it is held in drums, then delivered to a recycler.
ORS 468.190(1)(b) Return on Investment (ROI)	The useful life of the facility used for the ROI consideration is 7 years. Calculated according to rule, the percentage of the facility cost properly allocable to pollution control is 100%.
ORS 468.190(1)(c) Alternative Methods	No alternative investigated.
ORS 468.190(1)(d) Savings or Increase in Costs	There were no savings or increase in costs.
ORS 468.190(1)(e) Other Relevant Factors	No other relevant factors.

Compliance and Other Tax Credits

The applicant states the facility is in compliance with Department rules and statutes. The following DEQ permits are issued to the site:

DEQ NPDES Stormwater Permit # 1200Z, issued 7/22/1997
NPDES Waste #101345, issued 11/30/1995
Title V Air Permit #22-0471, issued 4/26/2001

Reviewers: Lois Payne, SJO Consulting Engineers
Dennis Cartier, SJO Consulting Engineers
Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Tax Credit Review Report

EQC 0302

Directors Recommendation:	**APPROVE**
Applicant	**Synthetech, Inc.**
Application No.	**5802**
Facility Cost	**$317,946**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**5 years**

Pollution Control Facility: Water
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized As: **C Corporation**
Business: **Peptide Building Block production: amino acid derivatives used by the pharmaceutical industry**
Taxpayer ID: **84-0845771**

The applicant's address is:

1290 Industrial Way SW
Albany, OR 97321

Facility Identification

The applicant claimed:

Wastewater Distillation Column and Receiving Tank T302

The applicant is the owner of the facility located at:

1290 Industrial Way SW
Albany, OR 97321

Technical Information

The claimed distillation column and support equipment removes organic solvents from the applicant's process wastewater prior to discharge to the City of Albany's publicly owned treatment plant (POTW). The applicant installed the system to remove volatile organic compounds (VOCs) including methylene chloride and toluene from the process wastewater through a heat process that vaporizes, condenses and collects the VOC. The remaining treated water is stored in a receiver tank to be analyzed prior to discharge to the POTW. Equipment includes:

1. Distillation skid with packing; spray nozzles; and required instrumentation and controls;
2. One 3,000-gallon stainless steel tank, 6'4" OD x 13' (T302);
3. Two 300-gallons stainless steel tanks, 3' OD x 6';
4. Stainless steel piping modifications;
5. Four Viking pumps, sized for 10 gpm and 50 psi with variable frequency drive and motor;

6. Two Alaskan Copper Heat Exchangers;
7. One Graham Heliflow Heat Exchanger (feed preheater); and
8. Tank and pipe insulation.

Methylene chloride levels were up to 500 ppm and toluene was up to 400 ppm prior to the installation of the claimed facility. The applicant's industrial wastewater permit, regulated by the POTW, limits the amount of methylene chloride and toluene to less than 0.8 ppm each. A series of permit violations occurred in 1997 and 1998 that proved the previous manual controls were not working. The new distillation column removes the amount of methylene chloride and toluene to less than 0.5 ppm each.

Eligibility

ORS 468.155 (1)(a)(A)	The **principal purpose** of the new **distillation column and receiver tank** is to comply with the applicant's Wastewater Discharge Permit to **prevent** water pollution. The applicant's permit requires toluene and methylene chloride levels be less than 0.8 ppm, among others.
ORS 468.155 (1)(b)(A)	The elimination of industrial waste is accomplished with the installed **distillation column and receiver tank** that meet the definition in ORS 468B.005 of an industrial waster treatment works.
ORS 468.155 (3)(e)	The new **distillation column and receiver tank** is not a replacement facility.
ORS 315.304 OAR 340-016-0008	The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Construction Started	**9/10/1998**
Construction Completed	**12/01/1999**
Facility Placed into Operation	**12/01/1999**
Application Received	**11/06/2001**

Facility Cost

Claimed Cost	$ 317,946
Eligible Cost	**$ 317,946**

Copies of invoices substantiated the claimed facility cost.

Facility Cost Allocable to Pollution Control

The following factors were used to determine that **100%** of the facility cost is allocable to pollution control.

Factor	Applied to This Facility
ORS 468.190(1)(a) Salable or Usable Commodity	There are no savings or usable commodities.
ORS 468.190(1)(b) Return on Investment	The useful life of the facility used for the return on investment consideration is 5 years. No gross annual revenues were associated with this facility.
ORS 468.190(1)(c) Alternative Methods	Alternative methods considered were steam stripping or air stripping.
ORS 468.190(1)(d) Savings or Increase in Costs	No savings or increases in costs were identified.
ORS 468.190(1)(e) Other Relevant Factors	No other relevant factors.

Compliance

The applicant states that the facility is in compliance with Department rules and statutes and with EQC orders. The following permits have been issued to the site:

Hazardous Waste Generator #ORD 085979474, issued 1/12/1988
Storm Water #ODEQ 1200-Z, issued 7/22/1997
Industrial Waste Water Discharge #2834-01, issued 1/1/2001
Air Contaminant #ODEQ #22-6009, issued 11/24/1999

Previous Tax Credit Certifications Issued to Applicant:

Application 5295, Wastewater Pretreatment System, $187, 064, installed in 1997.
Application 5297, Solvent Recovery Condensers, Jet Venturi Scrubber & Separator System, and dust Collector, $346,554, installed in 1997.

Reviewers: Lois L. Payne, SJO Consulting Engineers
Dennis E. Cartier, SJO Consulting Engineers
Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Director's
Recommendation: **APPROVE**

Applicant	**Georgia-Pacific West, Inc.**
Application No.	**5811**
Facility Cost	**$19,263**
Percentage Allocable	**100%**
Maximum Tax Credit	**50%**
Useful Life	**10 years**

Tax Credit Review Report

EQC 0302

Pollution Control Facility: Water
Final Certification
ORS 468.150 -- 468.190
OAR 340-016-0005 -- 340-016-0080

Applicant Identification

Organized as: **C Corporation**
Business: **manufacturer of linerboard and medium papers**
Taxpayer ID: **58-2142537**

The applicant's address is:

One Butler Bridge Road
Toledo, OR 97391

Facility Identification

The applicant claimed:

Standby Generator for Wastewater Pumps

The applicant is the owner of the facility located at:

One Butler Bridge Road
Toledo, OR 97391

Technical Information

The claimed facility is a standby diesel generator to supply power to the process water pumps that direct process water from the hog fuel boiler sump to the wastewater treatment system. The generator is an Olympian Model D75P1 and serial number F1853F/001.

There previously was no backup power for the sump pump and occasionally process water overflowed to the Yaquina river. The process water typically has a high pH so the overflow is out of compliance with the applicants storm water permit. The applicant was cited by DEQ for exceeding storm water permit discharge limits that occurred due to heavy rains and a power failure. The standby generator prevents an overflow due to loss of power. No storm water permit violations have occurred since the installation of the emergency generator.

Eligibility

ORS 468.155 (1)(a)(A) The **principal purpose** of this **new standby generator** is to comply with the applicant's storm water permit and Notice of Noncompliance ENF-WQ-WRS-00-292 dated August 9, 2000 from the DEQ to **prevent** water pollution.

The applicant's storm water permit (1200-Z) does not allow the discharge of wastewater from the hog fuel boiler sump.

ORS 468.155 (1)(b)(B) The prevention is accomplished with the use of treatment works for industrial waste as defined in ORS 468B.005.

OAR 340-016-0060 (3)(k) **Replacement:** The new standby generator is not a replacement facility.

ORS 315.304 OAR 340-016-0008 The maximum tax credit available to the applicant is **50%** because construction of the facility was completed prior to January 1, 2002.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.165 (6).

Construction Started	**4/2001**
Construction Completed	**9/2001**
Placed into Operation	**9/2001**
Application Received	**11/14/2001**

Facility Cost

Claimed Cost	$19,263
Eligible Cost	**$19,263**

Facility Cost Allocable to Pollution Control

The facility is used exclusively for pollution prevention; therefore 100% of the facility cost is allocable to pollution control.

Compliance and Other Tax Credits

The applicant states the facility is in compliance with Department rules and statutes and with EQC orders. The following permits have been issued to the site:

Air Permit #21-0005, issued 11/15/1999
Water Permit #101409, issued 8/19/1998
Storm Water Permit #1200-Z, issued 7/22/1997
Solid Waste Permit #1059, issued 5/17/1999

Reviewer: Lois Payne, SJO Consulting Engineers
Dennis Cartier, Associate, SJO Consulting Engineers
Maggie Vandehey, DEQ

Eligible Reclaimed Plastic Investments

OAR 468.451- 468.491
ORS 340-017-0010 - 340-017-0005

This Staff Report includes the Department's recommendation to approve certification of reclaimed plastic investments according to ORS 468.466.

The Department recommends the Commission certify investments made on **18** reclaimed plastic tax credit applications. The statistics for these approvals are:

	Sum	Average	Minimum	Maximum
Claimed	$366,866	$20,381	$1,729	$171,000
Certified	$366,866	$20,381	$1,729	$171,000
GF	$183,433	$10,191	$865	$85,500

A summary is on the next page followed by the individual reports for each reclaimed plastic product investment. The reviews are in order of the application number.

Eligibility

The investments claimed on these applications were made according to the statute and rules. The investments are used to collect, transport, or process reclaimed plastic; or to manufacture a reclaimed plastic product.

Program Close

The 1985 Legislature established the Reclaimed Plastic Tax Credit program to encourage the recycling of plastic and the manufacture of reclaimed plastic products. If the Commission certifies the applications in this staff report then 156 certificates would be issued for this tax credit program. The certified investment costs would amount to just over $5 million between 1985 and the end of the program.

The 2001 legislature did not extend this tax credit program. The applications presented in this report includes all reclaimed plastic tax credit applications filed with the Department of Environmental Quality as of December 31, 2001 — the sunset date established by ORS 468.461(6).

APPROVALS:

Reclaimed Plastic Products Tax Credit

Eligible Reclaimed Plastic

App #	Applicant	Cost			%	GF
		Claimed	Certified	+/-		Liability
5719	Dinihanian Manufacturing, Inc	21,000	21,000	0	100%	10,500
5720	Dinihanian Manufacturing, Inc	26,668	26,668	0	100%	13,334
5812	Denton Plastics Inc	8,560	8,560	0	100%	4,280
5817	Denton Plastics, Inc	12,000	12,000	0	100%	6,000
5871	Bowco Industries, Inc	10,203	10,203	0	100%	5,102
5872	Bowco Industries, Inc.	7,633	7,633	0	100%	3,817
5897	Bowco Industries	26,340	26,340	0	100%	13,170
5948	Denton Plastics, Inc.	18,354	18,354	0	100%	9,177
5949	Denton Plastics, Inc.	26,312	26,312	0	100%	13,156
5950	Oregon Cherry Growers	5,514	5,514	0	100%	2,757
5951	Oregon Cherry Growers	5,594	5,594	0	100%	2,797
5952	WinCo Foods Inc.	5,562	5,562	0	100%	2,781
5954	Ernst Manufacturing, Inc.	171,000	171,000	0	100%	85,500
5955	Costco Wholesale	4,995	4,995	0	100%	2,498
5958	Agri-Plas, Inc.	6,405	6,405	0	100%	3,203
5959	Agri-Plas, Inc.	1,729	1,729	0	100%	865
5960	Agri-Plas Inc.	3,402	3,402	0	100%	1,701
5961	Denton Plastics, Inc.	5,595	5,595	0	100%	2,798

Director's Recommendation: **APPROVE**
Applicant **Dinihanian Manufacturing, Inc.**
Application No. **5719**
Facility Cost **$21,000**
Percentage Allocable **100%**
Useful Life **5 years**

Tax Credit Review Report

EQC 0302

Reclaimed Plastic Products
Final Certification
ORS 468.451 -- 468.491
OAR 340-017-0010 -- 340-017-0055

Applicant Identification

Organized As: **A C Corporation**
Business: **Plastics manufacturer**
Taxpayer ID: **93-1166678**

The applicant's address is:

15005 NW Cornell Road
Beaverton, OR 97006

Facility Identification

The certificate will identify the facility as:

Mold for manufacture of reclaimed plastic safety caps for nursery stakes

The applicant is the owner of the facility located at:

15005 NW Cornell Road
Beaverton, OR 97006

Technical Information

This mold is used to manufacture safety caps for nursery stakes. The caps are made from 100% reclaimed plastic.

Eligibility

ORS 468.461 (1) Any person may apply to the Environmental Quality Commission (EQC) for certification of an investment made to allow the person to collect, transport or process reclaimed plastic, or to manufacture a reclaimed plastic product.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.461(6).

Preliminary Application Received	**09/11/2001**
Preliminary Approval Granted	**09/11/2001**
Date of Investment	**10/01/2001**
Final Application Received	**10/09/2001**
Application Substantially Complete	**10/09/2001**

Facility Cost

Claimed Cost	$21,000
Eligible Cost	**$21,000**

The applicant provided invoices to substantiate the cost of the facility.

Facility Cost Allocable to Pollution Control

The following factors were used to determine that **100%** of the investment is allocable to the collection, transportation or processing of reclaimed plastic, or the manufacture of reclaimed plastic product.

Factor	Applied to This Facility
OAR 340-017-0030(2)(a) Extent used to convert reclaimed plastic into a salable or usable commodity	The equipment is used 100% of the time for processing reclaimed plastic into a salable or usable commodity.
OAR 340-017-0030(2)(b) The alternative methods, equipment and costs for achieving the same objective	No alternative methods were considered.
OAR 340-017-0030(2)(c) Other relevant factors used to establish portion of the cost allocable to collection, transportation or processing of reclaimed plastic or the manufacture of reclaimed plastic products	No other factors were considered relevant.

Compliance

The facility is in compliance with Department rules and statutes and with EQC orders. There are no DEQ permits issued to this facility:

Reviewers: William R Bree, DEQ
Maggie Vandehey, DEQ

Director's Recommendation: **APPROVE**
Applicant **Dinihanian Manufacturing, Inc.**
Application No. **5720**
Facility Cost **$26,668**
Percentage Allocable **100%**
Useful Life **5 years**

Tax Credit Review Report

EQC 0302

Reclaimed Plastic Products
Final Certification
ORS 468.451 -- 468.491
OAR 340-017-0010 -- 340-017-0055

Applicant Identification

Organized As: **A C Corporation**
Business: **Plastics manufacturer**
Taxpayer ID: **93-1166678**

The applicant's address is:

15005 NW Cornell Road
Beaverton, OR 97006

Facility Identification

The certificate will identify the facility as:

Mold for manufacture of reclaimed plastic floral card holder

The applicant is the owner of the facility located at:

15005 NW Cornell Road
Beaverton, OR 97006

Technical Information This mold is used to manufacture a floral card holder for the floral and nursery industry. The holder is made from 100% reclaimed plastic.

Eligibility

ORS 468.461 (1) Any person may apply to the Environmental Quality Commission (EQC) for certification of an investment made to allow the person to collect, transport or process reclaimed plastic, or to manufacture a reclaimed plastic product.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.461(6).

Preliminary Application Received	**07/31/2001**
Preliminary Approval Granted	**07/31/2001**
Date of Investment	**10/01/2001**
Final Application Received	**10/09/2001**
Application Substantially Complete	**10/09/2001**

Facility Cost

Claimed Cost	$26,668
Eligible Cost	**$26,668**

The applicant provided invoices to substantiate the cost of the facility.

Facility Costs Allocable to Pollution Control

The following factors were used to determine that **100%** of the investment is allocable to the collection, transportation or processing of reclaimed plastic, or the manufacture of reclaimed plastic product.

Factor	Applied to This Facility
OAR 340-017-0030(2)(a) Extent used to convert reclaimed plastic into a salable or usable commodity	The equipment is used 100% of the time for processing reclaimed plastic into a salable or usable commodity.
OAR 340-017-0030(2)(b) The alternative methods, equipment and costs for achieving the same objective	No alternative methods were considered.
OAR 340-017-0030(2)(c) Other relevant factors used to establish portion of the cost allocable to collection, transportation or processing of reclaimed plastic or the manufacture of reclaimed plastic products	No other factors were considered relevant.

Compliance

The facility is in compliance with Department rules and statutes and with EQC orders. There are no DEQ permits issued to this facility:

Reviewers: William R Bree, DEQ
Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Director's Recommendation:	**APPROVE**
Applicant	**Denton Plastics, Inc.**
Application No.	**5812**
Facility Cost	**$8,560**
Percentage Allocable	**100%**
Useful Life	**5 years**

Tax Credit Review Report

EQC 0302

Reclaimed Plastic Products
Final Certification
ORS 468.451 -- 468.491
OAR 340-017-0010 -- 340-017-0055

Applicant Identification

Organized As: **a C Corporation**
Business: **Plastics recycling company**
Taxpayer ID: **93-0852298**

The applicant's address is:

4427 NE 158th Avenue
Portland, OR 97230

Facility Identification

The certificate will identify the facility as:

One Gala model 8.2 BF centrifugal dryer.

The applicant is the owner of the facility located at:

4427 NE 158th Avenue
Portland, OR 97230

Technical Information

The centrifugal dryer is used for mechanical drying of recycled polyethylene and polypropylene as part of the plastic reclamation process.

Eligibility

ORS 468.461 (1) Any person may apply to the Environmental Quality Commission (EQC) for certification of an investment made to allow the person to collect, transport or process reclaimed plastic, or to manufacture a reclaimed plastic product.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.461(6).

Preliminary Application Received	**07/10/2001**
Preliminary Approval Granted	**07/12/2001**
Date of Investment	**08/23/2001**
Final Application Received	**11/14/2001**

Facility Cost

Claimed Cost	$8,560
Eligible Cost	**$8,560**

The applicant provided invoices to substantiate the cost of the facility.

Facility Cost Allocable to Pollution Control

The following factors were used to determine that **100%** of the investment is allocable to the collection, transportation or processing of reclaimed plastic, or the manufacture of reclaimed plastic product.

Factor	Applied to This Facility
OAR 340-017-0030(2)(a) Extent used to convert reclaimed plastic into a salable or usable commodity	The equipment is used 100% of the time for processing reclaimed plastic into a salable or usable commodity.
OAR 340-017-0030(2)(b) The alternative methods, equipment and costs for achieving the same objective	No alternative methods were considered.
OAR 340-017-0030(2)(c) Other relevant factors used to establish portion of the cost allocable to collection, transportation or processing of reclaimed plastic or the manufacture of reclaimed plastic products	No other factors were considered relevant.

Compliance

The facility is in compliance with Department rules and statutes and with EQC orders. There are no DEQ permits issued to this facility:

Reviewers: William R Bree, DEQ
Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Director's Recommendation:	**APPROVE**
Applicant	**Denton Plastics, Inc.**
Application No.	**5817**
Facility Cost	**$12,000**
Percentage Allocable	**100%**
Useful Life	**5 years**

Tax Credit Review Report

EQC 0302

Reclaimed Plastic Products
Final Certification
ORS 468.451 -- 468.491
OAR 340-017-0010 -- 340-017-0055

Applicant Identification

Organized As: **A C Corporation**
Business: **Plastics recycling company**
Taxpayer ID: **93-0852298**

The applicant's address is:

4427 NE 158th Avenue
Portland, OR 97230

Facility Identification

The certificate will identify the facility as:

One AEF Weigh Blender, model 750 PPH.

The applicant is the owner of the facility located at:

4427 NE 158th Avenue
Portland, OR 97230

Technical Information

The weigh blender used to manufacture reclaimed plastic blends to customer specification.

Eligibility

ORS 468.461 (1) Any person may apply to the Environmental Quality Commission (EQC) for certification of an investment made to allow the person to collect, transport or process reclaimed plastic, or to manufacture a reclaimed plastic product.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.461(6).

Preliminary Application Received	**12/01/2000**
Preliminary Approval Granted	**12/04/2000**
Date of Investment	**12/16/2000**
Final Application Received	**11/13/2001**

Facility Cost

Claimed Cost	$12,000
Eligible Cost	**$12,000**

The applicant provided invoices to substantiate the cost of the facility.

Facility Cost Allocable to Pollution Control

The following factors were used to determine that **100%** of the investment is allocable to the collection, transportation or processing of reclaimed plastic, or the manufacture of reclaimed plastic product.

Factor	Applied to This Facility
OAR 340-017-0030(2)(a) Extent used to convert reclaimed plastic into a salable or usable commodity	The equipment is used 100% of the time for processing reclaimed plastic into a salable or usable commodity.
OAR 340-017-0030(2)(b) The alternative methods, equipment and costs for achieving the same objective	No alternative methods were considered.
OAR 340-017-0030(2)(c) Other relevant factors used to establish portion of the cost allocable to collection, transportation or processing of reclaimed plastic or the manufacture of reclaimed plastic products	No other factors were considered relevant.

Compliance

The facility is in compliance with Department rules and statutes and with EQC orders. There are no DEQ permits issued to this facility:

Reviewers: William R Bree, DEQ
Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Director's Recommendation:	**APPROVE**
Applicant	**Bowco Industries, Inc.**
Application No.	**5871**
Facility Cost	**$10,203**
Percentage Allocable	**100%**
Useful Life	**5 years**

Tax Credit Review Report

EQC 0302

Reclaimed Plastic Products
Final Certification
ORS 468.451 -- 468.491
OAR 340-017-0010 -- 340-017-0055

Applicant Identification

Organized As: **A C Corporation**
Business: **Plastics manufacturer**
Taxpayer ID: **93-1033851**

The applicant's address is:

5486 SE International Way
Milwaukie, OR 97222

Facility Identification

The certificate will identify the facility as:

One set of cores and slides for a duct terminator mold base

The applicant is the owner of the facility located at:

5486 SE International Way
Milwaukie, OR 97222

Technical Information

The facility is a set of cores and slides for an existing duct terminator mold base to be used to manufacture a reclaimed plastic product to the customer's specifications.

Eligibility

ORS 468.461 (1) Any person may apply to the Environmental Quality Commission (EQC) for certification of an investment made to allow the person to collect, transport or process reclaimed plastic, or to manufacture a reclaimed plastic product.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.461(6).

Preliminary Application Received	**11/15/2000**
Preliminary Approval Granted	**11/15/2000**
Date of Investment	**03/03/2001**
Final Application Received	**12/05/2001**

Facility Cost

Claimed Cost	$10,203
Eligible Cost	**$10,203**

The applicant provided invoices to substantiate the cost of the facility.

Facility Cost Allocable to Pollution Control

The following factors were used to determine that **100%** of the investment is allocable to the collection, transportation or processing of reclaimed plastic, or the manufacture of reclaimed plastic product.

Factor	Applied to This Facility
OAR 340-017-0030(2)(a) Extent used to convert reclaimed plastic into a salable or usable commodity	The equipment is used 100% of the time for processing reclaimed plastic into a salable or usable commodity.
OAR 340-017-0030(2)(b) The alternative methods, equipment and costs for achieving the same objective	No alternative methods were considered.
OAR 340-017-0030(2)(c) Other relevant factors used to establish portion of the cost allocable to collection, transportation or processing of reclaimed plastic or the manufacture of reclaimed plastic products	No other factors were considered relevant.

Compliance

The facility is in compliance with Department rules and statutes and with EQC orders. There are no DEQ permits issued to this facility:

Reviewers: William R Bree, DEQ
Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Director's Recommendation:	**APPROVE**
Applicant	**Bowco Industries, Inc.**
Application No.	**5872**
Facility Cost	**$7,633**
Percentage Allocable	**100%**
Useful Life	**5 years**

Tax Credit Review Report

EQC 0302

Reclaimed Plastic Products
Final Certification
ORS 468.451 -- 468.491
OAR 340-017-0010 -- 340-017-0055

Applicant Identification

Organized As: **A C Corporation**
Business: **Plastics manufacturer**
Taxpayer ID: **93-1033851**

The applicant's address is:

5486 SE International Way
Milwaukie, OR 97222

Facility Identification

The certificate will identify the facility as:

One Star Robot, model #TW-1500BMC, serial #T15BC-0037 with programming, TW-1500BMC W/STEC-311MC and end-of-arm tooling.

The applicant is the owner of the facility located at:

5486 SE International Way
Milwaukie, OR 97222

Technical Information

The facility is a Star Robot with software and end-of-arm tooling to automatically place internal components into a mold and remove reclaimed plastic parts after the plastic has been molded over the components.

Eligibility

ORS 468.461 (1) Any person may apply to the Environmental Quality Commission (EQC) for certification of an investment made to allow the person to collect, transport or process reclaimed plastic, or to manufacture a reclaimed plastic product.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.461(6).

Preliminary Application Received	**01/10/2001**
Preliminary approval granted	**01/10/2001**
Date of investment	**02/15/2001**
Final application received	**12/05/2001**

Facility Cost

Claimed Cost	$7,633
Eligible Cost	**$7,633**

The applicant provided invoices to substantiate the cost of the facility.

Facility Cost Allocable to Pollution Control

The following factors were used to determine that **100%** of the investment is allocable to the collection, transportation or processing of reclaimed plastic, or the manufacture of reclaimed plastic product.

Factor	Applied to This Facility
OAR 340-017-0030(2)(a) Extent used to convert reclaimed plastic into a salable or usable commodity	The equipment is used 100% of the time for processing reclaimed plastic into a salable or usable commodity.
OAR 340-017-0030(2)(b) The alternative methods, equipment and costs for achieving the same objective	No alternative methods were considered.
OAR 340-017-0030(2)(c) Other relevant factors used to establish portion of the cost allocable to collection, transportation or processing of reclaimed plastic or the manufacture of reclaimed plastic products	No other factors were considered relevant.

Considering these factors, the percentage allocable to pollution control is **100%.**

Compliance

The facility is in compliance with Department rules and statutes and with EQC orders. There are no DEQ permits issued to this facility:

Reviewers: William R Bree, DEQ
Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Director's Recommendation:	**APPROVE**
Applicant	**Bowco Industries, Inc.**
Application No.	**5897**
Facility Cost	**$26,340**
Percentage Allocable	**100%**
Useful Life	**5 years**

Tax Credit Review Report

EQC 0302

Reclaimed Plastic Products
Final Certification
ORS 468.451 -- 468.491
OAR 340-017-0010 -- 340-017-0055

Applicant Identification

Organized As: **a Corporation**
Business: **Plastics manufacturer**
Taxpayer ID: **93-1033851**

The applicant's address is:

5486 SE International Way
Milwaukie, OR 97222

Facility Identification

The certificate will identify the facility as:

One mold used to manufacture a 4" seal ring.

The applicant is the owner of the facility located at:

5486 SE International Way
Milwaukie, OR 97222

Technical Information

The facility is a mold for a reclaimed 4" seal ring used with a 4" duct terminator.

Eligibility

ORS 468.461 (1) Any person may apply to the Environmental Quality Commission (EQC) for certification of an investment made to allow the person to collect, transport or process reclaimed plastic, or to manufacture a reclaimed plastic product.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.461(6).

Preliminary Application Received	**08/30/2001**
Preliminary Approval Granted	**08/30/2001**
Date of Investment	**12/07/2001**
Final Application Received	**12/12/2001**

Facility Cost

Claimed Cost	$26,340
Eligible Cost	**$26,340**

The applicant provided invoices to substantiate the cost of the facility.

Facility Cost Allocable to Pollution Control

The following factors were used to determine that **100%** of the investment allocable to the collection, transportation or processing of reclaimed plastic, or the manufacture of reclaimed plastic product.

Factor	Applied to This Facility
OAR 340-017-0030(2)(a) Extent used to convert reclaimed plastic into a salable or usable commodity	The equipment is used 100% of the time for processing reclaimed plastic into a salable or usable commodity.
OAR 340-017-0030(2)(b) The alternative methods, equipment and costs for achieving the same objective	No alternative methods were considered.
OAR 340-017-0030(2)(c) Other relevant factors used to establish portion of the cost allocable to collection, transportation or processing of reclaimed plastic or the manufacture of reclaimed plastic products	No other factors were considered relevant.

Compliance

The facility is in compliance with Department rules and statutes and with EQC orders. There are no DEQ permits issued to this facility:

Reviewers: William R Bree, DEQ
Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Director's Recommendation:	**APPROVE**
Applicant	**Denton Plastics, Inc.**
Application No.	**5948**
Facility Cost	**$18,354**
Percentage Allocable	**100%**
Useful Life	**5 years**

Tax Credit Review Report

EQC 0302

Reclaimed Plastic Products
Final Certification
ORS 468.451 -- 468.491
OAR 340-017-0010 -- 340-017-0055

Applicant Identification

Organized As: **a Corporation**
Business: **Plastics recycling company**
Taxpayer ID: 93-0852298

The applicant's address is:

4427 NE 158th Avenue
Portland, OR 97230

Facility Identification

The certificate will identify the facility as:

One Toyota forklift, model 7FGU18, serial number 7fFGU8-62036

The applicant is the owner of the facility located at:

4427 NE 158th Avenue
Portland, OR 97230

Technical Information

This forklift truck is used to transport scrap plastic and reclaimed plastic feedstock as part of the plastic reclamation process.

Eligibility

ORS 468.461 (1) Any person may apply to the Environmental Quality Commission (EQC) for certification of an investment made to allow the person to collect, transport or process reclaimed plastic, or to manufacture a reclaimed plastic product.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.461(6).

Preliminary Application Received	**10/23/2001**
Preliminary approval granted	**10/23/2001**
Date of investment	**10/24/2001**
Final application received	**12/24/2001**

Facility Cost

Claimed Cost	$18,354
Eligible Cost	**$18,354**

The applicant provided invoices to substantiate the cost of the facility.

Facility Cost Allocable to Pollution Control

The following factors were used to determine that **100%** of the investment is allocable to the collection, transportation or processing of reclaimed plastic, or the manufacture of reclaimed plastic product.

Factor	Applied to This Facility
OAR 340-017-0030(2)(a) Extent used to convert reclaimed plastic into a salable or usable commodity	The equipment is used 100% of the time for processing reclaimed plastic into a salable or usable commodity.
OAR 340-017-0030(2)(b) The alternative methods, equipment and costs for achieving the same objective	No alternative methods were considered.
OAR 340-017-0030(2)(c) Other relevant factors used to establish portion of the cost allocable to collection, transportation or processing of reclaimed plastic or the manufacture of reclaimed plastic products	No other factors were considered relevant.

Compliance

The facility is in compliance with Department rules and statutes and with EQC orders. There are no DEQ permits issued to this facility:

Reviewers: William R Bree, DEQ
Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Director's Recommendation:	**APPROVE**
Applicant	**Denton Plastics, Inc.**
Application No.	**5949**
Facility Cost	**$26,312**
Percentage Allocable	**100%**
Useful Life	**5 years**

Tax Credit Review Report

EQC 0302

Reclaimed Plastic Products
Final Certification
ORS 468.451 -- 468.491
OAR 340-017-0010 -- 340-017-0055

Applicant Identification

Organized As: **a C Corporation**
Business: **Plastics recycling company**
Taxpayer ID: **93-0852298**

The applicant's address is:

4427 NE 158th Avenue
Portland, OR 97230

Facility Identification

The certificate will identify the facility as:

One Conair CE-1221 Grinder system, serial # RA-50.2732

The applicant is the owner of the facility located at:

4427 NE 158th Avenue
Portland, OR 97230

Technical Information

This grinder is used to reduce scrap plastic into small chips as part of a process to manufacture a reclaimed plastic feedstock that will be used by another company to manufacture a reclaimed plastic product.

Eligibility

ORS 468.461 (1) Any person may apply to the Environmental Quality Commission (EQC) for certification of an investment made to allow the person to collect, transport or process reclaimed plastic, or to manufacture a reclaimed plastic product.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.461(6).

Preliminary Application Received	**10/23/2001**
Preliminary Approval Granted	**10/23/2001**
Date of Investment	**10/29/2001**
Final Application Received	**12/24/2001**

Facility Cost

Claimed Cost	$26,312
Eligible Cost	**$26,312**

The applicant provided invoices to substantiate the cost of the facility.

Facility Cost Allocable to Pollution Control

The following factors were used to determine that **100%** of the investment is allocable to the collection, transportation or processing of reclaimed plastic, or the manufacture of reclaimed plastic product.

Factor	Applied to This Facility
OAR 340-017-0030(2)(a) Extent used to convert reclaimed plastic into a salable or usable commodity	The equipment is used 100% of the time for processing reclaimed plastic into a salable or useable commodity.
OAR 340-017-0030(2)(b) The alternative methods, equipment and costs for achieving the same objective	No alternative methods were considered.
OAR 340-017-0030(2)(c) Other relevant factors used to establish portion of the cost allocable to collection, transportation or processing of reclaimed plastic or the manufacture of reclaimed plastic products	No other factors were considered relevant.

Compliance

The facility is in compliance with Department rules and statutes and with EQC orders. There are no DEQ permits issued to this facility:

Reviewers: William R Bree, DEQ
Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Director's Recommendation:	**APPROVE**
Applicant	**Oregon Cherry Growers**
Application No.	**5950**
Facility Cost	**$5,514**
Percentage Allocable	**100%**
Useful Life	**5 years**

Tax Credit Review Report

EQC 0302

Reclaimed Plastic Products
Final Certification
ORS 468.451 -- 468.491
OAR 340-017-0010 -- 340-017-0055

Applicant Identification

Organized As: **A C Corporation**
Business: **Agricultural processing**
Taxpayer ID: **93-0877524**

The applicant's address is:

1520 Woodrow Street SE
Salem, OR 97303

Facility Identification

The certificate will identify the facility as:

One Orwak Baler, model 3100, serial # 47424

The applicant is the owner of the facility located at:

1520 Woodrow Street SE
Salem, OR 97303

Technical Information

The baler is used to package scrap plastic film prior to shipping it to a plastic recycling company.

Eligibility

ORS 468.461 (1) Any person may apply to the Environmental Quality Commission (EQC) for certification of an investment made to allow the person to collect, transport or process reclaimed plastic, or to manufacture a reclaimed plastic product.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.461(6).

Preliminary Application Received	**12/12/2001**
Preliminary Approval Granted	**12/12/2001**
Date of Investment	**12/13/2001**
Final Application Received	**12/26/2001**

Facility Cost

Claimed Cost	$5,514
Eligible Cost	**$5,514**

The applicant provided invoices to substantiate the cost of the facility.

Facility Cost Allocable to Pollution Control

The following factors were used to determine that **100%** of the investment is allocable to the collection, transportation or processing of reclaimed plastic, or the manufacture of reclaimed plastic product.

Factor	Applied to This Facility
OAR 340-017-0030(2)(a) Extent used to convert reclaimed plastic into a salable or usable commodity	The equipment is used 100% of the time for processing reclaimed plastic into a salable or usable commodity.
OAR 340-017-0030(2)(b) The alternative methods, equipment and costs for achieving the same objective	No alternative methods were considered.
OAR 340-017-0030(2)(c) Other relevant factors used to establish portion of the cost allocable to collection, transportation or processing of reclaimed plastic or the manufacture of reclaimed plastic products	No other factors were considered relevant.

Compliance

The facility is in compliance with Department of Environmental Quality (DEQ) rules and statutes and with EQC orders. There are no DEQ permits issued to this facility:

Reviewers: William R Bree, DEQ
Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Director's Recommendation:	**APPROVE**
Applicant	**Oregon Cherry Growers**
Application No.	**5951**
Facility Cost	**$5,594**
Percentage Allocable	**100%**
Useful Life	**5 years**

Tax Credit Review Report

EQC 0302

Reclaimed Plastic Products
Final Certification
ORS 468.451 -- 468.491
OAR 340-017-0010 -- 340-017-0055

Applicant Identification

Organized As **A C Corporation**
Business: **Agricultural processing**
Taxpayer ID: **93-0877524**

The applicant's address is:

First & Madison
The Dalles, OR 97058

Facility Identification

The certificate will identify the facility as:

One Orwak Baler, model 3100, serial # 48748

The applicant is the owner of the facility located at:

First & Madison
The Dalles, OR 97058

Technical Information

The baler is used to package scrap plastic film prior to shipping it to a plastic recycling company.

Eligibility

ORS 468.461 (1) Any person may apply to the Environmental Quality Commission (EQC) for certification of an investment made to allow the person to collect, transport or process reclaimed plastic, or to manufacture a reclaimed plastic product.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.461(6).

Preliminary Application Received	**12/12/2001**
Preliminary Approval Granted	**12/12/2001**
Date of Investment	**12/13/2001**
Final Application Received	**12/26/2001**

Facility Cost

Claimed Cost	$5,594
Eligible Cost	**$5,594**

The applicant provided invoices to substantiate the cost of the facility.

Facility Cost Allocable to Pollution Control

The following factors were used to determine that **100%** of the investment is allocable to the collection, transportation or processing of reclaimed plastic, or the manufacture of reclaimed plastic product.

Factor	Applied to This Facility
OAR 340-017-0030(2)(a) Extent used to convert reclaimed plastic into a salable or usable commodity	The equipment is used 100% of the time for processing reclaimed plastic into a salable or usable commodity.
OAR 340-017-0030(2)(b) The alternative methods, equipment and costs for achieving the same objective	No alternative methods were considered.
OAR 340-017-0030(2)(c) Other relevant factors used to establish portion of the cost allocable to collection, transportation or processing of reclaimed plastic or the manufacture of reclaimed plastic products	No other factors were considered relevant.

Compliance

The facility is in compliance with Department of Environmental Quality (DEQ) rules and statutes and with EQC orders. There are no DEQ permits issued to this facility:

Reviewers: William R Bree, DEQ
Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Director's Recommendation:	**APPROVE**
Applicant	**WinCo Foods Inc.**
Application No.	**5952**
Facility Cost	**$5,562**
Percentage Allocable	**100%**
Useful Life	**5 years**

Tax Credit Review Report

EQC 0302

Reclaimed Plastic Products
Final Certification
ORS 468.451 -- 468.491
OAR 340-017-0010 -- 340-017-0055

Applicant Identification

Organized As: **a Partnership**
Business: **Retail grocery store**
Taxpayer ID: **82-0440291**

The applicant's address is:

650 N Armstrong Place
Boise, ID 83704

Facility Identification

The certificate will identify the facility as:

One Orwak baler, serial # 47425.

The applicant is the owner of the facility located at:

1222 NE 102nd Avenue
Portland, OR

Technical Information

The Orwak baler is used to bale sheet plastic and plastic bags which are subsequently sent to a plastics recycling company.

Eligibility

ORS 468.461 (1) Any person may apply to the Environmental Quality Commission (EQC) for certification of an investment made to allow the person to collect, transport or process reclaimed plastic, or to manufacture a reclaimed plastic product.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.461(6).

Preliminary Application Received	**12/14/2001**
Preliminary Approval Granted	**12/14/2001**
Date of Investment	**12/24/2001**
Final Application Received	**12/24/2001**

Facility Cost

Claimed Cost	$5,562
Eligible Cost	**$5,562**

The applicant provided invoices to substantiate the cost of the facility.

Facility Cost Allocable to Pollution Control

The following factors were used to determine that **100%** of the investment is allocable to the collection, transportation or processing of reclaimed plastic, or the manufacture of reclaimed plastic product.

Factor	Applied to This Facility
OAR 340-017-0030(2)(a) Extent used to convert reclaimed plastic into a salable or usable commodity	The equipment is used 100% of the time for processing reclaimed plastic into a salable or usable commodity.
OAR 340-017-0030(2)(b) The alternative methods, equipment and costs for achieving the same objective	No alternative methods were considered.
OAR 340-017-0030(2)(c) Other relevant factors used to establish portion of the cost allocable to collection, transportation or processing of reclaimed plastic or the manufacture of reclaimed plastic products	No other factors were considered relevant.

Compliance

The facility is in compliance with Department rules and statutes and with EQC orders. There are no DEQ permits issued to this facility:

Reviewers: William R Bree, DEQ
Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Director's Recommendation:	**APPROVE**
Applicant	**Ernst Manufacturing, Inc.**
Application No.	**5954**
Facility Cost	**$171,000**
Percentage Allocable	**100%**
Useful Life	**5 years**

Tax Credit Review Report

EQC 0302

Reclaimed Plastic Products
Final Certification
ORS 468.451 -- 468.491
OAR 340-017-0010 -- 340-017-0055

Applicant Identification

Organized As: **a Corporation**
Business: **Plastic products manufacturing company**
Taxpayer ID: **93-0808508**

The applicant's address is:

37570 Ruben Lane, Suite B
Sandy, OR 97055

Facility Identification

The certificate will identify the facility as:

6 molds and 6 inserts used to manufacture a reclaimed plastic product

The applicant is the owner of the facility located at:

37570 Ruben Lane, Suite B
Sandy, OR 97055

Technical Information

The molds and inserts are used to manufacture a series of reclaimed plastic products used to display and hold hand tools.

Eligibility

ORS 468.461 (1) Any person may apply to the Environmental Quality Commission (EQC) for certification of an investment made to allow the person to collect, transport or process reclaimed plastic, or to manufacture a reclaimed plastic product.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.461(6).

Preliminary Application Received	**10/09/2000**
Preliminary Approval Granted	**10/11/2000**
Date of Investment	**03/21/2001**
Final Application Received	**12/27/2001**

Facility Cost

Claimed Cost	$171,000
Eligible Cost	**$171,000**

The applicant provided invoices to substantiate the cost of the facility.

Facility Cost Allocable to Pollution Control

The following factors were used to determine that **100%** of the investment is allocable to the collection, transportation or processing of reclaimed plastic, or the manufacture of reclaimed plastic product.

Factor	Applied to This Facility
OAR 340-017-0030(2)(a) Extent used to convert reclaimed plastic into a salable or usable commodity	The equipment is used 100% of the time for processing reclaimed plastic into a salable or usable commodity.
OAR 340-017-0030(2)(b) The alternative methods, equipment and costs for achieving the same objective	No alternative methods were considered.
OAR 340-017-0030(2)(c) Other relevant factors used to establish the portion of the cost allocable to collection, transportation or processing of reclaimed plastic or the manufacture of reclaimed plastic products	No other factors were considered relevant.

Compliance

The facility is in compliance with Department of Environmental Quality (DEQ) rules and statutes and with EQC orders. There are no DEQ permits issued to this facility.

Reviewers: William R Bree, DEQ
Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Director's Recommendation:	**APPROVE**
Applicant	**Costco Wholesale**
Application No.	**5955**
Facility Cost	**$4,995**
Percentage Allocable	**100%**
Useful Life	**5 years**

Tax Credit Review Report

EQC 0302

Reclaimed Plastic Products
Final Certification
ORS 468.451 -- 468.491
OAR 340-017-0010 -- 340-017-0055

Applicant Identification

Organized As **A C Corporation**
Business: **Membership-based wholesaler**
Taxpayer ID: **91-12232800301**

The applicant's address is:

13130 SE 84th Avenue
Clackamas, OR 97015

Facility Identification

The certificate will identify the facility as:

One Orwak Baler, model 3100, serial # 48751

The applicant is the owner of the facility located at:

13130 SE 84th Avenue
Clackamas, OR 97015

Technical Information

The baler is used to package scrap plastic film prior to shipping it to a plastic recycling company.

Eligibility

ORS 468.461 (1) Any person may apply to the Environmental Quality Commission (EQC) for certification of an investment made to allow the person to collect, transport or process reclaimed plastic, or to manufacture a reclaimed plastic product.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.461(6).

Preliminary Application Received	**08/28/2001**
Preliminary Approval Granted	**08/28/2001**
Date of Investment	**11/29/2001**
Final Application Received	**12/28/2001**

Facility Cost

Claimed Cost	$4,995
Eligible Cost	**$4,995**

The applicant provided invoices to substantiate the cost of the facility.

Facility Cost Allocable to Pollution Control

The following factors were used to determine that **100%** of the investment is allocable to the collection, transportation, or processing of reclaimed plastic, or the manufacture of reclaimed plastic product.

Factor	Applied to This Facility
OAR 340-017-0030(2)(a) Extent used to convert reclaimed plastic into a salable or usable commodity	The equipment is used 100% of the time for processing reclaimed plastic into a salable or usable commodity.
OAR 340-017-0030(2)(b) The alternative methods, equipment and costs for achieving the same objective	No alternative methods were considered.
OAR 340-017-0030(2)(c) Other relevant factors used to establish portion of the cost allocable to collection, transportation or processing of reclaimed plastic or the manufacture of reclaimed plastic products	No other factors were considered relevant.

Compliance

The facility is in compliance with Department of Environmental Quality (DEQ) rules and statutes and with EQC orders. There are no DEQ permits issued to this facility:

Reviewers: William R Bree, DEQ
Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Director's Recommendation:	**APPROVE**
Applicant	**Agri-Plas, Inc.**
Application No.	**5958**
Facility Cost	**$6,405**
Percentage Allocable	**100%**
Useful Life	**5 years**

Tax Credit Review Report

EQC 0302

Reclaimed Plastic Products
Final Certification
ORS 468.451 -- 468.491
OAR 340-017-0010 -- 340-017-0055

Applicant Identification

Organized As: **A C Corporation**
Business: **Plastics recycling company**
Taxpayer ID: **95-4543096**

The applicant's address is:

948 McNary Estates Drive N
Keizer, OR 97303

Facility Identification

The certificate will identify the facility as:

One pelletizing line

The applicant is the owner of the facility located at:

3615 Chemawa Road NE
Salem, OR 97303

Technical Information

The pelletizing line will be used to make reclaimed plastic pellets from scrap agricultural plastic baling twine and nursery containers. The reclaimed plastic pellets are subsequently sent to plastic product manufacturing companies.

Eligibility

ORS 468.461 (1) Any person may apply to the Environmental Quality Commission (EQC) for certification of an investment made to allow the person to collect, transport or process reclaimed plastic, or to manufacture a reclaimed plastic product.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.461(6).

Preliminary Application Received	**09/23/1999**
Preliminary Approval Granted	**09/23/1999**
Date of Investment	**08/15/2001**
Final Application Received	**12/31/2001**

Facility Cost

Total Cost	$81,405
Local government grant	-75,000
Claimed Cost	6,405
Eligible Cost	**$6,405**

The applicant provided invoices to substantiate the cost of the facility and the amount of the grant.

Facility Costs Allocable to Pollution Control

The following factors were used to determine that **100%** percentage of the investment is allocable to the collection, transportation or processing of reclaimed plastic, or the manufacture of reclaimed plastic product.

Factor	Applied to This Facility
OAR 340-017-0030(2)(a) Extent used to convert reclaimed plastic into a salable or usable commodity	The equipment is used 100% of the time for processing reclaimed plastic into a salable or usable commodity.
OAR 340-017-0030(2)(b) The alternative methods, equipment and costs for achieving the same objective	No alternative methods were considered.
OAR 340-017-0030(2)(c) Other relevant factors used to establish portion of the cost allocable to collection, transportation or processing of reclaimed plastic or the manufacture of reclaimed plastic products	No other factors were considered relevant.

Compliance

The facility is in compliance with Department rules and statutes and with EQC orders. There are no DEQ permits issued to this facility:

Reviewers: William R Bree, DEQ
Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Director's Recommendation:	**APPROVE**
Applicant	**Agri-Plas, Inc.**
Application No.	**5959**
Facility Cost	**$1,729**
Percentage Allocable	**100%**
Useful Life	**5 years**

Tax Credit Review Report

EQC 0302

Reclaimed Plastic Products
Final Certification
ORS 468.451 -- 468.491
OAR 340-017-0010 -- 340-017-0055

Applicant Identification

Organized As: **a C Corporation**
Business: **Plastics recycling company**
Taxpayer ID: **95-4543096**

The applicant's address is:

948 McNary Estates Drive N
Keizer, OR 97303

Facility Identification

The certificate will identify the facility as:

Electrical wiring and control panel for plastics granulator and aspirator.

The applicant is the owner of the facility located at:

3615 Chemawa Road NE
Salem, OR 97303

Technical Information

The claimed investment is part of a process that converts nursery containers into clean flakes that are sold to other companies that use them to manufacture reclaimed plastic products. The electrical wiring and control panel claimed in this application is part of the installation of a scrap plastics granulator and aspirator claimed in application number 5485 certified December 1, 2000. The electrical wiring and the control panel had not been billed at the time of the earlier application and were not included in application number 5485.

Eligibility

ORS 468.461(1) Any person may apply to the Environmental Quality Commission for certification of an investment made to allow the person to collect, transport or process reclaimed plastic, or to manufacture a reclaimed plastic product.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.461(6).

Preliminary Application Received	**09/23/1999**
Preliminary Approval Granted	**09/23/1999**
Date of Investment	**11/01/2000**
Final Application Received	**12/31/2001**

Facility Cost

Claimed Cost	$1,729
Eligible Cost	**$1,729**

The applicant provided invoices to substantiate the cost of the facility.

Facility Cost Allocable to Pollution Control

The following factors were used to determine that **100%** of the investment is allocable to the collection, transportation or processing of reclaimed plastic, or the manufacture of reclaimed plastic product.

Factor	Applied to This Facility
OAR 340-017-0030(2)(a) Extent used to convert reclaimed plastic into a salable or usable commodity	The equipment is used 100% of the time for processing reclaimed plastic into a salable or usable commodity.
OAR 340-017-0030(2)(b) The alternative methods, equipment and costs for achieving the same objective	No alternative methods were considered.
OAR 340-017-0030(2)(c) Other relevant factors used to establish portions of the cost allocable to collection, transportation or processing of reclaimed plastic or the manufacture of reclaimed plastic products	No other factors were considered relevant.

Compliance

The facility is in compliance with Department rules and statutes and with EQC orders. There are no DEQ permits issued to this facility:

Reviewers: William R Bree, DEQ
Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Director's Recommendation:	**APPROVE**
Applicant	**Agri-plas, Inc.**
Application No.	**5960**
Facility Cost	**$3,402**
Percentage Allocable	**100%**
Useful Life	**5 years**

Tax Credit Review Report

EQC 0302

Reclaimed Plastic Products
Final Certification
ORS 468.451 -- 468.491
OAR 340-017-0010 -- 340-017-0055

Applicant Identification

Organized As: **a C Corporation**
Business: **Plastics recycling company**
Taxpayer ID: **95-4543096**

The applicant's address is:

948 McNary Estates Drive N
Keizer, OR 97303

Facility Identification

The certificate will identify the facility as:

426 used onion bins

The applicant is the owner of the facility located at:

3615 Chemawa Rd. NE
Salem, OR 97303

Technical Information

The onion bins are used to collect agricultural plastic including scrap agricultural plastic baling twine and nursery containers. The scrap plastic is processed and subsequently sent to plastic product manufacturing companies.

Eligibility

ORS 468.461 (1) Any person may apply to the Environmental Quality Commission for certification of an investment made to allow the person to collect, transport or process reclaimed plastic, or to manufacture a reclaimed plastic product.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.461(6).

Preliminary Application Received	**09/23/1999**
Preliminary Approval Granted	**09/23/1999**
Date of Investment	**01/09/2001**
Final Application Received	**12/31/2001**

Facility Cost

Claimed Cost	$3,402
Eligible Cost	**$3,402**

The applicant provided invoices to substantiate the cost of the facility.

Facility Cost Allocable to Pollution Control

The following factors were used to determine that **100%** of the investment is allocable to the collection, transportation or processing of reclaimed plastic, or the manufacture of reclaimed plastic product.

Factor	Applied to This Facility
OAR 340-017-0030(2)(a) Extent used to convert reclaimed plastic into a salable or usable commodity	The equipment is used 100% of the time for processing reclaimed plastic into a salable or usable commodity.
OAR 340-017-0030(2)(b) The alternative methods, equipment and costs for achieving the same objective	No alternative methods were considered.
OAR 340-017-0030(2)(c) Other relevant factors used to establish portions of the cost allocable to collection, transportation or processing of reclaimed plastic or the manufacture of reclaimed plastic products	No other factors were considered relevant.

Compliance

The facility is in compliance with Department rules and statutes and with EQC orders. There are no DEQ permits issued to this facility:

Reviewers: William R Bree, DEQ
Maggie Vandehey, DEQ

State of Oregon
Department of
Environmental
Quality

Director's Recommendation:	**APPROVE**
Applicant	**Denton Plastics, Inc.**
Application No.	**5961**
Facility Cost	**$5,595**
Percentage Allocable	**100%**
Useful Life	**5 years**

Tax Credit Review Report

EQC 0302

Reclaimed Plastic Products
Final Certification
ORS 468.451 -- 468.491
OAR 340-017-0010 -- 340-017-0055

Applicant Identification

Organized As: **A C Corporation**
Business: **Plastics recycling company**
Taxpayer ID: **93-0852298**

The applicant's address is:

4427 NE 158th Avenue
Portland, OR 97230

Facility Identification

The certificate will identify the facility as:

One Landa cabinet wash system

The applicant is the owner of the facility located at:

4427 NE 158th Avenue
Portland, OR 97230

Technical Information

The washer is used to clean scrap plastic buckets prior to their being reground and melted into reclaimed plastic pellets.

Eligibility

ORS 468.461 (1) Any person may apply to the Environmental Quality Commission (EQC) for certification of an investment made to allow the person to collect, transport or process reclaimed plastic, or to manufacture a reclaimed plastic product.

Timeliness of Application

The application was submitted within the timing requirements of ORS 468.461(6).

Preliminary Application Received	**11/12/2001**
Preliminary Approval Granted	**11/13/2001**
Date of Investment	**11/14/2001**
Final Application Received	**12/31/2001**

Facility Cost

Claimed Cost	$5,595
Eligible Cost	**$5,595**

The applicant provided invoices to substantiate the cost of the facility.

Facility Cost Allocable to Pollution Control

The following factors were used to determine that **100%** of the investment is allocable to the collection, transportation or processing of reclaimed plastic, or the manufacture of reclaimed plastic product.

Factor	Applied to This Facility
OAR 340-017-0030(2)(a) Extent used to convert reclaimed plastic into a salable or usable commodity	The equipment is used 100% of the time for processing reclaimed plastic into a salable or usable commodity.
OAR 340-017-0030(2)(b) The alternative methods, equipment and costs for achieving the same objective	No alternative methods were considered.
OAR 340-017-0030(2)(c) Other relevant factors used to establish portion of the cost allocable to collection, transportation or processing of reclaimed plastic or the manufacture of reclaimed plastic products	No other factors were considered relevant.

Compliance

The facility is in compliance with Department of Environmental Quality (DEQ) rules and statutes and with EQC orders. There are no DEQ permits issued to this facility:

Reviewers: William R Bree, DEQ
Maggie Vandehey, DEQ

Attachment C

Department of Justice Memorandum to Environmental Quality Commission

HARDY MYERS
Attorney General

PETER D. SHEPHERD
Deputy Attorney General

DEPARTMENT OF JUSTICE
GENERAL COUNSEL DIVISION

MEMORANDUM

DATE: December 18, 2001

TO: Environmental Quality Commission

CC: Stephanie Hallock, Director
Maggie Vandehey, Management Services Division

FROM: Lynne Perry, Assistant Attorney General
Natural Resources Section

SUBJECT: Computation of Time for Purposes of Pollution Control Facility Tax Credit Applications

Introduction

The Environmental Quality Commission (Commission) has questioned whether an application for a pollution control facility tax credit was timely filed under ORS 468.165(6), which provides as follows:

> "The application shall be submitted after construction of the facility is substantially completed and the facility is placed in service and ***within two years after construction of the facility is substantially completed.*** Failure to file a timely application shall make the facility ineligible for tax credit certification. An application shall not be considered filed until it is complete and ready for processing. The commission may grant an extension of time to file an application for circumstances beyond the control of the applicant that would make a timely filing unreasonable. * * *." (Emphasis Added.)

The Department of Environmental Quality (DEQ) has recommended approval of a tax credit application received by on August 27, 2001. The application indicates that the relevant construction work was completed on August 27, 1999. The question is whether, the application was submitted to DEQ "within two years" of August 27, 1999, as required by ORS 468.155(6).

Short Answer

The available authority indicates that the application should be considered timely. The tax credit statutes are silent as to how time should be computed. In fact, there is no guidance on this question in any of DEQ's statutory authority or rules. One must look beyond DEQ's authorities for guidance on this issue. The general rule for computing time and the provisions for

computing time found in Oregon statute and rules are uniform in their treatment of this issue. They reflect that the triggering date (August 27, 1999) is not included in the calculation. Thus, the application should be considered timely.

Discussion

Suffice it to say that the Commission is not alone:

> "Whether the day of the happening of a certain event should be included as a basis from which to compute time has been a vexed question for many centuries * * *." *Grant v. Paddock*, 30 Or 312, 318, 47 P 712 (1897).

The general rule is that the first day (in this case August 27, 1999) is excluded from the computation and the last day is included.

> "In the absence of any statute regulating the matter, the rule seems to be that the day upon which the particular event happened should be excluded from the computation of time, when by doing so courts are enabled to construe the provisions of a statute or the stipulations of a contract in such a manner as to prevent penalties and forfeitures, and to uphold bona fide transactions." *Grant,* 30 Or at 319 (citations omitted).

See also, 86 CJS Time § 13.[1] Although the word "within" is a word of limitation, the same rule is generally applied when an act must be performed "within" a certain period:

> "If something is to be done 'within' a specified time 'from' or "after' a given date or a certain day, the generally recognized rule is that the period of time is computed by excluding the given date or the certain day and including the last day of the period, and similarly, if something is to be done 'within' a specified time 'from' or 'after' a preceding event, or the day an act was done, the day of the preceding event or on which the act was done must be excluded from the count." 86 CJS Time § 18 (footnotes omitted).

At least one Oregon statute and a number of administrative rules describe how time is to be computed for various purposes. Although none are directly applicable to the pollution tax credit statute in question, they are instructive in that each follows the general rule stated above. For example, ORS 174.120 controls the computation of time under the civil and criminal procedure statutes:

> "Except as otherwise provided in [Oregon Rule of Civil Procedure 10],[2] the time within which an act is to be done, as provided in the civil and criminal procedure statutes, is

[1] "In computing a designated number of days or a period of time, for the purpose of ascertaining the first or the last day on which an act is to be done, it is customary to exclude one of the terminal days and to include the other, and the general rule is to exclude the first terminal day and to include the last."

[2] As is relevant here, the rule found in ORCP 10 is the same.

> computed by excluding the first day and including the last unless the last day falls upon any legal holiday or on Saturday, in which case the last day is also excluded."

See also, Stuptek v. Wyle Laboratories, 327 Or 433, 963 P2d 678 (1998); *Beardsley v. Hill*, 219 Or 440, 348 P2d 58 (1959).

Similarly, the various administrative rules for computing the time in which specified acts are to completed or accomplished follow the same general rule. *See e.g.* OAR 115-010-0012 and 115-045-0002 (Employment Relations Board); OAR 150 150-309-100(1)-(A) (Department of Revenue); OAR 333-670-0250 (Department of Human Services); OAR 438-085-0131 (Department of Consumer and Business Services); OAR 660-018-0010 and 660-025-0220 (Department of Land Conservation and Development); OAR 661-010-0075 (Land Use Board of Appeals); OAR 735-020-0050 (Department of Transportation).

Application of this rule to the facts before the Commission would render the tax credit application in question timely. The date on which construction was substantially completed (August 27, 1999) would not be included. In effect, "year one" would start on August 28, 1999 and run through August 27, 2000 and "year two" would start on August 28, 2000 and run through August 27, 2001.

Given the general rule, the uniformity of the Oregon authority, and the dearth of support for a contrary rule for purposes of computing the time for submitting tax credit applications, we believe that the more supportable position would be to find that the application in question was timely filed, if all other prerequisites in ORS 468.165(6) have been satisfied (e.g. the application was complete and ready for processing when filed on August 27, 2001).

GENA5087

State of Oregon

Department of Environmental Quality Memorandum

To: Environmental Quality Commission **Date:** March 1, 2002

From: Mikell O'Mealy

Subject: Supplemental March 7-8 EQC Meeting Materials

Enclosed is an addendum to your materials for Item D, containing the results of the public comment period on the request for waiver to the Total Dissolved Gas standard on the Columbia River. Your Item D staff report promised this addendum once the public comment period closed to provide you time to consider public input on the request before your March 7-8 meeting. Russell Harding plans to summarize public input during the March 8 meeting presentation as well. If you have any questions, please feel free to call Russell at 503-229-5284.

Also enclosed are two memos from DEQ staff responding to questions raised at the January 24-25 EQC meeting. The first responds to concerns from Michael Jones regarding DEQ's work on the St. John's Landfill, which he gave during public forum on Friday. The second provides background information on how Oregon regulates radon, in response to Mark's suggestion that we consider parallels and process lessons we might draw from radon regulation in developing a permanent solution to handling methane at unpermitted landfills. Alan Kiphut, DEQ Clean-up Manager, is indeed looking at how the state handles radon in working on a fix for methane issues. Please feel free to contact Alan at 503-229-6834 if you are interested in discussing this more at this time.

As always, please contact me with any questions or needs (503-229-5301). See you soon.

State of Oregon
Department of Environmental Quality Memorandum

Date: February 28, 2002

To: Environmental Quality Commission

From: Stephanie Hallock, Director S Hallock

Subject: Agenda Item D, Action Item: Request from U.S. Army Corps of Engineers and U.S. Fish and Wildlife Service for a Waiver to the Total Dissolved Gas Water Quality Standard on the Columbia River, March 8, 2002 EQC Meeting

Public Input

In its report of February 14, 2002, the Department committed to summarize the public input received in relation to the above two petitions.

On January 25, 2002, the Department released a public notice advising the public of the receipt of the two petitions. A public hearing was scheduled for February 25, 2002 at 7:00 p.m. in Portland. The deadline for receiving written comments was 5:00 p.m. on February 27, 2002.

No testimony was offered at the public hearing. Two written comments were received. The following summarizes the written comments:

Dr. Wes Ebel, Fish and Wildlife Consultant

Recent data indicate that there may be no benefit to spring Chinook from the current spill program. Data do indicate benefits to summer migrants (fall Chinook). Endangered Snake River Sockeye may also benefit. Maintaining 120 percent saturation in the tailrace and 115 percent in the next downstream forebay may be impossible because of involuntary spill. Snowpack in the Basin is above average, and unless spill is carefully controlled, the entire drainage could exceed 120 percent. The difficulty may be in keeping spill levels sufficiently low to prevent mortalities from gas bubble disease. I hope the plan calls for monitoring, and a provision to reduce spill if ten percent or more fish show signs of gas bubble disease. Weighing losses from gas bubble disease against passage benefits is difficult. The politically correct thing to do is spill no matter what.

Donald Sampson, Columbia River InterTribal Fish Commission

Granting this variance is essential for the performance of the requirements of the 2000 biological opinion relating to operation of the Columbia River federal hydropower system. Granting the variance for the Spring Creek

National Fish Hatchery release is important to protect tule fall Chinook that are important components of international, Tribal and sports fisheries. Both juvenile and adult survival will be enhanced through granting this variance.

Implementing spill at hydropower projects will protect salmonids more than forcing them through turbines or screened bypass systems. Juvenile mortality through turbines has been estimated as being between four and 19 percent, with adult mortalities estimated at between 22 and 51 percent. Fish in the bypass system are often subject to high water temperatures. Additionally, smolts that proceed through the bypass system have been shown to have a lower smolt-to-adult return ration that smolts passed by spill. Temperatures in the bypass system will be a concern with less than average predicted basin runoff. Salmon are at greater risk from high water temperatures than from elevated total dissolved gas. The Commission and Department should focus on improving in-river survival. The Clean Water Act does not envisage removing beneficial uses from their habitat by transporting them around dams. CRITFC strongly recommends that the Corps be required to seek a variance for the temperature water quality criteria.

This variance has been approved since 1994 and all physical and biological monitoring requirements have been met. The same monitoring is in place for 2002.

The value of hatchery versus wild salmon is difficult to determine. The State has an obligation to the Tribes, under which there is no differentiation as between wild and hatchery produced salmon. A failure to approve the variance for the Spring Creek National Fish Hatchery release will result in a significant loss of juvenile salmonids. Denial of the variance in 2000 would have resulted in the loss of 1,654 tule adults to the treaty and non-treaty harvests. A similar loss will occur if this variance is not granted. An agreement has been reached to begin outplanting Spring Creek National Fish Hatchery tule juveniles into under-seeded tributaries in the Bonneville pool, and lower Columbia River. Tule production has been reduced in recent years due to low adult returns to the Columbia River.

Every additional salmon adult available for Tribal harvest is critical from a cultural viewpoint. Tribal members are dependent on these fish for ceremonial and subsistence purposes. Tule fall Chinook are a very important source of winter protein for Tribal members. Much of the salmon has been removed from the Tribes and distributed to others in the form of flood control, navigation, irrigation and municipal development. As a result Tribal

people have experienced elevated poverty and death rates relative to the general population.

Both the Independent Scientific Advisory Board and the National Marine Fisheries Service's 2000 biological opinion found that 120 percent saturation of total dissolved gas was conservative and not harmful to salmon in the river. Additional research shows that gas bubble disease incidence was very low at in-river saturations of 125 percent. In terms of delayed mortality from exposure to elevated total dissolved gas levels, estimates at Bonneville Dam for fish that proceeded concurrently via turbines, bypass systems, and spill were 18, 20, and 4 percent respectively. Further, survival improves with increased spill even at levels up to 125 percent saturation. Spawner-to-spawner analyses show that survival improved in years with greater spill quantities.

Approved:

Section:

Division:

Report Prepared By: Russell Harding
Phone: (503) 229-5284

State of Oregon

Department of Environmental Quality Memorandum

To: Environmental Quality Commission **Date:** February 11, 2002

From: Sally Puent, Solid Waste Manager, Northwest Region

Subject: Response to citizen concerns about St. John's Landfill

At the January 25, 2002, EQC meeting, Mr. Mikey Jones raised a number of concerns pertaining to the St. John's Landfill. Specifically, Mr. Jones identified these issues:

- DEQ said it would do a risk assessment in 1993; the risk assessment was not released until 1997
- DEQ then acknowledged that the risk assessment was inadequate, and would require another assessment
- DEQ also committed to issue a stipulation and final order, which has not been issued
- Mr. Jones needs these documents in working with the associations managing Smith and Bybee Lakes, and plans to use them elsewhere.
- Mr. Jones asked the Commission to require DEQ to conduct the risk assessment

Why Hasn't DEQ Followed-Up on its Commitments on St. John's Landfill?

The risk assessment process for St. Johns Landfill has been delayed, as Mr. Jones stated. Similar delays have occurred at other solid waste landfills with known releases to the environment because the use of DEQ Solid Waste Program authority has had to be reevaluated. Solid Waste Program authority does not extend to all hazardous substances present in landfills, and does not include adequate guidance or standards for ecological risk assessment.

The Department has been working on including Environmental Cleanup Program requirements in risk assessments and in the methods used to characterize releases both on and off site from solid waste landfills. Recognizing that some ongoing landfill projects would be delayed, DEQ has been developing an effective cross-program approach to address releases from solid waste landfills.

Development of this integrated cleanup approach has taken about one year to complete. The new approach is expected to be finalized in March.

What's Next for St. John's Landfill?

With acceptance of the new risk assessment approach imminent, DEQ met with Metro two weeks ago and provided a schedule for issuance of the Solid Waste Closure Permit and the Consent Agreement. DEQ committed to issuing these documents by no later than October 31, 2002, following the required public notice and chance to comment period.

The Consent Agreement will require Metro to develop a work plan and schedule to fully characterize the on and off-site releases at St. John's Landfill, and to complete the risk assessment.

The Department welcomes Mr. Jones's participation in the upcoming public involvement process for St. John's Landfill and will provide copies of the Solid Waste Closure Permit and Consent Agreement to him as soon as they are issued. DEQ will also provide Mr. Jones a copy of the work plan and schedule for completion of the site characterization and risk assessment.

State of Oregon
Department of Environmental Quality Memorandum

To: Commissioners **Date:** 25 February 2002

From: Environmental Cleanup Program
Marilyn Daniel, Acting Manager

Subject: Radon

Radon is a naturally-occurring radioactive gas found in soil and rock throughout the world. Some geologic formations have higher concentrations than others. Radon can be found in construction materials and foundations of virtually every type of building (residential, commercial, industrial, etc.) where it can accumulate in high concentrations. Radon is also produced by the decay of radioactive wastes. Buried radioactive materials may be the source of radon gas exposures in indoor air in geologic areas where one would otherwise not expect to find significant concentrations of radon.

As radon decays, it releases radioactive particles that can become trapped in the lungs. Long-term exposure to high levels of radon may increase a person's risk of developing lung cancer.

In Oregon, the State Radon and Indoor Air Quality Coordinator is the Oregon Health Division (OHD) . As such, OHD has the primary responsibility for regulating and providing information about the characteristics of naturally-occurring radon and radioactive materials, potential exposure issues, and testing methods. OHD also licenses companies and persons that use radioactive sources for various beneficial purposes (such as x-ray machines). The EPA is also a good source for information regarding radon, and has developed radon concentration guidelines.

While OHD regulates radioactive materials in Oregon, the DEQ Cleanup Program and EPA sometimes provide oversight of investigations and cleanups of radon-contaminated areas. This contamination is typically the result of improper waste disposal or handling practices, resulting in unacceptable radon exposures to workers or residents. In such cases, radon is treated like other hazardous substances. A risk-based approach is used to determine appropriate cleanup action.

For example, the potential for unacceptable radon exposure was evaluated during the environmental investigation at the Wah-Chang Superfund site in Albany, because radon is the by-product of radioactive wastes from Wah-Chang's industrial processes. Investigators discovered that radioactive materials had been placed on agricultural land away from the main Wah-Chang plant. Radon testing was performed, radon was detected, and OHD was consulted to help develop options for eliminating exposure hazards. As a result, measures have been put in place to make sure that workers and potential future residents are protected. These measures include options for excavation of the radioactive materials and requirements for using radon-resistant building methods.

DEQ sometimes receives calls from the general public about potential exposures from naturally-occurring radon. In these cases, DEQ typically refers the caller to OHD or EPA (see contact information below), to local environmental consulting firms who conduct radon testing, or lets them know that do-it-yourself radon detection test kits are available for purchase through the National Safety Council and at home-building supply stores.

OREGON
Dept. of Human Resources
Health Division
800 NE Oregon Street, Suite 260
Portland, OR 97232
(503) 731-4014 x664
Radon Contact: Ray D. Paris
http://www.ohd.hr.state.or.us/rps/radon/radon.htm

EPA
Mail Code (OAQ-107)
1200 Sixth Avenue
Seattle, WA 98101-9797
Phone: (206) 553-7299
Fax: (206) 553-0110
Radon Contact: Jerrold Leitch
http://www.epa.gov/iaq/radon/rnlinks.html

State of Oregon

Department of Environmental Quality Memorandum

Date: February 14, 2002

To: Environmental Quality Commission

From: Stephanie Hallock, Director S. Hallock

Subject: Agenda Item D, Action Item: Request from U.S. Army Corps of Engineers and U.S. Fish and Wildlife Service for a Waiver to the Total Dissolved Gas Water Quality Standard on the Columbia River, March 8, 2002 EQC Meeting

Proposed Action

The U.S. Army Corps of Engineers (Corps) has petitioned the Commission for a variance to the State's total dissolved gas water quality standard to enable water to be spilled at all four Lower Columbia River dams (McNary, John Day, The Dalles and Bonneville) to assist outmigrating threatened and endangered salmonid smolts. The petition requests a variance from the standard of 110 percent of saturation relative to atmospheric pressure, between April 1, 2002 and August 31, 2002. For this period, the Corps is seeking a total dissolved gas standard of 115 percent saturation as measured in the forebay of each of the dams, and 120 percent saturation as measured in the tailrace.

The U.S. Fish and Wildlife Service has petitioned the Commission for a variance to the State's total dissolved gas water quality standard. This variance will enable water to be spilled at Bonneville Dam to assist outmigrating fall chinook from the Spring Creek National Fish Hatchery. The petition requests a variance from the standard of 110 percent of saturation relative to atmospheric pressure, for a ten-day period in March 2002. For this period, the Service is seeking a total dissolved gas standard of 120 percent saturation as measured in the tailrace of Bonneville Dam, and 115 percent as measured at the fixed monitoring station at Camas/Washougal.

These petitions are evaluated in Attachment A.

Key Issues

Summary of 2001 Spill Season

The 2000-2001 winter was very dry and was characterized by low natural streamflow. The unregulated runoff from precipitation and snowpack between January and July, 2001 was 58.2 million acre feet of water as measured at The Dalles Dam (55 percent of the 1961-1990 average). Due to low streamflows and the California/ Northwest Power emergency, the spring

spill program was limited to a quantity of water that would have generated 600-megawatt months of electricity. Spill was similarly constrained in the summer months by low stream flows, the power emergency and ensuring power system reliability.

Salmonid Migration in 2001

Very large numbers of returning adult salmonids of all species characterized the 2001 year. As in the past hatchery fish formed the overwhelming majority of returns. The high returns were generally attributed to improved ocean conditions. While it is very difficult to attribute the proportion of returning fish to the spill program, it is clear that the spill program has not resulted in the widespread mortalities predicted by some a few years ago.

Lower Columbia River TDG TMDL

On February 18, 2002 the Department, in conjunction with the Washington Department of Ecology, will release a draft TMDL for total dissolved gas for the Lower Columbia River (from the confluence of the Salmon River to the Pacific Ocean). The TMDL sets load allocations for each of the four lower river dams. It also includes an implementation plan that balances total dissolved gas improvements with fish passage. Divided into short-term and long-term actions, the implementation plan specifies actions that will lead to achievement of water quality standards.

Future Variances

The Corps has been exploring with the Department the possibility of future variances to this water quality standard extending beyond one season. The greater degree of certainty provided by the allocations and implementation actions in the above TMDL provides a framework within which it may be possible to consider a multi-year variance, with regular reports on water quality improvement. The Department and Corps intend to return to the Commission later this year with a proposal.

Public Input

The Department issued a notice to the public of receipt of these applications on January 25, 2002. Public comment will be solicited until February 27, 2002, and a public hearing is scheduled for February 25, 2002. The Department will summarize public input immediately after the comment period closes and mail this information to the Commission prior to the March 7-8, 2002 meeting. The Department will also review the results of public input during the March 8 meeting.

EQC Action Alternatives

The EQC has two alternatives for action:

1. Approve the requests with or without conditions. In order to take this action, the Commission must make the four affirmative findings detailed in Attachment B;

2. Decline to approve the petitions. In this case, the Commission could decide that alternative methods of fish migration are available, such as barge transportation, or releasing additional fish from the hatchery. See Attachment A, p. 3 for a description and analysis of these alternatives.

Department Recommendation

The Department recommends that the Commission grant these petitions by adopting the findings, and imposing the conditions contained in the Draft Orders (Attachments D and E).

Attachments

A. Summary of Applications and Supporting Documentation
B. Oregon Administrative Rule Relating to the Total Dissolved Gas Water Quality Standard
C. Map of Columbia River Showing Locations of Federal Hydropower Projects
D. Draft Order Approving the Corps of Engineer's Request for a Variance
E. Draft Order Approving the Fish and Wildlife Service's Request for a Variance

Available Upon Request

U.S. Army Corps of Engineer's Request (103 pp.)
U.S. Fish and Wildlife Service's Request (30 pp.)
Public Review Draft of Lower Columbia River TDG TMDL (101 pp.)

Approved:

Section:

Division:

Report Prepared By: Russell Harding
Phone: (503) 229-5284

ATTACHMENT A

Summary of Applications and Supporting Information

U.S. Fish and Wildlife Service

Although the Spring Creek Hatchery fish are not endangered species, they play an important role in helping protect Endangered Species Act listed fish. The 7.5 million juveniles due to be released make up a large proportion of the fish to be caught under the United States/Canada treaty allocations. Additionally, these fish are important for the near-shore fisheries off the coasts of Oregon and Washington, and in the Columbia River, most notably the Buoy Ten fishery.

In the absence of these hatchery fish, a disproportionate number of endangered species can be expected to be taken. The Canadian ocean fisheries are managed under harvest quota, time and area regulations. Because both Spring Creek hatchery fish and endangered Snake River fish intermingle off the west coast of Vancouver Island, greater numbers of hatchery fish in the United States/Canada Treaty area will result in fewer endangered Snake River fish being caught. Similarly, endangered Snake River fish are at greater risk if there is any reduction in Spring Creek Hatchery production. Historically, Spring Creek Hatchery fish contributed nine percent of the catch off the West Coast of Vancouver Island, and 27 percent of the catch off the Washington and northern Oregon coasts annually. Spring Creek Hatchery fish have contributed as much as 65,600 fish to tribal fisheries and 41,500 fish annually to non-tribal fisheries in the Columbia River in the past. In 1999, fall chinook produced at the hatchery contributed about 26,500 fish to commercial and sport fisheries in the Columbia River. The treaty Indian harvest was about 21,900 fish, and the in-river sport catch was about 4,400 fish. A further 200 fish were taken incidentally in prosecution of the non-Indian commercial sturgeon fishery.

In recent years both federal and state governments have reduced hatchery production for the Columbia River due to Congressional reductions in Mitchell Act funding. These reductions have forced the closure of some hatcheries, with the result that the Spring Creek Hatchery is the sole producer of tule fall chinook remaining open above Bonneville Dam. These closures make the Spring Creek contribution even more important.

Spill for the Spring Creek Hatchery release was first requested in 1995 because of the low fish guidance efficiency (the number of fish guided away from turbine intakes) at the Bonneville Dam second powerhouse.

Justification for the Variance

A fish passage efficiency of 80 percent is targeted for the Spring Creek Hatchery release. This is the same as the fish passage efficiency targeted by the National Marine Fisheries Service for endangered salmonids. According to the National Marine Fisheries Service's calculations, for a river flow of 200 thousand cubic feet per second, spills of 45, 80 and

150 thousand cubic feet per second would result in fish passage efficiencies of 54, 63 and 72 percent respectively. According to the U.S. Army Corps of Engineers, spills of 45, 80 and 150 thousand cubic feet per second would result in total dissolved gas levels of 110, 115, and 120 percent saturation respectively. These calculations are presented in Table 1.

Table 1: Estimated Bonneville Spillway Flows, Total Dissolved Gas Levels, Fish Passage Efficiency, and Increase in Fish Survival.

Total River Flow (kcfs)	200	200	200	200	200	200
Spill (kcfs)	0	45	80	100	120	150
Tailrace Gas Level (percent)	100	110	114	116	117	120
Fish Passage Efficiency (percent)	33	48	59	63	66	71
Increase in fish survival Compared to no-spill	0	133,500	229,500	258,750	288,750	333,000

During previous spill events, both physical and biological monitoring have occurred. Physical monitoring has been required to ensure compliance with the water quality standard variances. Biological monitoring has been required to demonstrate that the higher total dissolved gas levels have not adversely impacted fish. Biological monitoring occurring since 1995 has shown extremely low levels (one to two percent at most) of fish showing any signs of gas bubble disease. Incidences of gas bubble disease can be expected to be low due to the limited exposure time for these fish. They are exposed to elevated total dissolved gas levels for a short duration, and only one episode.

Sub-lethal effects, such as difficulty with the fresh-water/salt-water transition or increased susceptibility to predation from northern pike-minnow have not been documented. But, again, due to the short duration and single episode, significant sub-lethal effects are not expected.

Monitoring Results for 2001 Spill

Spring Creek National Fish Hatchery released 5.3 million tule fall chinook salmon on March 8, 2001 at 0800 hours. Spilling began at Bonneville Dam at 1800 hours on March 10, 2001. The spill operation was stopped on March 13, 2001.

Biological monitoring occurred on March 12 and 13, 2001. On March 12, 2001, and on March 13, 2001, 104 and 110 juvenile and resident fish were collected and analyzed respectively for signs of gas bubble trauma. Three fish (two chinook and one pike minnow) showed signs of gas bubble disease. All three had one bubble in one fin.

Physical monitoring was conducted, and at no time did total dissolved gas levels exceed 120 percent of saturation at Skamania/Warrendale or 115 percent of saturation at Camas/Washougal. Both measurements are calculated as 12-hour averages.

Counts of fish passing Power House 2 at Bonneville Dam did not commence until March 13, 2001, the last day of spill. On that day, 59,454 fish passed. Between March 14 and March 20, 2001, an additional 69,892 fish were counted passing the Power House 2.

Alternatives and Evaluation

The U.S. Fish and Wildlife Service has considered alternatives to spill at Bonneville Dam. These include transporting smolts below Bonneville Dam, and releasing more fish.

Transporting Juvenile Fish

The alternative of transporting juvenile fish from the hatchery and releasing them downstream from Bonneville Dam has been considered. Potentially loading fish in barges and releasing them below Bonneville Dam could result in increased survival. Certainly, it would alleviate the effects of turbines, elevated total dissolved gas and predation. However, this has been evaluated, and a very high percentage of adult fish strayed to other hatcheries. Also, adult return rates to the Spring Creek Hatchery were significantly lower from the barged group. The goal for returns to the Spring Creek hatchery is 7,000 fish. This number is required to provide enough fish for spawning. Straying of fish to other streams or facilities may lead to the Spring Creek Hatchery falling short of this target.

The Spring Creek Hatchery has been in operation sufficiently long for its fish to have developed into a unique group. The U.S. Fish and Wildlife Service, along with state and tribal fisheries managers are trying to maintain the genetic integrity of this group. Supplementing the Spring Creek Hatchery with fish from other hatcheries (either of Spring Creek origin, or not) runs the risk of diluting the unique characteristics of these fish.

Releasing More Fish

Based on the notion that there are going to be mortalities at Bonneville Dam if this variance is not approved, the argument has been advanced that the U.S. Fish and Wildlife Service should simply release more fish. In this way, despite increased mortality, the required number of fish could be assured.

Due to the capacity of the hatchery, and hatchery operation, this is not a possibility. The Spring Creek Hatchery makes three releases per year, in March, April and May. Under this schedule, not all fish are released in March. Those that remain behind grow to take over the space vacated by the March release. Similarly, only a portion of the fish is released in April, and the remaining fish grow to occupy the vacated space. This latter group is released in May. This schedule fully utilizes the physical capacity of the hatchery, as well as its water supply and waste treatment facilities. This schedule has been followed to reduce the risk from low returns from any one release. Fish released in April and May are able to pass Bonneville Dam under the auspices of the National Marine Fisheries Service's (NMFS) total dissolved gas variance that will be considered separately by the Commission.

Competition Between Spring Creek Hatchery Fish and Endangered Snake River Salmon

Interactions between wild fish and hatchery fish have been blamed for thinning the genetic diversity of wild fish, and competing for food and habitat. Spring Creek Hatchery fish are expected to pose little competitive risk to wild Snake River salmon. The main reason for this is the difference in migration timing. Because passage to the sea for Spring Creek Hatchery fish is short, the timing of the release assures that hatchery fish either completely miss or only slightly overlap with Snake River salmon. Spring Creek Hatchery fish are physiologically ready to migrate and move out of rearing areas in the Columbia River quickly. It is possible that hatchery and wild fish compete with one another for food in the ocean, although the size of the marine environment, coupled with the fact that there are billions of juveniles migrating in the ocean minimize the impact of this interaction.

U.S. Army Corps of Engineers

In late 1991 and early 1992, the National Marine Fisheries Service (NMFS) determined that three species of salmon from the Snake River Basin were endangered or threatened under the Endangered Species Act (ESA). The listed species were sockeye salmon, spring/summer chinook, and fall chinook. On March 2, 1995, an ESA Section 7 Biological Opinion on the operation of the federal Columbia River Power System was issued. The Biological Opinion established a set of reasonable and prudent alternatives (RPA's) with the objective of improving the operation and configuration of the federal power system to meet the "no jeopardy" requirement of the ESA, and to fulfill the United States' commitment to uphold Indian treaty rights.

On May 14, 1998, NMFS issued a Supplemental Biological Opinion. The Supplemental Biological Opinion was developed in part to address the needs of the newly listed threatened Snake River and Lower Columbia River steelhead, and endangered Upper Columbia River steelhead which were listed in August 1997, and March 1998 respectively.

On December 21, 2000, NMFS released a new Biological Opinion relating to the federal hydropower system. This Biological Opinion superceded all prior opinions and supplemental opinions. RPA #54 of the December 2000 Biological Opinion calls for spilling water to facilitate passage of juvenile salmonids outmigrating in the Snake and Columbia rivers. Spilling water has been part of the operation of the federal hydropower system since 1995.

There are four methods by which downstream migrating salmonids can pass dams. These passage methods are via the turbines, transportation by barge, through the screened fish by-pass system, and over the spillway. Each of these passage routes has a level of mortality associated with it. The National Marine Fisheries Service's biological opinion significantly changed the metric for fish passage. Rather than an eighty percent fish passage efficiency (80 percent of fish passing dams other than via turbines), the 2000

biological opinion substituted a survival performance measure. These will be assessed in 2005 and 2008. The performance measures are detailed in Table 2.

Table 2: Biological Performance Measures from the National Marine Fisheries Service's 2000 Biological Opinion

ESU	Adult Survival Rate		Juvenile Survival Rate		
	FCRPS System	Per FCRPS Project[1]	FCRPS Inriver Only		FCRPS Combined[2] (Transport + Inriver + Differential Mortality of Transported Fish)
			System	Per Project[1]	
Chinook Salmon					
SR spring/summer	83.5	98.1	49.6	91.6	57.6
SR fall	74.0	96.3	14.3	78.4	12.7
UCR spring	92.2	98.1	66.4	90.3	66.4
UWR	N/A	N/A	N/A	N/A	N/A
LCR	98.1	98.1	90.7	90.7	90.7
Steelhead					
SR	80.3	97.3	51.6	92.1	50.8
UCR	89.3	97.3	67.7	90.7	67.7
MCR	89.3	97.3	67.7	90.7	67.7
UWR	N/A	N/A	N/A	N/A	N/A
LCR	97.3	97.3	90.8	90.8	90.8
CR chum salmon	N/A	N/A	N/A	N/A	N/A
SR sockeye salmon	88.7	98.5	N/A	N/A	N/A

Due to the dry conditions with associated low stream flows and curtailment of the fish passage spill program in 2001, progress on the performance standards is in a deficit. Additional efforts will need to be made over the next three years to make up for this.

2001 Spill Season

As noted the 2001 winter and spring were unusually dry, resulting in an unregulated runoff total of 58.2 million acre feet of water as measured at The Dalles Dam. This represented 55 percent of the average runoff from the 1961-1990. In addition, the California and Northwest energy crisis conspird to curtail the spill program in 2001. Table 3 includes the number of hours of spill and percentage of time spent spilling relative to the migration season (estimated at between 4,032 and 4560 hours)

Table 3: Spill Time and Percentage in 2001

Project	Spill Season	Spill (hours)	Spill (percent)
McNary	Apr 1 – Sep 15	142	3.5
John Day	Apr 1 – Sep 15	274	6.8
The Dalles	Apr 1 – Sep 15	1,643	40.7
Bonneville	Mar 10 – Sep 15	1,746	38.3

Due to the low water year, and limited spill, exceedances of the 2001 variance limits were limited to McNary and Bonneville. The forebay monitor on the Oregon side of the river is subject to two influences that result in elevated levels of total dissolved gas. Firstly, it is the first downstream monitor after the inflow of the Snake River, and therefore it measures the contribution both from the Snake River and the mid-Columbia River. Secondly, and more significantly, the forebay on the Oregon side of the river is particularly susceptible to heating due to its shallow depth. Total dissolved gas concentrations increase with increasing water temperature. The Corps began studying the use of mixers in this area to try and limit localized heating. Exceedances were measured on six days.

A similar problem occurs at the Camas/Washougal gauge below Bonneville Dam. Not only is it susceptible to fluctuations in barometric pressure, and localized elevated water temperatures, but aqauatic plants contribute dissolved oxygen as a part of their diurnal respiration. This, too, contributes to elevated total dissolved gas concentrations. Exceedances were measured on two days.

Smolt Monitoring

A report on the biological monitoring of smolts will be presented by the National Marine Fisheries Service at the Commission's March 2002 meeting.

Total Dissolved Gas Abatement

The Corps began a comprehensive Dissolved Gas Abatement Study (DGAS) in 1994. The study was completed in 2001. Incidentally, this study formed the technical basis of the Lower Columbia River Total Dissolved Gas TMDL. In the course of undertaking the study, a number of structural and operational improvements were identified. Rather than awaiting the completion of the study, the Corps implemented these on a fast-track basis. Of particular note is the installation of flow deflectors (flip lips) at Ice Harbor and John Day Dams. A number of further modifications have been incorporated into the National Marine Fisheries Service's 2000 biological opinion, and into the TDG TMDL.

ATTACHMENT B

Oregon Administrative Rule, OAR 340-41-205, 445, 485 and 525 (2)(n)

(A) The concentration of total dissolved gas relative to atmospheric pressure at the point of sample collection shall not exceed 110 percent of saturation, except when stream flow exceeds the ten-year, seven-day average flood. However, for hatchery receiving waters and waters of less than two feet in depth, the concentration of total dissolved gas relative to atmospheric pressure at the point of sample collection shall not exceed 105 percent of saturation;

(B) The Commission may modify the total dissolved gas criteria in the Columbia River for the purpose of allowing increased spill for salmonid migration. The Commission must find that:

(i) Failure to act would result in greater harm to salmonid stock survival through in-river migration than would occur by increased spill;

(ii) The modified total dissolved gas criteria associated with the increased spill provides a reasonable balance of the risk of impairment due to elevated total dissolved gas to both resident biological communities and other migrating fish and to migrating adult and juvenile salmonids when compared to other options for in-river migration of salmon;

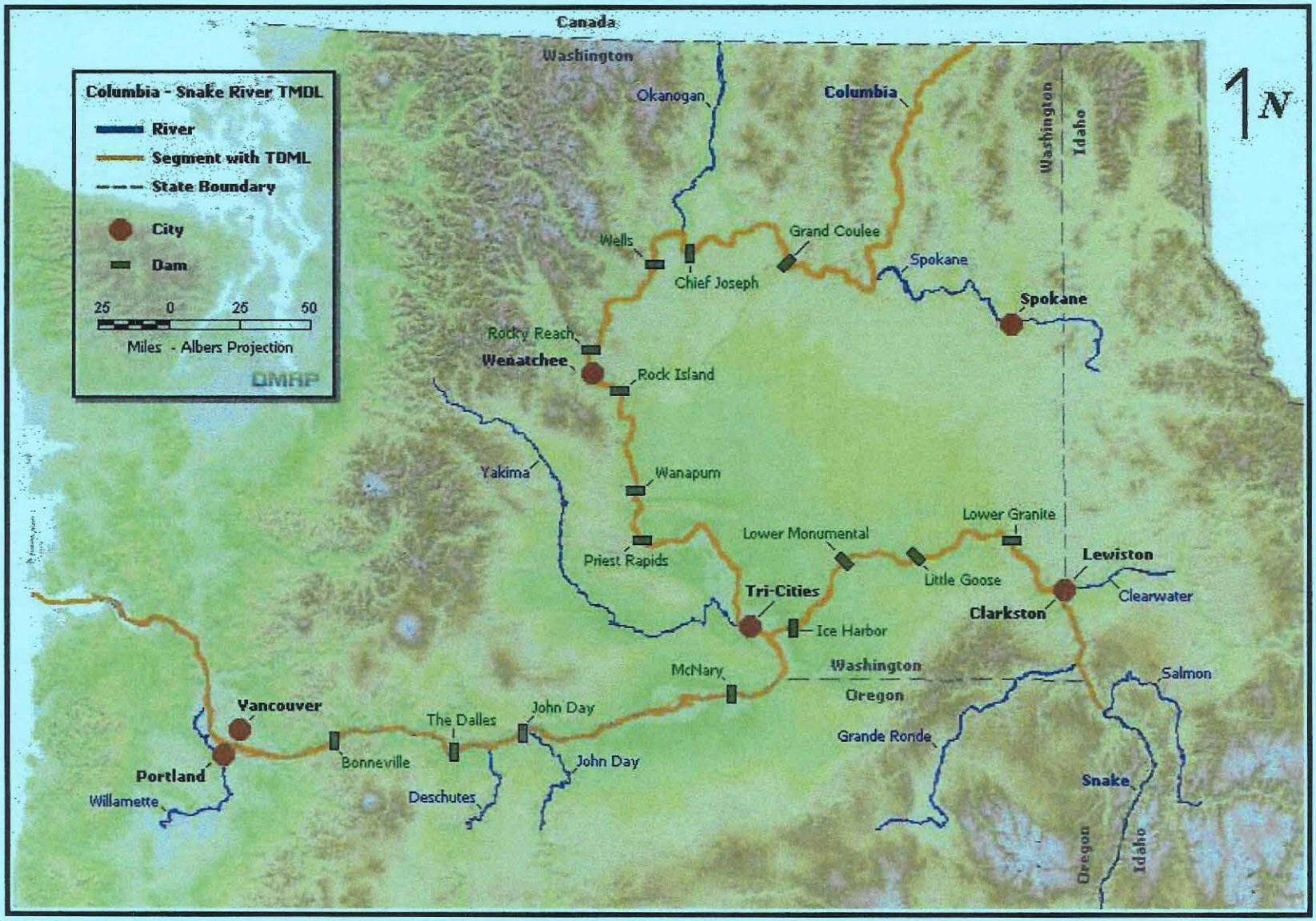
(iii) Adequate data will exist to determine compliance with the standards; and

(iv) Biological monitoring is occurring to document that the migratory salmonid and resident biological communities are being protected.

(C) The Commission will give public notice and notify all known interested parties and will make provision for opportunity to be heard and comment on the evidence presented by others, except that the Director may modify the total dissolved gas criteria for emergencies for a period not exceeding 48 hours;

(D) The Commission may, at its discretion, consider alternative modes of migration.

Columbia Basin Map



ATTACHMENT C

ATTACHMENT D

Draft Order Approving the U.S Army Corps of Engineer's Request

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION

In the matter of the U.S. Army Corps of Engineer's request to spill water to assist out-migrating threatened and endangered salmon smolts	(	ORDER

WHEREAS the Department of Environmental Quality received a request from the U.S. Army Corps of Engineers dated December 31, 2001, to adjust the Total Dissolved Gas Standard as necessary to spill water over McNary, John Day, The Dalles and Bonneville Dams on the Lower Columbia River to assist out-migrating threatened and endangered salmon smolts, for the period from April 1, 2002 to August 31, 2002; and

WHEREAS the public was notified of the request on January 25, 2002, and given the opportunity to provide testimony at 7:00 p.m. on February 25, 2002 and the opportunity to provide written comments until 5:00 p.m. on February 27, 2002; and

WHEREAS the Environmental Quality Commission met on March 8, 2002 and considered the request, justification and public comment.

THEREFORE the Environmental Quality Commission orders as follows:

1. Acting under OAR 340-41-205, 445, 485 and 525(2)(n), the Commission finds that:

   (i) failure to act will result in more salmonid passage via hydroelectric dam turbines. Estimated mortalities from fish passing through turbines is between 10 and 15 percent. Fish passing over spillways as a result of spill experience two to three percent mortality;

   (ii) the balance of risk of impairment to migrating salmonids, resident fish, and other aquatic life due to elevated dissolved gas levels needs to be balanced against migrating juvenile salmonid mortality from turbine passage. Resident fish and aquatic invertebrates in the Columbia River downstream of Bonneville Dam were monitored by NMFS for signs of gas bubble disease in 1993, 1994, 1995, 1996, 1997 and 1998. There was a low incidence of gas bubble disease (less than one percent) in resident fish examined in 1993 and 1995 while in 1994, 1997 and 1998 none of the fish observed had signs of

gas bubble disease. There were no signs of gas bubble disease observed in the aquatic invertebrates examined. Signs of gas bubble disease were prevalent in 1996 but this was a high flow year with large volumes of involuntary spill and total dissolved gas levels above 115 percent in the forebays and 120 percent in the tail races of dams. There is a low incidence of gas bubble disease in migrating juvenile and adult salmonids when the total dissolved gas levels are at or below 115 percent in the dam forebays and 120 percent in the tailraces. The low incidence of gas bubble disease observed has been regarded as a low risk for mortality from gas bubble disease. Total dissolved gas levels of between 130 to 140 percent from involuntary spill, resulted in an increased incidence of gas bubble disease and is regarded as an increased risk of mortality from gas bubble disease. Given the past monitoring of gas bubble disease, the levels requested in this petition seem to be a reasonable balance between increased survival due to reduced turbine mortality and the risk of mortality from gas bubble disease;

(iii) The Corps has submitted a physical monitoring plan. Physical monitoring will be conducted at Camas/Washougal, and the Bonneville Dam forebay and in the forebay and tailraces of McNary, John Day, and The Dalles Dams. Hourly data will be available on the Corp's Internet World Wide Web pages. Implementation of the physical monitoring plan will ensure that data will exist to determine compliance with the standards for the voluntary spill program; and

(iv) The Corps has submitted a biological monitoring plan. Juvenile salmonids will be collected at Bonneville and McNary Dams and examined for signs of gas bubble disease on non-paired fins, eyes, and lateral lines.

2. The Environmental Quality Commission approves a modification to the Total Dissolved Gas standard for spill over McNary, John Day, The Dalles and Bonneville Dams on the Lower Columbia River, subject to the following conditions:

(i) a revised total dissolved gas standard for the Columbia River for the period from midnight on April 1, 2002 to midnight on August 31, 2002;

(ii) a total dissolved gas standard for the Columbia River of a daily (12 highest hours) average of 115 percent as measured in the forebays of McNary, John Day, The Dalles, and Bonneville Dams and at the Camas/Washougal monitoring stations;

(iii) a cap on total dissolved gas for the Columbia River during the spill program of 120 percent measured in the tailraces of McNary, John Day, The Dalles, and Bonneville Dams' monitoring stations, based on the highest 12 highest hourly measurements per calendar day; and

(iv) a cap on total dissolved gas for the Columbia River during the spill program of 125 percent, based on the highest two hours during the 12 highest hourly measurements per calendar day during these times;

(v) a requirment that if 15 percent of the juvenile fish examined show signs of gas bubble disease in their non-paired fins where more than 25 percent of the surface area of the fin is occluded by gas bubbles, the Director will terminate the variance; and

(vi) a requirement that the Corps incorporate the following conditions into its program:

1. The Corps must provide written notice to the Department within 24 hours of any violations of the conditions in the variance as it relates to voluntary spill. Such notice shall include actions proposed to reduce total dissolved gas levels or the reason(s) for no action;

2. The Corps shall provide a report of the spill program for 2002. The report should be completed by December 31, 2002 and supply information on the levels of total dissolved gas, the fish monitored and incidence and severity of gas bubble disease; and

3. Any request for this operation in 2003 must be received by the Department no later than December 31, 2002.

Dated: _____ ON BEHALF OF THE COMMISSION

_____
Director

ATTACHMENT E

Draft Order Approving U.S. Fish and Wildlife Service's Request

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION

In the matter of the U.S. Fish and Wildlife Service's request to spill water to assist out-migrating Spring Creek Hatchery salmon smolts	((((	ORDER

WHEREAS the Department of Environmental Quality received a request from the U.S. Fish and Wildlife Service dated November 30, 2001, to adjust the Total Dissolved Gas Standard as necessary to spill over Bonneville Dam on the Columbia River to assist out-migrating Spring Creek Hatchery tule fall Chinook smolts, for a ten-day period in March 2001;

WHEREAS the public was notified of the request on January 25, 2002, and given the opportunity to provide testimony at 7:00 p.m. on February 25, 2002, and the opportunity to provide written comments until 5:00 p.m. on February 27, 2002; and

WHEREAS the Environmental Quality Commission met on March 8, 2002, and considered the request, justification and public comment.

THEREFORE the Environmental Quality Commission orders as follows:

1. Acting under OAR 340-41-205(2)(n)(B), the Commission finds:

   (i) failure to act will result in more salmonid passage via hydroelectric dam turbines. Estimated mortalities from fish passing through turbines is between 11 and 15 percent. Fish passing over spillways as a result of spill experience two to three percent mortality;

   (ii) the balance of risk of impairment to migrating salmonids, resident fish, and other aquatic life due to elevated dissolved gas levels needs to be balanced against migrating juvenile salmonid mortality from turbine passage. Resident fish and aquatic invertebrates in the Columbia River downstream of Bonneville Dam have been monitored for signs of gas bubble disease since 1993. A total of 214 fish were examined in 2001. Of these 1.4 percent (three fish) showed signs of gas bubble disease. Both fish exhibited signs of the lowest rank. No signs were observed in aquatic macroinvertebrates. Low incidences, as reported above, were detected in migrating juveniles and returning adults when total dissolved gas levels were within

variance limits. Higher levels of total dissolved gas saturation resulting from involuntary spill have resulted in increased incidence of gas bubble disease detected. Given data from past monitoring, at the levels requested, there appears to be a reasonable balance between increased survival due to avoidance of turbine and bypass system mortalities;

(iii) the U.S. Fish and Wildlife Service has submitted a physical monitoring plan. The U.S. Geological Survey will conduct physical monitoring at the Bonneville Dam forebay, and at Camas/Washougal. Hourly data will be posted electronically on the U.S. Army Corps of Engineers' Internet World Wide Web pages. Implementation of the physical monitoring plan will ensure that data will exist to determine compliance with the standards for the voluntary spill program; and

(iv) the U.S. Fish and Wildlife Service has submitted a biological monitoring plan. Juvenile salmonids and resident fish will be collected with a beach seine downstream from Bonneville Dam and examined for signs of gas bubble disease on non-paired fins, eyes and lateral lines. Based on evidence from previous years, few signs of gas bubble disease are expected. The sampling will, therefore be confined to two days during the ten-day spill period. No examinations of gill lamellae will occur this year due to the variability of results and increased risk to fish to due handling for this examination.

2. The Environmental Quality Commission approves a modification to the Total Dissolved Gas standard for spill over Bonneville Dam subject to the following conditions:

(i) a revised total dissolved gas standard for Bonneville Dam on the Columbia River for a ten-day period in March 2002;

(ii) a total dissolved gas standard for Bonneville Dam of a daily (12 highest hours) average of 115 percent as measured at the Camas/Washougal monitoring station;

(iii) a further modification of the total dissolved gas standard at Bonneville Dam to allow for a daily (12 highest hours) average of 120 percent as measured at tailrace monitors below the dam;

(iv) a cap on total dissolved gas for Bonneville Dam during the spill program of 125 percent, based on the highest two hours during the 12 highest hourly measurements per calendar day;

(v) if *either* 15 percent of the fish examined show signs of gas bubble disease in their non-paired fins, *or* five percent of the fish examined show signs of gas bubble trauma in their non-paired fins where more than 25 percent of the surface area of the fin is occluded by gas bubbles, whichever is less, the Director will halt the spill program; and

(vi) the U.S. Fish and Wildlife Service to incorporate the following conditions into its program:

a) written notice must be furnished to the Department within 24 hours of a violation of the conditions of this variance as it relates to voluntary spill. Such notice will include an explanation of the reasons for the violation, actions taken to resolve the situation, or if no action is taken, the reasons for no action;

b) provision of a written report of the 2002 spill program for the Spring Creek National Fish Hatchery release. Such report is to be received by the Department no later than September 30, 2002; and

c) any application for a variance for 2003 is to be furnished to the Department in conjunction with the written report prescribed above.

Dated: _____ ON BEHALF OF THE COMMISSION

_____
Director

State of Oregon

Department of Environmental Quality Memorandum

Date: February 17, 2002

To: Environmental Quality Commission

From: Stephanie Hallock, Director

Subject: Agenda Item D, Rule Adoption: ACDP Permitting Program Fee Increase
March 8, 2002 EQC Meeting

Department Recommendation

The Department recommends the Commission: adopt the proposed increase in ACDP permit fees and related rule changes presented in Attachment A, as a revision to the State Implementation Plan (SIP); and amend the SIP to incorporate changes in General ACDP rules OAR 340-216-0060 Sections (1) through (4), which the Commission adopted in August 2001.

Need for Rulemaking

This proposed fee increase is needed to fund the Department's Air Contaminant Discharge Permitting (ACDP) Program, which permits and assures compliance for more than 1,100 stationary air pollution sources in Oregon. The Department is proposing a 30 percent overall increase in ACDP Program revenue as authorized by the 2001 Legislature. The fee increase will partially offset reductions in state General Fund, and pay for increased program costs due to salary adjustments and inflation.

The proposed rules are also needed to revise the Oregon State Implementation Plan (SIP) to include the ACDP fee increase as well as the General ACDP rules that were adopted in August 2001.

Effect of Rule

This proposed rulemaking builds on the Air Quality Division's fee structure, which was adopted in May 2001 as part of a permit streamlining effort. In that rulemaking, the number of fee categories was reduced from over 75 (based on type of industry) to 6 (based on type of permit). While the total ACDP Program revenue generated by the new fee table did not change, fees for individual permittees increased or decreased depending on the industry category and the type of permit needed. The goal of this effort was to produce a fee table that is simple to administer and is based on the cost to issue and ensure compliance for each permit type. However, a side effect of reducing the number of fee categories was that many larger businesses saw fee reductions while many smaller businesses saw fee increases.

This rulemaking is designed to generate a 30 percent increase in the ACDP fee revenue, while providing relief to small businesses. To accomplish this, the

Department is proposing to allow additional types of small businesses to qualify for permit categories that have lower fees, and to apply a lower percent increase to the fees for permit categories used by most small businesses. To generate the 30 percent increase in revenue, higher percent increases are proposed for the types of permits used mainly by larger businesses. Even so, many larger businesses will be subject to modest fee increases – or even fee reductions in some cases – when compared to the fee table in effect before May 2001.

A new, "Simple-low" fee category is proposed to reduce the current fees assessed to sources that had "Minimal ACDP" permits in the former fee system. The proposal also changes permitting criteria to allow approximately 90 sources to qualify for a lower cost permit and exempt approximately 30 small sources from permitting altogether.

The fee for General ACDPs, which are mainly used by smaller businesses, will increase by only 20 percent. The new Simple-low fee category is proposed as a $400 per year decrease from the existing Simple ACDP fee of $2000. This is offset by a proposed increase of 60 percent for Simple and Standard ACDPs. The fee for the Basic ACDP will increase by $200 per year because, with the new criteria, more complex sources will use Basic permits.

Again, the net effect of these changes will be to generate a 30 percent overall increase in revenue while providing relief for smaller businesses. The proposed fees for each fee category are provided in the table below.

The proposed rules also amend the permit issuance procedures for Standard ACDP permit issuance and modifications. This is a non-substantive change to clarify the public notice requirements for Standard ACDP permittees that increase emissions. The proposed change amends OAR 340-216-0066(4), as provided in Attachment A.

Proposed ACDP Fees

ACDP Permit Type[1]	Current Annual Fees	Proposed Fee Increase	Proposed Annual Fees
Basic ACDP	$100	$200	$300
General ACDPs			
Fee Class One	$500	$100	$600
Fee Class Two	$900	$180	$1,080
Fee Class Three	$1,300	$260	$1,560
Simple Low ACDP	Does Not Exist	($400)[2]	$1,600

Simple ACDP	$2,000	$1,200	$3,200
Standard ACDP	$4,000	$2,400	$6,400

[1] Basic ACDPs are required for small sources such as autobody repair, small rock crushers, and coffee roasters. General and Simple fee ACDPs are required for sources such as larger rock crushers, chemical manufacturing facilities, and larger boiler operations. Simple and Standard ACDPs are required the sources such as steel works, sewage treatment facilities, and large wood products sources that produce plywood, particleboard, and paper.

[2] The Simple-Low ACDP fee is a new proposed fee category. The table above shows the Simple-Low fee as a $400 decrease from the existing Simple ACDP fee of $2,000.

Commission Authority

The Commission has authority to adopt the proposed rules under ORS468.065, and amend the SIP under ORS468A.035.

Stakeholder Involvement

The basis for the increase is the fee table adopted in May 2001. During the outreach for that rulemaking, the Department discussed the need for a fee increase with permittees, source representatives, and other interested parties in six locations across the state. In Fall 2001, during the period when permittees elected their new permit categories, the Department had further discussion with permittees about their concerns over the existing fee table. The Department has also engaged in numerous exchanges with source representatives as part of the Department's overall budget deliberation process during the 2001 Legislative session.

Public Comment

The public comment period for this proposal was from November 16 through December 26, 2001. Hearings were held in Portland, Salem, Pendleton, Medford, and Coos Bay. Before each hearing the Department offered a one-hour workshop on the fee proposal. Nine written comments and one oral comment were submitted to the Department. The comments and the Department's response are provided in Attachment E, and are summarized below under "Key Issues". Based on comments received, the Department made one substantive revision to the proposed rules. This change shortens the time required to meet one of the criteria for the Simple-Low fee ACDP [see Attachment A, OAR 340-216-0064(3)(a)(B)].

Key Issues

Most of the commentors representing relatively small sources were concerned that the fee increase was too high. This proposal, however, was designed to reduce the impact of the increase on smaller sources (see discussion in "Effect of Rule").

One commentor noted that the proposed fee increase shifts the fee burden to Standard and Simple sources. The Department disagrees. As described above, the adoption of the current fee table in May 2001 had the effect of shifting the fee burden from larger sources to smaller sources. By reducing the number of fee categories, sources that were in the highest fee categories saw fee reductions while sources that were in the lowest fee categories saw fee increases. By adjusting the criteria to qualify for lower cost permit categories, creating a Simple-low fee category, and applying a lower percent increase to General Permits, this proposal is designed to reduce the burden on smaller sources. The Department believes that the net effect is a fairer distribution of the fee burden among all permit categories, based on permit complexity and staff resources needed to administer the permits.

One commentor recommended that the new Simple-low fee category be available to all sources with low emissions, and that the timeframe for a source to qualify for a Simple-low fee should be shortened. The Department disagrees with expanding the industry categories that may qualify for Simple-low fee permits for two reasons. First, the listed categories are made up of less complex sources that cost less to permit and inspect. Second, allowing more sources to qualify for the Simple-low fee would require an even larger fee increase for Simple-high and Standard permits. However, the Department agrees that the timeframe to qualify for a Simple-low fee should be shorter, and has revised the proposal to include this change [see Attachment A, OAR 340-216-0064(3)(a)(B)].

Next Steps

The Department will send a supplemental invoice to existing ACDP sources for the fee increase in April 2002 for the 2002 calendar year. A number of sources are expected to request permit amendments to take advantage of the proposed new criteria to qualify for Basic and Simple-low permits. The Department will use existing procedures for invoicing and for making permit category adjustments.

This proposal will be filed with the Secretary of State, and submitted to EPA as a SIP amendment as soon as possible after adoption by the Commission. The Rule Implementation Plan is available upon request for more information.

Attachments

A. Proposed Rule Revisions
B. Relationship to Federal Requirements
C. Fiscal and Economic Impact Statement
D. Presiding Officer's Report on Public Hearings
E. Public Input and Department's Response
F. Land Use Evaluation Statement
G. August 10, 2001 General ACDP Rule Amendments

Available Upon Request

1. Legal Notice of Hearing
2. Cover Memorandum from Public Notice
3. Written Comment Received
4. Rule Implementation Plan

Approved:

Section: _____

Division: _____

Report Prepared by: Scott Manzano
Phone: (503) 229-6821

Attachment A

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal
for
Air Contaminant Discharge Permit Fee Increase

DIVISION 216
AIR CONTAMINANT DISCHARGE PERMITS

340-216-0025
Types of Permits

(1) **Construction ACDP**:
  (a) A Construction ACDP may be used for approval of Type 3 changes specified in OAR 340-210-0220 at a source subject to the ACDP permit requirements in this division.
  (b) A Construction ACDP is required for Type 3 changes specified in OAR 340-210-0225 at sources subject to the Oregon Title V Operating Permit requirements.

(2) **General ACDP**. A General ACDP is for a category of sources for which individual permits are unnecessary in order to protect the environment. An owner or operator of a source may be assigned to a General ACDP if the Department has issued a General ACDP for the source category:
  (a) The source meets the qualifications specified in the General ACDP;
  (b) The Department determines that the source has not had ongoing, reoccurring, or serious compliance problems; and
  (c) The Department determines that a General ACDP would appropriately regulate the source.

(3) **Short Term Activity ACDP**. A Short Term Activity ACDP is a letter permit that authorizes the activity and includes any conditions placed upon the method or methods of operation of the activity. The Department may issue a Short Term Activity ACDP for unexpected or emergency activities, operations, or emissions.

(4) **Basic ACDP**. A Basic ACDP is a ~~letter~~ permit that authorizes the regulated source to operate in conformance with the rules contained in OAR 340 Divisions 200 to 268.
  (a) Owners and operators of sources and activities listed in Table 1, Part A of OAR 340-216-0020 must at a minimum ~~to~~ obtain a Basic ACDP.
  (b) Any owner or operator of a source required to obtain a Basic ACDP may obtain either a Simple or Standard ACDP.

(5) **Simple ACDP**. A Simple ACDP is a permit that contains:
  (a) All relevant applicable requirements for source operation, including general ACDP conditions for incorporating generally applicable requirements;
  (b) Generic PSELs for all pollutants emitted at more than the deminimis level in accordance with OAR 340 division 222;
  (c) Testing, monitoring, recordkeeping, and reporting requirements sufficient to determine compliance with the PSEL and other emission limits and standards, as necessary; and
  (d) A permit duration not to exceed 5 years.

(6) **Standard ACDP**:
  (a) A Standard ACDP is a permit that contains:
    (A) All applicable requirements, including general ACDP conditions for incorporating generally applicable requirements;

(B) Source specific PSELs or Generic PSELs, whichever are applicable, as specified in OAR 340 division 222;

(C) Testing, monitoring, recordkeeping, and reporting requirements sufficient to determine compliance with the PSEL and other emission limits and standards, as necessary; and

(D) A permit duration not to exceed 5 years.

(b) All owners and operators of sources and activities listed in Table 1, Part C of OAR 340-216-0020 must obtain a Standard ACDP.

(c) Owners or operators of sources and activities listed in Table 1, Part B of OAR 340-216-0020 which do not qualify for a General ACDP or Simple ACDP must obtain a Standard ACDP.

(d) Any owner or operator of a source not required to obtain a Standard ACDP may obtain a Standard ACDP.

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-211-0040.]

Stat. Auth.: ORS 468 & ORS 468A

Stats. Implemented: ORS 468.020 & ORS 468A.025

Hist.: DEQ 47, f. 8-31-72, ef. 9-15-72; DEQ 63, f. 12-20-73, ef. 1-11-74; DEQ 107, f. & ef. 1-6-76; Renumbered from 340-020-0033; DEQ 125, f. & ef. 12-16-76; DEQ 20-1979, f. & ef. 6-29-79; DEQ 23-1980, f. & ef. 9-26-80; DEQ 13-1981, f. 5-6-81, ef. 7-1-81; DEQ 11-1983, f. & ef. 5-31-83; DEQ 3-1986, f. & ef. 2-12-86; DEQ 12-1987, f. & ef. 6-15-87; DEQ 27-1991, f. & cert. ef. 11-29-91; DEQ 4-1993, f. & cert. ef. 3-10-93; DEQ 12-1993, f. & cert. ef. 9-24-93; Renumbered from 340-020-0155; DEQ 19-1993, f. & cert. ef. 11-4-93; DEQ 22-1994, f. & cert. ef. 10-4-94; DEQ 22-1995, f. & cert. ef. 10-6-95; DEQ 19-1996, f. & cert. ef. 9-24-96; DEQ 22-1996, f. & cert. ef. 10-22-96; DEQ14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-028-1720; DEQ 6-2001, f. 6-18-01, cert. ef. 7-1-01

340-216-0060

General Air Contaminant Discharge Permits

(1) Applicability.

(a) The Commission may issue a General ACDP under the following circumstances:

(A) There are several sources that involve the same or substantially similar types of operations;

(B) All requirements applicable to the sources can be contained in a General ACDP;

(C) The emission limitations, monitoring, recordkeeping, reporting and other enforceable conditions are the same for all sources covered by the General ACDP; and

(D) The pollutants emitted are of the same type for all covered sources.

(b) Permit content. Each General ACDP must include the following:

(A) All relevant requirements;

(B) Generic PSELs for all pollutants emitted at more than the deminimis level in accordance with OAR 340, division 222;

(C) Testing, monitoring, recordkeeping, and reporting requirements necessary to ensure compliance with the PSEL and other applicable emissions limits and standards, and;

(D) A permit duration not to exceed 10 years.

(c) Permit issuance procedures: A General ACDP requires public notice and opportunity for comment in accordance with ORS 183.325 to 183.410. All General ACDPs are on file and available for review at the Department's headquarters. ~~The Commission chair signs a General ACDP.~~

(2) Source assignment:

(a) Application requirements. Any person requesting that a source be assigned to a General ACDP must submit a written application in accordance with OAR 340-216-0040 that includes the information in OAR 340-216-0040(1), specifies the General ACDP source category, and shows that the source qualifies for the General ACDP.

(b) Fees. Applicants must pay the fees set forth in Table 2 of OAR 340-216-0020.

(c) Source assignment procedures:

(A) Assignment of a source to a General ACDP is a Category I permit action and is subject to the Category I public notice requirements in accordance with OAR 340, division 209.

(B) A person is not a permittee under the General ACDP until the Department assigns the General ACDP to the person.

(C) Assignments to General ACDPs terminate when the General ACDP expires or is modified, terminated or revoked.

(3) Commission Initiated Modification. If the Commission determines that the conditions have changed such that a General ACDP for a category needs to be modified, the Commission may issue a new General ACDP for that category and the Department may assign all existing General ACDP permit holders to the new General ACDP.

(4) Rescission. In addition to OAR 340-216-0082 (Termination or Revocation of an ACDP), the Department may rescind an individual source's assignment to a General ACDP if the source no longer meets the requirements of this rule or the conditions of the permit, including, but not limited to the source having an ongoing, reoccurring or serious compliance problem. Upon rescinding a source's assignment to a General ACDP the Department will place the source on a Simple or Standard ACDP. The Commission may also revoke a General ACDP if conditions, standards or rules have changed so the permit no longer meets the requirements of this rule.

(5) General ACDPs adopted by reference. The following General ACDPs are adopted by this reference and incorporated herein:

(a) AQGP-001, Hard chrome platers (August 10, 2001)
(b) AQGP-002, Decorative chrome platers (August 10, 2001)
(c) AQGP-003, Halogenated solvent degreasers – batch cold (August 10, 2001)
(d) AQGP-004, Halogenated solvent degreasers – batch vapor and in-line (August 10, 2001)
(e) AQGP-005, Halogenated solvent degreasers – batch cold, batch vapor, and in-line (August 10, 2001)
(f) AQGP-006, Dry cleaners (August 10, 2001)
(g) AQGP-007, Asphalt plants (August 10, 2001)
(h) AQGP-008, Rock crushers (August 10, 2001)
(i) AQGP-009, Ready-mix concrete (August 10, 2001)
(j) AQGP-010, Sawmills, planing mills, millwork, plywood manufacturing and veneer drying (August 10, 2001)
(k) AQGP-011, Boilers (August 10, 2001)
(l) AQGP-012, Crematories (August 10, 2001)
(m) AQGP-013, Grain elevators (August 10, 2001)
(n) AQGP-014, Prepared feeds, flour, and cereal (August 10, 2001)
(o) AQGP-015, Seed cleaning (August 10, 2001)
(p) AQGP-016, Coffee roasters (August 10, 2001)
(q) AQGP-017, Bulk gasoline plants (August 10, 2001)
(r) AQGP-018, Electric power generators (August 10, 2001)

[**NOTE:** Except for OAR 340-216-0060(5), this rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040.]

Stat. Auth.: ORS 468 & ORS 468A
Stats Implemented: ORS 468.020 & ORS 468A.025
Hist.: DEQ 14-1998, f. & cert. ef. 9-14-98; DEQ14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-028-1725; DEQ 6-2001, f. 6-18-01, cert. ef. 7-1-01; DEQ 10-2001, f. & cert. ef. 8-30-01

340-216-0064
Simple ACDP

(1) Applicability.

(~~A~~a) Sources and activities listed in Table 1, Part B of OAR 340-216-0020 that do not qualify for a General ACDP and are not required to obtain a Standard ACDP must, at a minimum, obtain a Simple ACDP.

(~~B~~b) Any source required to obtain a Simple ACDP may obtain a Standard ACDP.

(~~C~~c) The Department may determine that a source is ineligible for a Simple ACDP and must obtain a Standard ACDP based upon, but not limited to, the following considerations:

(A) ~~(i)~~ the nature, extent, and toxicity of the source's emissions;

(B) ~~(ii)~~ the complexity of the source and the rules applicable to that source;

(C) ~~(iii)~~ the complexity of the emission controls and potential threat to human health and the environment if the emission controls fail;

(D) ~~(iv)~~ the location of the source; and

(E) ~~(v)~~ the compliance history of the source.

(2) Application Requirements. Any person requesting a new, modified, or renewed Simple ACDP must submit an application in accordance with OAR 340-216-0040.

(3) Fees. Applicants for a new, modified, or renewed Simple ACDP must pay the fees set forth in Table 2 of 340-216-0020. Annual fees for Simple ACDPs will be assessed based on the following:

(a) Low Fee – A Source may qualify for the Low Fee if:

(A) the source is, or will be, permitted under only one of the following categories from OAR 340-216-0020 Table 1, Part B (category 25. Electric Power Generation, may be included with any category listed below):

(i) Category 6. Asphalt felt and coatings;

(ii) Category 12. Boilers and other fuel burning equipment

(iii) Category 30. Galvanizing & Pipe coating;

(iv) Category 36. Gray iron and steel foundries, malleable iron foundries, steel investment foundries, steel foundries 100 or more tons/yr. metal charged (not elsewhere identified);

(v) Category 37. Gypsum products;

(vi) Category 41. Liquid Storage Tanks subject to OAR Division 232;

(vii) Category 50. Non-Ferrous Metal Foundries 100 or more tons/yr. of metal charged;

(viii) Category 51. Organic or Inorganic Industrial Chemical Manufacturing;

(ix) Category 63. Secondary Smelting and/or Refining of Ferrous and Non-Ferrous Metals; or

(x) Category 75. All Other Sources not listed in Table 1 which would have actual emissions, if the source were to operate uncontrolled, of 5 or more tons a year of PM10 if located in a PM10 non-attainment or maintenance area, or 10 or more tons of any single criteria pollutant in any part of the state; and

(B) the actual emissions from the 12 months immediately preceding the invoice date, and future projected emissions are less than 5 tons/yr. PM_{10} in a PM_{10} nonattainment or maintenance area, and less than 10 tons/yr. for each criteria pollutant; and

(C) the source is not considered an air quality problem or nuisance source by the Department.

(b) High Fee – Any source required to have a Simple ACDP (OAR 340-216-0020 Table 1 Part B) that does not qualify for the Low Fee will be assessed the High Fee.

(c) If the Department determines that a source was invoiced for the Low Annual Fee but does not meet the Low Fee criteria outlined above, the source will be required to pay the difference between the Low and High Fees, plus applicable late fees in accordance with OAR 340-216-0020 Table 2. Late fees start upon issuance of the initial invoice. In this case, the Department will issue a new invoice specifying applicable fees.

(4) Permit Content.

(a) All relevant applicable requirements for source operation, including general ACDP conditions for incorporating generally applicable requirements;

(b) Generic PSELs for all pollutants emitted at more than the deminimis level in accordance with OAR 340 division 222;

(c) Testing, monitoring, recordkeeping, and reporting requirements sufficient to determine compliance with the PSEL and other emission limits and standards, as necessary; and

(d) A permit duration not to exceed 5 years

(5) Permit issuance procedures:

(a) Issuance of a new or renewed Simple ACDP requires public notice in accordance with OAR 340 division 209 for Category II permit actions.

(b) Issuance of a modification to a Simple ACDP requires one of the following procedures, as applicable:

(A) Non-technical and non-NSR/PSD Basic and Simple technical modifications require public notice in accordance with OAR 340, division 209 for Category I permit actions; or

(B) Issuance of non-NSR/PSD Moderate and Complex technical modifications require public notice in accordance with OAR 340 division 209 for Category II permit actions.

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A
Hist.: DEQ 6-2001, f. 6-18-01, cert. ef. 7-1-01

340-216-0066
Standard ACDPs

(1) Application requirements. Any person requesting a new, modified, or renewed Standard ACDP must submit an application in accordance with OAR 340-216-0040 and include the following additional information as applicable:
  (a) For new or modified Standard ACDPs that are not subject to NSR (OAR 340 division 224) but have emissions increases above the significant emissions rate, the application must include an analysis of the air quality and visibility (federal major sources only) impact of the source or modification, including meteorological and topographical data, specific details of models used, and other information necessary to estimate air quality impacts.
  (b) For new or modified Standard ACDPs that are subject to NSR (OAR 340 division 224), the application must include the following additional information as applicable:
    (A) A detailed description of the air pollution control equipment and emission reductions processes which are planned for the source or modification, and any other information necessary to determine that BACT or LAER technology, whichever is applicable, would be applied;
    (B) An analysis of the air quality and visibility (federal major sources only) impact of the source or modification, including meteorological and topographical data, specific details of models used, and other information necessary to estimate air quality impacts; and
    (C) An analysis of the air quality and visibility (federal major sources only) impacts, and the nature and extent of all commercial, residential, industrial, and other source emission growth, which has occurred since January 1, 1978, in the area the source or modification would affect.
(2) Fees. Applicants for a Standard ACDP must pay the fees set forth in Table 2 of 340-216-0020.
(3) Permit content. A Standard ACDP is a permit that contains:
  (a) all applicable requirements, including general ACDP conditions for incorporating generally applicable requirements;
  (b) Source specific PSELs or Generic PSELs, whichever are applicable, as specified in OAR 340, division 222;
  (c) Testing, monitoring, recordkeeping, and reporting requirements sufficient to determine compliance with the PSEL and other emission limits and standards, as necessary; and
  (d) A permit duration not to exceed 5 years.
(4) Permit issuance procedures.
  (a) Issuance of a new or renewed Standard ACDP requires public notice as follows:
    (A) For non-NSR permit actions, issuance of a new or renewed Standard ACDP requires public notice in accordance with OAR 340 division 209 for Category III permit actions for any increase in allowed emissions, or Category II permit actions if no emissions increase is allowed.
    (B) For NSR permit actions, issuance of a new Standard ACDP requires public notice in accordance with OAR 340 division 209 for Category IV permit actions.
  (b) Issuance of a modified Standard ACDP requires one of the following, as applicable:
    (A) Non-technical modifications and non-NSR Basic and Simple technical modifications require public notice in accordance with OAR 340 division 209 for Category I permit actions.
    (B) Non-NSR/PSD Moderate and Complex technical modifications require public notice in accordance with OAR 340 division 209 for Category II permit actions if no increase in allowed emissions, or Category III permit actions if an increase in emissions is allowed.
    (C) NSR/PSD modifications require public notice in accordance with OAR 340 division 209 for Category IV permit actions.

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A
Hist.: DEQ 6-2001, f. 6-18-01, cert. ef. 7-1-01

Table 1

OAR 340-216-0020

Part A: Activities and Sources

The following commercial and industrial sources must obtain a Basic ACDP under the procedures set forth in 340-216-0056 unless the source is required to obtain a different form of ACDP by Part B or C hereof:
(Production and emission parameters are based on the latest consecutive12 month period, or future projected operation, whichever is higher. Emission cutoffs are based on actual emissions.)

1. ** Autobody Repair or Painting Shops painting more than 25 automobiles in a year.
2. Natural Gas and Propane Fired Boilers (with or without #2 diesel oil back-up[(a)]) of 10 or more MMBTU but less than 30 MMBTU/hr heat input constructed after June 9, 1989.
3. Bakeries, Commercial baking more than 500 tons of dough per year.
4. * Cereal Preparations and Associated Grain Elevators more than 2,000 but less than 10,000 tons per year throughput.
5. Coffee Roasters roasting more than 6 tons coffee beans in a year, but less than 30 tons/yr.

~~5.~~6. Concrete Manufacturing including Redimix and CTB more than 5,000 but less than 25,000 cubic yards per year output.

~~5.~~7. Crematory and Pathological Waste Incinerators with less than 20 tons/yr. material input.

~~6.~~8. * Flour, Blended and/or Prepared and Associated Grain Elevators more than 2,000 but less than 10,000 tons per year throughput.

~~7.~~9. * Grain Elevators used for intermediate storage more than 1,000 but less than 10,000 tons/yr. throughput.

~~7.~~10. Gray iron and steel foundries, malleable iron foundries, steel investment foundries, steel foundries more than one ton/yr. but less than 100 tons/yr. metal charged (not elsewhere identified)

~~8.~~11. Millwork (including kitchen cabinets and structural wood members) more than 5,000 but less than 25,000 bd. ft./maximum 8 hour input.

~~9.~~12. Non-Ferrous Metal Foundries more than one ton/yr. but less than 100 tons/yr. of metal charged

~~10.~~13. Pesticide Manufacturing more than 1,000 tons/yr. but less than 5,000 tons/yr.

~~11.~~14. Prepared feeds for animals and fowl and associated grain elevators more than 1,000 tons/yr. but less than 10,000 tons per year throughput.

~~12.~~15. Rock, Concrete or Asphalt Crushing both portable and stationary more ~~then~~ than 5,000 tons/yr. but less than 25,000 tons/yr. crushed.

~~13.~~16. Sawmills and/or Planing Mills more than 5,000 but less than 25,000 bd. ft./maximum 8 hour finished product.

~~14.~~17. * Seed Cleaning and Associated Grain Elevators more than 1,000 but less than 5000 tons per year throughput, if particulate emission equal or exceed ½ ton/yr. (sources in this Basic permit category that have less than ½ ton of PM emissions are not required to have an ACDP).

~~15.~~18. ~~Spray Paint Booths and surface~~ Surface coating operations whose actual or expected usage of coating materials is greater than 250 gallons per month, excluding sources that exclusively use non-VOC and non-HAP containing coatings (e.g. powder coating operations).

~~16.~~19. Wood Furniture and Fixtures more than 5,000 but less than 25,000 bd. ft./maximum 8 hour input.

Part B: Activities and Sources

The following commercial and industrial sources must obtain either:

- a General ACDP, if one is available for the source classification and the source qualifies for a General ACDP under the procedures set forth in 340-216-0060;
- a Simple ACDP under the procedures set forth in 340-216-0064; or
- a Standard ACDP under the procedures set forth in 340-216-0066 if the source fits one of the criteria of Part C hereof.

1. Aerospace or Aerospace Parts Manufacturing

2. Aluminum Production - Primary
3. Ammonia Manufacturing
4. Animal Rendering and Animal Reduction Facilities
5. Asphalt Blowing Plants
6. Asphalt Felts or Coating
7. Asphaltic Concrete Paving Plants both stationary and portable
8. Bakeries, Commercial over 10 tons of VOC emissions per year
9. Battery Separator Manufacturing
10. Battery Manufacturing and Re-manufacturing
11. Beet Sugar Manufacturing
12. Boilers and other Fuel Burning Equipment over 10 MMBTU/hr. heat input, except exclusively Natural Gas and Propane fired units (with or without #2 diesel backup) under 30 MMBTU/hr. heat input
13. Building paper and Buildingboard Mills
14. Calcium Carbide Manufacturing
15. *** Can or Drum Coating
16. Cement Manufacturing
17. * Cereal Preparations and Associated Grain Elevators 10,000 or more tons/yr. throughput
18. Charcoal Manufacturing
~~19.Chemical Manufacturing and Distribution~~
~~20.~~19. Chlorine and Alkalies Manufacturing
~~21.~~20. Chrome Plating
~~22.~~21. Coffee Roasting (roasting ~~more than 30~~ 30 or more tons per year)
~~23.~~22. Concrete Manufacturing including Redimix and CTB 25,000 or more cubic yards per year output
~~24.~~23. Crematory and Pathological Waste Incinerators 20 or more tons/yr. material input
24. Degreasers (halogenated solvents subject to a NESHAP)
25. Electrical Power Generation from combustion (excluding units used exclusively as emergency generators)
26. Ethylene Oxide Sterilization
27. *** Flatwood Coating regulated by Division 232
28. *** Flexographic or Rotogravure Printing subject to RACT
29. * Flour, Blended and/or Prepared and Associated Grain Elevators 10,000 or more tons/yr. throughput
30. Galvanizing and Pipe Coating (except galvanizing operations that use less than 100 tons of zinc/yr.)
31. *** Gasoline Plants and Bulk Terminals subject to OAR 232
32. Gasoline Terminals
33. Glass and Glass Container Manufacturing
34. * Grain Elevators used for intermediate storage 10,000 or more tons/yr. throughput
35. Grain terminal elevators
36. Gray iron and steel foundries, malleable iron foundries, steel investment foundries, steel foundries 100 or more tons/yr. metal charged (not elsewhere identified)
37. Gypsum Products Manufacturing
38. Hardboard Manufacturing (including fiberboard)
39. Incinerators with two or more ton per day capacity
40. Lime Manufacturing
41. *** Liquid Storage Tanks subject to OAR Division 232
42. Magnetic Tape Manufacturing
43. Manufactured and Mobile Home Manufacturing
44. Marine Vessel Petroleum Loading and Unloading
45. Millwork (including kitchen cabinets and structural wood members) 25,000 or more bd. ft./maximum 8 hr. input
46. Molded Container
47. Motor Coach Manufacturing
48. Natural Gas and Oil Production and Processing and associated fuel burning equipment

49. Nitric Acid Manufacturing
50. Non-Ferrous Metal Foundries 100 or more tons/yr. of metal charged
51. Organic or Inorganic ~~Industrial~~ Chemical Manufacturing and Distribution with ½ or more tons per year emissions of any one criteria pollutant (sources in this category with less than ½ ton/yr. of each criteria pollutant are not required to have an ACDP)
52. *** Paper or other Substrate Coating
53. Particleboard Manufacturing (including strandboard, flakeboard, and waferboard)
54. Perchloroethylene dry cleaners that do not submit a complete Dry Cleaner Annual Hazardous Waste and Air Compliance Report by June 1 of any given year
55. Pesticide Manufacturing ~~greater than~~ 5,000 or more tons/yr. annual production
56. Petroleum Refining and Re-refining of Lubricating Oils and Greases including Asphalt Production by Distillation and the reprocessing of oils and/or solvents for fuels
57. Plywood Manufacturing and/or Veneer Drying
58. Prepared feeds for animals and fowl and associated grain elevators 10,000 or more tons per year throughput
59. Primary Smelting and/or Refining of Ferrous and Non-Ferrous Metals
60. Pulp, Paper and Paperboard Mills
61. Rock, Concrete or Asphalt Crushing both portable and stationary 25,000 or more tons/yr. crushed
62. Sawmills and/or Planing Mills 25,000 or more bd. ft./maximum 8 hr. finished product
63. Secondary Smelting and/or Refining of Ferrous and Non-Ferrous Metals
64. * Seed Cleaning and Associated Grain Elevators 5,000 or more tons/yr. throughput
65. Sewage Treatment Facilities employing internal combustion for digester gasses
66. Soil Remediation Facilities stationary or portable
67. Steel Works, Rolling and Finishing Mills
68. *** Surface Coating in Manufacturing subject to RACT
69. Surface Coating Operations with actual emissions of VOCs before add on controls of 10 or more tons/yr.
70. Synthetic Resin Manufacturing
71. Tire Manufacturing
72. Wood Furniture and Fixtures 25,000 or more bd. ft./maximum 8 hr. input
73. Wood Preserving (excluding waterborne)
74. All Other Sources not listed herein that the Department determines an air quality concern exists or one which would emit significant malodorous emissions
75. All Other Sources not listed herein which would have actual emissions, if the source were to operate uncontrolled, of 5 or more tons a year of PM10 if located in a PM10 non-attainment or maintenance area, or 10 or more tons of any single criteria pollutant in any part of the state

Part C: Activities and Sources

The following sources must obtain a Standard ACDP under the procedures set forth in 340-216-0066:

1. Incinerators for PCBs and / or other hazardous wastes
2. All Sources that the Department determines have emissions that constitute a nuisance
3. All Sources electing to maintain the source's baseline emission rate, or netting basis
4. All Sources subject to a RACT, BACT, LAER, NESHAP, NSPS, State MACT, or other significant Air Quality regulation(s), except:
   (a) Source categories for which a General ACDP has been issued, and
   (b) Sources with less than 10 tons/yr. actual emissions that are subject to RACT, NSPS or a NESHAP which qualify for a Simple ACDP
5. All Sources having the Potential to Emit more than 100 tons of any regulated air contaminant in a year
6. All Sources having the Potential to Emit more than 10 tons of a single hazardous air pollutant in a year
7. All Sources having the Potential to Emit more than 25 tons of all hazardous air pollutants combined in a year

Notes:

* Applies only to Special Control Areas

** Portland AQMA only
*** Portland AQMA, Medford-Ashland AQMA or Salem SKATS only
(a) "back-up" means less than 10,000 gallons of fuel per year

Table 2
OAR 340-216-0020

Part 1. Initial Permitting Application Fees: (in addition to first annual fee)

a.	Short Term Activity ACDP	$ 250.00
b.	Basic ACDP	$ 100.00
c.	Assignment to General ACDP	$ 1,000.00
d.	Simple ACDP	$ 5,000.00
e.	Construction ACDP	$ 8,000.00
f.	Standard ACDP	$ 10,000.00
g.	Standard ACDP (PSD/NSR)	$ 35,000.00

Part 2. Annual Fees: (due 12/1 for 1/1 to 12/31 of the following year)

a.	Short Term Activity ACDP	$ NA
b.	Basic ACDP	~~$100.00~~300.00
c.	General ACDP	
(A)	Fee Class One	~~$500.00~~600.00
(B)	Fee Class Two	~~$900.00~~1,080.00
(C)	Fee Class Three	~~$1,300.00~~1,560.00
d.	Simple ACDP	~~$2000.00~~
(A)	Low Fee	$1,600.00
(B)	High Fee	$3,200.00
e.	Standard ACDP	~~$4,000.00~~6,400.00

Part 3. Specific Activity Fees:

a.	Non-Technical Permit Modification (1)	$ 300.00
b.	Non-PSD/NSR Basic Technical Permit Modification (2)	$ 300.00
c.	Non-PSD/NSR Simple Technical Permit Modification(3)	$ 1,000.00
d.	Non-PSD/NSR Moderate Technical Permit Modification (4)	$ 5,000.00
e.	Non-PSD/NSR Complex Technical Permit Modification (5)	$ 10,000.00
f.	PSD/NSR Modification	$ 35,000.00
g.	Modeling Review (outside PSD/NSR)	$ 5,000.00
h.	Public Hearing at Source's Request	$ 2,000.00
i.	State MACT Determination	$ 5,000.00
j.	Compliance Order Monitoring (6)	$100.00/mo.

Part 4. Late Fees:

a. 8-30 days late	5% of annual fee
b. 31-60 days late	10% of annual fee
c. 61 or more days late	20% of annual fee

(1) Non-Technical modifications include, but are not limited to name changes, change of ownership and similar administrative changes.
(2) Basic Technical Modifications include, but are not limited to corrections of emission factors in compliance methods, changing source test dates for extenuating circumstances, and similar changes.
(3) Simple Technical Modifications include, but are not limited to , incorporating a PSEL compliance method from a review report into an ACDP, modifying a compliance method to use different emission factors or process parameter, changing source test dates for extenuating circumstances, changing reporting frequency, incorporating NSPS and NESHAP requirements that do not require judgement, and similar changes.

(4) Moderate Technical Modifications include, but are not limited to incorporating a relatively simple new compliance method into a permit, adding a relatively simple compliance method or monitoring for an emission point or control device not previously addressed in a permit, revising monitoring and reporting requirements other than dates and frequency, adding a new applicable requirement into a permit due to a change in process or change in rules and that does not require judgment by the Department, incorporating NSPS and NESHAP requirements that do not require judgment, and similar changes.
(5) Complex Technical Modifications include, but are not limited to incorporating a relatively complex new compliance method into a permit, adding a relatively complex compliance method or monitoring for an emission point or control devise not previously addressed in a permit, adding a relatively complex new applicable requirement into a permit due to a change in process or change in rules and that requires judgement by the Department, and similar changes.
(6) This is a one time fee payable when a Compliance Order is established in a Permit or a Department Order containing a compliance schedule becomes a Final Order of the Department and is based on the number of months the Department will have to oversee the Order.

DIVISION 200

GENERAL AIR POLLUTION PROCEDURES AND DEFINITIONS

340-200-0040
State of Oregon Clean Air Act Implementation Plan
(1) This implementation plan, consisting of Volumes 2 and 3 of the State of Oregon Air Quality Control Program, contains control strategies, rules and standards prepared by the Department of Environmental Quality and is adopted as the state implementation plan (SIP) of the State of Oregon pursuant to the federal **Clean Air Act**, Public Law 88-206 as last amended by Public Law 101-549.
(2) Except as provided in section (3), revisions to the SIP will be made pursuant to the Commission's rulemaking procedures in Division 11 of this Chapter and any other requirements contained in the SIP and will be submitted to the United States Environmental Protection Agency for approval.
(3) Notwithstanding any other requirement contained in the SIP, the Department may:
(a) Submit to the Environmental Protection Agency any permit condition implementing a rule that is part of the federally-approved SIP as a source-specific SIP revision after the Department has complied with the public hearings provisions of **40 CFR 51.102 (July 1, 1992)**; and
(b) Approve the standards submitted by a regional authority if the regional authority adopts verbatim any standard that the Commission has adopted, and submit the standards to EPA for approval as a SIP revision.
[**NOTE**: Revisions to the State of Oregon Clean Air Act Implementation Plan become federally enforceable upon approval by the United States Environmental Protection Agency. If any provision of the federally approved Implementation Plan conflicts with any provision adopted by the Commission, the Department shall enforce the more stringent provision.]
[Publications: The publication(s) referred to or incorporated by reference in this rule are available from the agency.]

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.035
Hist.: DEQ 35, f. 2-3-72, ef. 2-15-72; DEQ 54, f. 6-21-73, ef. 7-1-73; DEQ 19-1979, f. & ef. 6-25-79; DEQ 21-1979, f. & ef. 7-2-79; DEQ 22-1980, f. & ef. 9-26-80; DEQ 11-1981, f. & ef. 3-26-81; DEQ 14-1982, f. & ef. 7-21-82; DEQ 21-1982, f. & ef. 10-27-82; DEQ 1-1983, f. & ef. 1-21-83; DEQ 6-1983, f. & ef. 4-18-83; DEQ 18-1984, f. & ef. 10-16-84; DEQ 25-1984, f. & ef. 11-27-84; DEQ 3-1985, f. & ef. 2-1-85; DEQ 12-1985, f. & ef. 9-30-85; DEQ 5-1986, f. & ef. 2-21-86; DEQ 10-1986, f. & ef. 5-9-86; DEQ 20-1986, f. & ef. 11-7-86; DEQ 21-

1986, f. & ef. 11-7-86; DEQ 4-1987, f. & ef. 3-2-87; DEQ 5-1987, f. & ef. 3-2-87; DEQ 8-1987, f. & ef. 4-23-87; DEQ 21-1987, f. & ef. 12-16-87; DEQ 31-1988, f. 12-20-88, cert. ef. 12-23-88; DEQ 2-1991, f. & cert. ef. 2-14-91; DEQ 19-1991, f. & cert. ef. 11-13-91; DEQ 20-1991, f. & cert. ef. 11-13-91; DEQ 21-1991, f. & cert. ef. 11-13-91; DEQ 22-1991, f. & cert. ef. 11-13-91; DEQ 23-1991, f. & cert. ef. 11-13-91; DEQ 24-1991, f. & cert. ef. 11-13-91; DEQ 25-1991, f. & cert. ef. 11-13-91; DEQ 1-1992, f. & cert. ef. 2-4-92; DEQ 3-1992, f. & cert. ef. 2-4-92; DEQ 7-1992, f. & cert. ef. 3-30-92; DEQ 19-1992, f. & cert. ef. 8-11-92; DEQ 20-1992, f. & cert. ef. 8-11-92; DEQ 25-1992, f. 10-30-92, cert. ef. 11-1-92; DEQ 26-1992, f. & cert. ef. 11-2-92; DEQ 27-1992, f. &cert. ef. 11-12-92; DEQ 4-1993, f. & cert. ef. 3-10-93; DEQ 8-1993, f. & cert. ef. 5-11-93; DEQ 12-1993, f. & cert. ef. 9-24-93; DEQ 15-1993, f. & cert. ef. 11-4-93; DEQ 16-1993, f. & cert. ef. 11-4-93; DEQ 17-1993, f. & cert. ef. 11-4-93; DEQ 19-1993, f. & cert. ef. 11-4-93; DEQ 1-1994, f. & cert. ef. 1-3-94; DEQ 5-1994, f. & cert. ef. 3-21-94; DEQ 14-1994, f. & cert. ef. 5-31-94; DEQ 15-1994, f. 6-8-94, cert. ef. 7-1-94; DEQ 25-1994, f. & cert. ef. 11-2-94; DEQ 9-1995, f. & cert. ef. 5-1-95; DEQ 10-1995, f. & cert. ef. 5-1-95; DEQ 14-1995, f. & cert. ef. 5-25-95; DEQ 17-1995, f. & cert. ef. 7-12-95; DEQ 19-1995, f. & cert. ef. 9-1-95; DEQ 20-1995 (Temp), f. & cert. ef. 9-14-95; DEQ 8-1996(Temp), f. & cert. ef. 6-3-96; DEQ 15-1996, f. & cert. ef. 8-14-96; DEQ 19-1996, f. & cert. ef. 9-24-96; DEQ 22-1996, f. & cert. ef. 10-22-96; DEQ 23-1996, f. & cert. ef. 11-4-96; DEQ 24-1996, f. & cert. ef. 11-26-96; DEQ 10-1998, f. & cert. ef. 6-22-98; DEQ 15-1998, f. & cert. ef. 9-23-98; DEQ 16-1998, f. & cert. ef. 9-23-98; DEQ 17-1998, f. & cert. ef. 9-23-98; DEQ 20-1998, f. & cert. ef. 10-12-98; DEQ 21-1998, f. & cert. ef. 10-12-98; DEQ 1-1999, f. & cert. ef. 1-25-99; DEQ 5-1999, f. & cert. ef. 3-25-99; DEQ 6-1999, f. & cert. ef. 5-21-99; DEQ 10-1999, f. & cert. ef. 7-1-99; DEQ14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-020-0047

Attachment B

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal
for
Air Contaminant Discharge Permit Fee Increase

Questions to be Answered to Reveal Potential Justification for Differing from Federal Requirements.

1. Are there federal requirements that are applicable to this situation? If so, exactly what are they?

The Air Contaminant Discharge Permit (OAR Chapter 340, Division 216) program is part of Oregon's State Implementation Plan (SIP) approved by the U.S. Environmental Protection Agency (EPA) to meet federal air quality protection requirements. EPA rules (40 CFR Part 51) specify requirements for establishing and amending the SIP, and include resource requirements to implement the SIP.

2. Are the applicable federal requirements performance based, technology based, or both with the most stringent controlling?

Performance-based

3. Do the applicable federal requirements specifically address the issues that are of concern in Oregon? Was data or information that would reasonably reflect Oregon's concern and situation considered in the federal process that established the federal requirements?

Yes

4. Will the proposed requirement improve the ability of the regulated community to comply in a more cost effective way by clarifying confusing or potentially conflicting requirements (within or cross-media), increasing certainty, or preventing or reducing the need for costly retrofit to meet more stringent requirements later?

Not applicable

5. Is there a timing issue which might justify changing the time frame for implementation of federal requirements?

Not applicable.

6. Will the proposed requirement assist in establishing and maintaining a reasonable margin for accommodation of uncertainty and future growth?

Not Applicable.

7. Does the proposed requirement establish or maintain reasonable equity in the requirements for various sources? (level the playing field)

Not applicable.

8. Would others face increased costs if a more stringent rule is not enacted?

Not Applicable.

9. Does the proposed requirement include procedural requirements, reporting or monitoring requirements that are different from applicable federal requirements? If so, Why? What is the "compelling reason" for different procedural, reporting or monitoring requirements?

Not applicable.

10. Is demonstrated technology available to comply with the proposed requirement?

Not Applicable.

11. Will the proposed requirement contribute to the prevention of pollution or address a potential problem and represent a more cost effective environmental gain?

Not Applicable.

Attachment C

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal
for
Air Contaminant Discharge Permit Fee Increase

Fiscal and Economic Impact Statement

Introduction

The proposed rulemaking increases Annual Fees for air quality Air Contaminant Discharge Permits (ACDPs) by 30 percent overall. The proposed fee increase is needed to fund existing Air Quality permitting staff due to inflation and reductions in state General Fund.

The Department proposed a 48 percent overall increase in ACDP fee revenue as part of the 2001-2003 budget request to the Oregon Legislature. The Legislature authorized an overall increase in fee revenue of 30 percent, and made up some of the difference with General Fund. As a result, the total authorized increase did not provide sufficient revenue to maintain the current staffing level, and the ACDP program lost 3.5 existing positions.

2001 Legislative Authorization

The total projected revenue from all permit types before fee increase, as submitted to the 2001 Legislature	$3,946,568
30 percent increase authorized by 2001 Legislature	$1,183,970
Total Authorized Fees with 30 Percent Increase	**$5,130,538**

Proposed ACDP Fees

ACDP Permit Type	Current Annual Fees	Proposed Fee Increase	Proposed Annual Fees
Basic ACDP	$100	$200	$300
General ACDPs			
Fee Class One	$500	$100	$600
Fee Class Two	$900	$180	$1,080
Fee Class Three	$1,300	$260	$1,560
Simple Low ACDP	Does Not Exist	*($400)	$1,600
Simple ACDP	$2,000	$1,200	$3,200
Standard ACDP	$4,000	$2,400	$6,400

Total Projected Revenue After Proposed Fee Increase: $5,111,780 ⇔ 29.5 Percent Increase

* The Simple-Low ACDP fee is a new proposed fee category. The table above shows the Simple-Low fee as a $400 decrease from the existing Simple ACDP fee of $2,000.

The Department is not proposing to increase Initial Permitting Application and Specific Activity Fees from their current level, and Late Fees will increase because they are based on a percentage of Annual Fees.

General Public

The fiscal and economic impact on the general public is the possibility of increased costs for products or service from the facilities subject to the proposed fee increase. These potential cost increases are likely to be very modest, however, because the proposed fee increases are estimated to have a minor effect on the yearly operating costs or gross revenue of the majority of permitted facilities.

Small Business

The Department expects most small businesses to pay Basic, General, and Simple-Low ACDP fees. Depending on the type of permit a source had before the May 2001 streamlining rules, the proposed fees may represent an increase or decrease from average fees in previous years.

For most sources moving to a Basic Permit, the $300 Basic Permit fee will be comparable to the average fees paid in the past. Small businesses that have General ACDPs will be affected by a relatively small fee increase, and avoid permit modification fees because General ACDPs are not modified for individual sources. Small businesses subject to Simple-Low fees will pay slightly more than the General ACDP Fee Class Three. The Simple-Low category is new, and will reduce the fee for small businesses that would otherwise pay for a Simple ACDP. Small Business that have a Standard ACDP will be affected by the fee increase the same as a large business. In addition, approximately 30 very small existing permittees will be exempted from permits altogether by the proposed rules.

Large Business

Most large businesses will have Standard ACDPs; a smaller number will have Simple ACDPs.. The proposed fee increase is greater for Simple and Standard ACDPs than the General Permit category because they require more resources for both processing the permits and administering the permits through inspections and compliance-related activities. Depending on the type of permit a source had before the May 2001 streamlining rules, the proposed fees may represent an increase or decrease from average fees paid in previous years.

Local Governments

This rulemaking will increase fees for local government agencies that have ACDPs. Local governments that may be affected include schools and jails that have boilers; counties that operate rock crushers, asphalt and concrete plants, and crematory incinerators. Most of these sources will have Basic, General, or Simple-low ACDPs, and will experience impacts similar to small businesses.

The proposed increase is estimated to have a minor effect on local government operating budgets.

State Agencies

Department of Environmental Quality: The proposed fee increase will result in increased revenue of approximately $1.2 million per biennium. However, the increase will not fully cover funding shortfalls and will result in a decrease in ACDP program staff. Even with the proposed increase, 3.5 existing FTEs will not be funded in the 2001-2003 biennium. Although this shortfall will likely provide challenges in the short term, the Department does expect resource savings in future years (i.e., after a complete five year permitting cycle) as a result of other permit streamlining efforts.

Other Affected Agencies: Oregon Department of Corrections and other state facilities that have ACDPs will be subject to the proposed increase, including hospitals and the School for the Deaf that operate boilers; universities that operate boilers and crematories; and the Oregon Department of Transportation that operates rock crushers. In most cases, the impacts will be similar to those of small businesses.

The proposed increase is estimated to have an insignificant effect on state agency operating budgets.

Assumptions

This proposed increase is based on the permit election process completed in September 2001. That process provided data on the number of sources in each permit category. Using that information as a basis, the Department evaluated expected shifts that are anticipated from proposed low-end cutoffs and exemptions.. This analysis determined the expected final number of sources in each fee category for this proposal.

The Department anticipates that ACDP fee revenue for the 2001-2003 biennium will increase 30 percent overall based on expected fees generated by the projected number of permits of each type, provided below. These revenue figures could change based on the number of permitted sources, and the number of new, modified, and cancelled permits.

2001-2003 Projected Revenue			
ACDP Permit Type	Estimated Sources	Proposed Annual Fee	Proposed Fee Totals
Basic	170	$300	$51,000
General Fee Class One	164	$600	$98,400
General Fee Class Two	306	$1,080	$330,480
General Fee Class Three	151	$1,560	$235,560
Simple Low	29	$1,600	$46,400
Simple-High	115	$3,200	$368,000
Standard ACDP	182	$6,400	$1,164,800
Total ACDP Sources	1117	Total Annual Fees	$2,294,640
		Annual Activity Fees	$261,250
		Total Annual Fees	$2,555,890
		Total Biennium Fees	**$5,111,780**

Housing Cost Impact Statement

The Department has determined that this proposed rulemaking will have no effect on the development cost of a 6,000 square foot parcel and the construction cost of a 1,200 square foot detached single family dwelling on that parcel.

Attachment D

State of Oregon
Department of Environmental Quality Memorandum

Date: January 2, 2002

To: Environmental Quality Commission

From: Scott Manzano

Subject: Presiding Officer's Report for Rulemaking Hearing
Hearing Date and Time: see below
Hearing Locations: see below
Title of Proposal: Air Contaminant Discharge Permits Fee Increase

The public hearings for this proposed rulemaking were held at 3:00 PM in six locations as follows:

Portland on 12/19/01 Department of Environmental Quality 811 SW 6th Avenue	Salem on 12/20/01 DEQ Regional Office 750 Front Street
Coos Bay on 12/20/01 Newmark Center - Room 228 2110 Newmark Avenue	Medford on 12/19/01 City of Medford 411 W. 8th Street
Bend on 12/20/01 Central Oregon Environmental Center 16 NW Kansas	Pendleton on 12/20/01 Pendleton City Hall Community Room 501 Emigrant

Department staff acted as presiding officers at each of the hearings. Prior to receiving comments, Department presiding officers briefly explained the procedures to be followed during the hearing. Oral testimony was provided by one individual at the public hearing in Bend. No other testimony was given at any other location.

The testimony provided at the Bend public hearing was from Mr. Manny Milby, representing a rockcrushing operation, Hap Taylor and Sons. Hap Taylor and Sons are in favor of the proposed rules as long as the condition remains that concrete plants with less than 25,000 cubic yards throughput qualify for the Basic ACDP.

The Department also received a total of nine written comments on the proposed rules. The comments and the Department's response is provided in Attachment E.

Attachment E
Department Response to Public Comment

Comment Type	Commentor	Comment	Department Response
Fee Increase Not Demonstrated	Fremont Saw Mill	DEQ has failed to adequately demonstrate why it needs an increase beyond normal inflationary pressures, and why it requires such a large increase.	**Response 1.** The 30 percent proposed increase is not just to pay for costs due to inflation. The fee increase was requested by the Department to ***replace*** approximately $1.6 million in General Fund that was no longer available to fund the ACDP program. The rulemaking proposal memorandum states "...the Department requested a 48 percent overall increase in ACDP fee revenue due to cost increases and reductions in state General Fund." The memo further explains that the Legislature responded by authorizing an overall increase of 30 percent, which was not sufficient to maintain the current staff level. The 30 percent increase will only fund approximately 90% of program costs after inflation, and result in a cut of 3.5 ACDP employees.
Pass Through Costs for Business	Fremont Saw Mill,	Disagree with the Fiscal and Economic Impact Statement saying the impact on the general public is the "possibility" of increased costs for products or services, and that these potential cost increases are likely to be very modest. "If the increases are passed they will add to costs, it will not be a possibility".	**Response 2.** ACDP permit fees are a relatively small cost considering a business's yearly operating cost. Some businesses may pass the cost of increased permitting fees on to consumers, some may not. The Department believes the use of the word "possibility" is correct as intended in the Fiscal and Economic Impact Statement attachment.
	Wallowa County Public Works	"In Attachment A, the Housing Cost Impact is incorrect. When DEQ increases fees for all permit holders involved in building a house, they will have to pass on the increase"	**Response 3.** The commentor is referring to the statement "...this proposed rulemaking will have no effect on the development cost of a 6,000 square foot parcel and the construction of a 1,200 square foot detached single family dwelling on that parcel" that is in Attachment A of the public comment package. The Department is not aware of any ACDP permittee that builds single family dwellings, and does not anticipate that this rulemaking will affect those costs. Further, the Department does not believe that the fee increase will materially effect prices for permittees that supply materials or services to the home construction industry. For example, for ready-mix plants that produce over 25,000 cubic yards per year, the fee increase amounts to 0.4 cents per yard or less. However, smaller ready-mix plants that qualify for a Basic permit will see a fee decrease of 0.8 cents per yard or more.
Fee Increase Too High	Fremont Saw Mill	Our annual permitting costs have risen from $3,200 to $4,000 over the last year, and DEQ is now proposing to increase fees to $6,400 per year.	**Response 4.** Fremont Saw Mill paid $4,874.40/year as a 10-year average before the permit streamlining rules were adopted in May 2001. This amount is the sum of the annual compliance fee ($4,134) and a $740.40 annual cost of the permit renewal fee ($3702 every 5 years). The rules adopted in May changed the fee structure so that there is now only one fee paid every year. The

Comment Type	Commentor	Comment	Department Response
			proposed annual fee is $6,400/year. Therefore, the effect of the proposed rules for Freemont will be an increase from $4,874.40 to $6,400 per year, or approximately 31 percent.
	Mr. Gordon Sawser	The Department already received a 30 percent increase in the 2001 Legislative session, and is now asking for more (referring to an additional 48 percent increase).	**Response 5.** As noted in Response 1, the Department requested a 48 percent increase from the 2001 Legislature and received authority to increase ACDP fees 30 percent overall due to cost increases and reductions in state General Fund no longer available to the ACDP program. This proposed increase is intended to codify the 30 percent increase authorized by the 2001 Legislature, and not add to the authorized increase.
	Box B Ent., Inc.	The fee is excessive for one year. We are a small business, and our production varies each year. "This year was our yard's best year for most yards sold and that just meets the 45,000 ton limit."	**Response 6.** The commentor may be referring to the cutoff between a Basic ACDP and a General ACDP for rock crushers, which is 25,000 tons per year and not 45,000 tons per year. The cutoff was established in the May rules at a level that would distinguish between plants that are used infrequently in support of other activities and those that are used on a more constant basis as a viable business. The Basic ACDP is available for plants that crush less than 25,000 tons of rock per year and a General ACDP is available for plants that crush 25,000 or more tons per year. To reduce the impact on small businesses, the Department is only proposing to increase fees 20 percent for General ACDPs. The Department has determined that because General ACDPs require less work overall, the increase should be less than the 30 percent authorized by the 2001 Legislature. Also see Response 12.
	National Automotive Trade Association (NATA)	The fee increases are difficult to support considering the economic situation in Oregon along with the Governor's request for agencies to reduce expenses by 8%.	**Response 7.** The Legislature authorized the fee increase to offset cost increases and a reduction in state General Fund that is no longer available to support the program. The proposed fee increase will, however, result in a cut of 3.5 employees because the 30 percent increase is not sufficient to fund the program at the same level as in the past. The Governor and the Legislature are now considering further cuts in General Fund, not fees, due to a state-wide budget shortfall.
	National Automotive Trade Association (NATA)	The proposed fee increase of $200 per year for the Basic ACDP may not seem substantial but is staggering when combined with the list of other government fees and taxes.	**Response 8.** The proposed rules expand the scope of the Basic permit to include a number of sources that were formerly required to obtain Simple or General ACDPs. Because the General permits will now include more complex sources, a higher fee is needed to cover costs. This does result in a $200 per year increase for some sources, but others will see a significantly lower fee as compared to Simple or General permit fees. The Department does understand that the total fees and taxes paid by businesses are substantial.
	National Automotive	Rather than increase the fee for Basic	**Response 9.** The Department recently completed a major streamlining of the

Comment Type	Commentor	Comment	Department Response
	Trade Association (NATA)	ACDPs, the DEQ should further streamline the permitting program.	permitting program. The creation of the Basic permit was one part of that rulemaking, which also included greater use of General permits and simplified permitting procedures. The Department will continue to evaluate ways to streamline the program and reduce costs.
ACDP Fees Should Not Increase	TriQuint Semiconductor	The proposed fee increase does not improve environmental protection, there is no gain for our operation or our permit monitoring program, and economic conditions in Oregon have deteriorated.	**Response 10.** The proposed fee increase is needed to retain approximately seven existing ACDP staff. Without those staff, Oregon's environment would suffer because of reduced compliance assurance work, and Oregon's economy would further erode because of facility construction and modification delays. The Department acknowledges that the state of the current economy in Oregon is challenging for many businesses.
	-Mr. Gordon Sawser, -Fremont Saw Mill	The memo says that without the fee increase the Department would be forced to eliminate approximately 1/3 of ACDP program staff – why? The Department should stop asking for more money and decrease staff to stay within budget.	**Response 11.** Due to a significant reduction in General Fund combined with cost increases, the Department has no funding for approximately one third of existing ACDP staff. The Department requested a 48 percent increase to retain these existing staff. Because the Legislature authorized only the 30 percent increase, 3.5 ACDP program employees, or approximately 10 percent of program staff, have been cut.
	Oregon Concrete & Aggregate Producers Association, Inc. (OCAPA)	"OCAPA is strongly opposed to this additional fee increase on all Ready Mix Concrete ACDPs because the industry has already felt the May 2001 compliance fee increase jump from $641 for a five year permit to $500 for a one year permit. This proposal adds an additional $100 on top of this fee! These compliance fee increases will cause a financial hardship for most operators."	**Response 12.** When developing this proposal, the Department recognized that an additional fee on small ready-mix concrete plants may be a financial hardship. Therefore, the Department is proposing the creation of a low-end throughput cutoff so that smaller ready-mix plants can qualify for the lower fee Basic ACDP in lieu of being assigned to the more expensive General ACDP. For those that qualify for the Basic ACDP (i.e., produce from 5,000 to 25,000 cubic yards of concrete per year), the fees will be reduced from the existing General ACDP fee of $500 per year to the proposed Basic ACDP fee of $300 per year. For the larger ready-mix concrete plants, the proposed fees will increase from $500 to $600 per year, which is a 20 percent increase rather than the 30 percent increase authorized by the Legislature. It is anticipated that nearly 50 percent of the existing ready-mix concrete plants will qualify for the Basic ACDP. In addition, plants producing less than 5,000 cubic yards per year would not be required to obtain a permit altogether. Also see Response 3. *Note:* The current fee structure is based on the type of permit issued to the source, as compared to the former fee system, which was based on source categories. The old system was inequitable because two different sources with the same type of permit were paying drastically different fees. For example, the former fee system allowed most ready-mix concrete plants to be permitted on "Minimal" permits. Their fees before the May 2001 fee revisions were $178

Comment Type	Commentor	Comment	Department Response
			per year, based on a 10-year average while some wood products facilities were paying over $1,000 per year for the same type of Minimal permit. The disparity in fees indicates that some sources were subsidizing other sources. The new fee structure was designed to eliminate these inequities and base fees on the service (e.g., permit type), or work provided by the DEQ.
	Wallowa County Public Works	DEQ wants to expand its network. The 2001 Legislature authorized a 30 percent increase in DEQ funding, and they should not be asking for more.	**Response 13.** The proposed fee increase is designed to generate $1,165,212, which is slightly less that the 30 percent increase in revenue as authorized by the Legislature. Also see Response 7.
	Wallowa County Public Works	In May 2001, DEQ estimated 10 sources would convert to a Basic ACDP, and they now expect approximately 170 sources will obtain a Basic ACDP. DEQ needs to show some credibility and make sound judgements.	**Response 14.** The Department is proposing changes that will allow more sources to qualify for the Basic ACDP as a way of reducing the cost for small businesses. This accounts for the expected increase in the number of sources that will obtain a Basic ACDP.
	Harvey Rock and Paving Company	The only way we can survive is to find ways to cut cost and become more efficient. Government, on the other hand seems to growing like a cancer.	**Response 15.** See Response 1.
Fee Increase Affects Different Source Categories Unequally	AOI	The proposal is going to shift the burden of the fee increase onto Simple and Standard permit holders. Why is this proposal different than the original fee proposal (proposed in July 2001)?	**Response 16.** The Department evaluated comments pertaining to the July 2001 proposal and the permit election process in Fall 2001. Based on those comments, the Department compared the annual permit cost for all source types under the old fee system and the current fee system adopted in May 2001. The results showed that under the current fee system, the average annual fees for former Regular and Synthetic Minor ACDP sources decreased 18 and 32 percent; respectively, while former Minimal and General ACDP sources increased 93 and 80 percent; respectively. Merely increasing fees by an equal percentage for each type of permit, as proposed in July 2001, would make the impact on small businesses even worse. Therefore, the Department re-proposed the fee increase to address the impact on small businesses (those that typically had Minimal ACDPs) while still obtaining the overall increase approved by the Legislature.
Fee Increase Appears to be Greater Than 30 Percent	AOI	We are puzzled regarding the mathematics of the proposal. The proposal states that the fees will increase by $1,165,212 over the biennium. When we do the calculation	**Response 17.** The difference in this calculation results from a change in the estimated number of sources in each permit type. Based on the numbers available at the time, the revenue from the fee table adopted in May 2001 was overestimated. Based on the best current information, the proposed fee table

Comment Type	Commentor	Comment	Department Response
		we derive an increase of $1,381,880.	will generate an increase of $1,165,212 over the base ACDP fee limitation for the biennium. The numbers used for the proposed fees, while still estimates, are based on much better information obtained from the permit election process in Fall 2001 and the proposed changes to the rules that will allow some sources to move from one permit type to another. Although a number of factors will cause the total number of ACDP sources and their permit types to fluctuate from year to year, the Department believes that it is appropriate to use the most current information to set the fees to generate the approved revenue.
More Sources Should Be Able to Shift to a Lower Fee Category	AOI	Any source category that has maintained its emissions below the threshold stated in the proposal should be allowed to take advantage of the Simple-Low ACDP fee.	**Response 18.** The Simple-low fee is proposed specifically to reduce fees for former "Minimal" ACDP sources that could only move to a Simple ACDP because there is no General ACDP available. Most of the sources that had Minimal ACDPs were able to take advantage of a General ACDP, but some could not because a General ACDP was not developed for their source category. However, the amount of work required for regulating these sources is not much different than for those that can be assigned to a General ACDP. Therefore, the Department has proposed a Simple-low fee category specifically for these sources. Expanding the scope of the Simple-low fee category to other, more complex sources that require more work would not be equitable. In addition, expanding the scope of the Simple-low fee category would require the Department to increase the Simple-low fee and likely all other permit fees to provide the revenue needed to maintain the ACDP program.
	AOI	Provide an incentive to allow a source to move to a lower fee category based on a reduction of potential emissions, not solely based on the source's previous 2-year actual emissions.	**Response 19.** The Department agrees that incentives to permanently reduce emissions should not be impeded. The Department has modified the proposal to allow sources to move to the lower fee category sooner, based on either their prior one-year actual emissions or their future projected emissions.
Supports Proposed Rule	Hap Taylor and Sons	Support the proposed rules as long as the condition remains that concrete plants with less than 25,000 cubic yards throughput qualify for the Basic ACDP.	**Response 20.** The Department appreciates the support for the proposed rules and recommends that the Commission adopt the rules with the 25,000 cubic yard cutoff, as proposed.

Attachment F

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal
for
Air Contaminant Discharge Permit Fee Increase

Land Use Evaluation Statement

1. **Explain the purpose of the proposed rules.**

The proposed rulemaking increases Annual Fees for air quality Air Contaminant Discharge Permits (ACDPs) by 30 percent overall. The proposed fee increase is needed to fund existing Air Quality permitting staff due to inflation and reductions in state General Fund.

2. **Do the proposed rules affect existing rules, programs or activities that are considered land use programs in the DEQ State Agency Coordination (SAC) Program?**

Yes_X_ No____

a. If yes, identify existing program/rule/activity:

Oregon's Air Contaminant Discharge Permit Program (OAR 340, Division 216), which regulates air emissions from non-major industrial sources.

b. If yes, do the existing statewide goal compliance and local plan compatibility procedures adequately cover the proposed rules?

Yes_X_ No____ (if no, explain):

The proposed rules would be implemented through the Department's existing stationary source ACDP permitting program. An approved land use compatibility statement is required from local government before an air permit is issued.

3. **If the proposed rules have been determined a land use program under 2. above, but are not subject to existing land use compliance and compatibility procedures, explain the new procedures the Department will use to ensure compliance and compatibility.**

Not applicable.

_____ _____
Intergovernmental Coordinator Date

Attachment G

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal
for
Air Contaminant Discharge Permit Fee Increase

Proposed General ACDP Rules - Adopted August 10, 2001
(Re-noticed here as a State Implementation Plan Revision)

DIVISION 216

AIR CONTAMINANT DISCHARGE PERMITS

340-216-0060
General Air Contaminant Discharge Permits

(1) Applicability.

(a) The Commission may issue a General ACDP under the following circumstances:

(A) There are several sources that involve the same or substantially similar types of operations;

(B) All requirements applicable to the sources can be contained in a General ACDP;

(C) The emission limitations, monitoring, recordkeeping, reporting and other enforceable conditions are the same for all sources covered by the General ACDP; and

(D) The pollutants emitted are of the same type for all covered sources.

(b) Permit content. Each General ACDP must include the following:

(A) All relevant requirements;

(B) Generic PSELs for all pollutants emitted at more than the deminimis level in accordance with OAR 340, division 222;

(C) Testing, monitoring, recordkeeping, and reporting requirements necessary to ensure compliance with the PSEL and other applicable emissions limits and standards, and;

(D) A permit duration not to exceed 10 years.

(c) Permit issuance procedures: A General ACDP requires public notice and opportunity for comment in accordance with ORS 183.325 to 183.410. All General ACDPs are on file and available for review at the Department's headquarters. The Commission chair signs a General ACDP.

(2) Source assignment:

(a) Application requirements. Any person requesting that a source be assigned to a General ACDP must submit a written application in accordance with OAR 340-216-0040 that includes the information in OAR 340-216-0040(1), specifies the General ACDP source category, and shows that the source qualifies for the General ACDP.

(b) Fees. Applicants must pay the fees set forth in Table 2 of OAR 340-216-0020.

(c) Source assignment procedures:

(A) Assignment of a source to a General ACDP is a Category I permit action and is subject to the Category I public notice requirements in accordance with OAR 340, division 209 ~~for Category I permit actions~~.

(B) A person is not a permittee under the General ACDP until the Department assigns the General ACDP to the person.

(~~B~~C) Assignments to General ACDPs terminate when the General ACDP expires or is modified, terminated or revoked.

(3) Commission Initiated Modification. If the Commission determines that the conditions have changed such that a General ACDP for a category needs to be modified, the Commission may issue a new General ACDP for that category and the Department may assign all existing General ACDP permit holders to the new General ACDP.

(4) Rescission. In addition to OAR 340-216-0082 (Termination or Revocation of an ACDP), the Department may rescind an individual source's assignment to a General ACDP if the source no longer meets the requirements of this rule or the conditions of the permit, including, but not limited to the source having an ongoing, reoccurring or serious compliance problem. Upon rescinding a source's assignment to a General ACDP the Department will place the source on a Simple or Standard ACDP. The Commission may also revoke a General ACDP if conditions, standards or rules have changed so the permit no longer meets the requirements of this rule.

(5) General ACDPs adopted by reference. The following General ACDPs are adopted by this reference and incorporated herein:

(a) AQGP-001, Hard chrome platers (August 10, 2001)

(b) AQGP-002, Decorative chrome platers (August 10, 2001)

(c) AQGP-003, Halogenated solvent degreasers – batch cold (August 10, 2001)

(d) AQGP-004, Halogenated solvent degreasers – batch vapor and in-line (August 10, 2001)

(e) AQGP-005, Halogenated solvent degreasers – batch cold, batch vapor, and in-line (August 10, 2001)

(f) AQGP-006, Dry cleaners (August 10, 2001)

(g) AQGP-007, Asphalt plants (August 10, 2001)

(h) AQGP-008, Rock crushers (August 10, 2001)

(i) AQGP-009, Ready-mix concrete (August 10, 2001)

(j) AQGP-010, Sawmills, planing mills, millwork, plywood manufacturing and veneer drying (August 10, 2001)

(k) AQGP-011, Boilers (August 10, 2001)

(l) AQGP-012, Crematories (August 10, 2001)

(m) AQGP-013, Grain elevators (August 10, 2001)

(n) AQGP-014, Prepared feeds, flour, and cereal (August 10, 2001)

(o) AQGP-015, Seed cleaning (August 10, 2001)

(p) AQGP-016, Coffee roasters (August 10, 2001)

(q) AQGP-017, Bulk gasoline plants (August 10, 2001)

(r) AQGP-018, Electric power generators (August 10, 2001)

[**NOTE:** Except for OAR 340-216-0060(5), ~~T~~this rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040.]

Stat. Auth.: ORS 468 & ORS 468A

Stats Implemented: ORS 468.020 & ORS 468A.025

Hist.: DEQ 14-1998, f. & cert. ef. 9-14-98; DEQ14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-028-1725

DEPARTMENT OF THE ARMY
PROGRAM MANAGER FOR CHEMICAL DEMILITARIZATION
UMATILLA CHEMICAL AGENT DISPOSAL FACILITY
78072 ORDNANCE ROAD
HERMISTON, OREGON 97838

REPLY TO
ATTENTION OF:

MAR 05 2002

Project Manager
for Chemical Stockpile Disposal

ENV–02–0045

SUBJECT: Umatilla Chemical Agent Disposal Facility (UMCDF) Hazardous Waste Permit (ORQ 000 009 431) – Agenda Item E for the March 7-8, 2002, Environmental Quality Commission Meeting: Proposed Modification of the UMCDF Hazardous Waste Permit

Environmental Quality Commission
c/o Department of Environmental Quality
Attention: Mikell O'Meally
811 SW Sixth Avenue
Portland, OR

Madam Chair:

Reference letter, Department of Environmental Quality (DEQ), DEQ Item No. 02-0260(92.94), February 19, 2002, subject: Transmittal of Staff Report Related to Agenda Item E, Environmental quality Commission Meeting March 8, 2002 ["Decision on Modification of Umatilla Chemical Agent Disposal Facility (UMCDF) Hazardous Waste Permit to Incorporate Start-up Approval Conditions"].

We reviewed the DEQ staff report and appreciate the DEQ addressing our public comments. We recognize that you will be considering various alternatives to the proposed permit modification request on March 8, 2002. In the staffing report the DEQ recommended you approve Alternative #1 which contains several new permit conditions. As it stands today, we are on schedule and foresee no technical issues that will delay startup of the facility. However, the permit conditions addressing management of secondary waste will result in a delay of agent destruction startup. We want to resolve these secondary waste management issues in a timely manner and are writing this to offer a means of achieving the intent of these permit conditions without schedule impact.

To show our desire to resolve these issues we have to date permitted all but five percent of our projected secondary waste and expect to have the last five-percent permitted within the next five months. It should by remembered that the risk posed to the public by secondary waste is inconsequential when compared to that of agent storage. We think these issues don't warrant schedule slippage because they can be addressed in another manner, and a schedule delay does not provide benefit commensurate to the increased public risk that will result from prolonging agent storage. We suggest the following changes to the secondary waste management conditions proposed by the DEQ.

1. **Secondary Waste Conditions (Attachment 6, Conditions C.2 through C.4) Should Be Made Conditions for Start-Up of Agent Operations Instead of Conditions for Start-Up of Surrogate Operations.**

Secondary wastes are those generated during agent destruction operations. Agent-contaminated secondary wastes will not be produced during surrogate operations, because those operations use surrogate chemicals, not actual chemical agent. Proposed Permit Conditions C.2 through C.4 would require the Permittees to submit permit modification requests for secondary wastes (C.2) and personal protective equipment and other plastics (C.4) and to provide the DEQ with a written decision of the treatment method that will be used for agent-contaminated carbon (C.3), as a precondition for start-up of surrogate operations. The Secondary waste treatment issues intended to be resolved in these permit modification requests and the written decision do not apply during surrogate operations.

Despite substantial progress that has been made to address secondary waste issues[1], we will not be able to complete all of the requirements in Conditions C.2 through C.4 before the scheduled May 2002 start-up of surrogate operations, however we project completing them by agent start-up. A delay in the start-up of surrogate operations will delay start-up of agent operations. To prevent this delay, these three conditions should be made prerequisites to agent operations rather than prerequisites to surrogate operations. This can be done by moving them to Section D.

2. **Condition D.4 requires the Permittees to submit a Permit Modification Request and obtain approval for Treatment of UMCD Wastes.**

Proposed Permit Condition D.4 would require DEQ approval of a permit modification request for adding all UMCD wastes to the permitted waste feed streams for the Liquid Incinerators, Deactivation Furnace System and Metal Parts Furnace at the UMCDF before agent operations could start. Historically, the DEQ approval process has taken from 3 to 15 months for Class 2 modifications, and from 10 to 24 months for technical Class 3 modifications. We acknowledge the complexity and scope of those permit modifications are significant. However, the start of chemical weapon destruction operations should not be delayed by this modification approval process. We recommend that Condition D.4 be revised so operations can begin once the requested modification is submitted. This can be done by substituting the word "submit" for "obtain Department approval of" in proposed Condition D.4.

[1] A secondary waste is a waste that will be generated as a result of treatment of the chemical agents. An example is personal protective equipment, which may contain small concentrations of agent. Forty secondary waste streams have been identified for treatment at the UMCDF. Of those forty, thirty-eight have been permitted or a decision on how they will be decontaminated has been communicated to DEQ. A treatment system has been identified for the other two carbon filter secondary waste streams. That system is currently in the final stages of testing at the Army's Johnston Atoll Chemical Agent Disposal System (JACADS). As of February 22, 2002, JACADS has used that system to treat over 50% of its carbon wastes. Further, JACADS has successfully treated over half of their other secondary wastes.

Though not an issue impacting our schedule, we also propose the following change.

Permit Conditions B.3 and D.1 Should Be Deleted Because They Are Redundant.

Proposed Permit Condition B.3 states that Permittees shall "Be in compliance with all applicable Permit Modification Request approval conditions imposed by the Department." This appears to be a duplication of proposed condition B.1, which states that Permittees shall "Be in compliance with all HW Permit Conditions applicable to the permitted treatment or storage unit." A permit modification condition imposed by DEQ is an enforceable permit condition, so there is no need to impose the same requirement using different language in Condition B.3. Consequently, the Permittees recommend that Condition B.3 be deleted.

Proposed Permit Condition D.1 would require the Permittees to "implement a waste/munitions tracking procedure and system approved by the Department." This appears to duplicate existing Permit Condition III.E.5, which states, in relevant part, "Items stored within the [Munitions Demilitarization Building] MDB will be tracked in accordance with DEQ-approved tracking system." Permittees request that proposed Permit Condition D.1 be deleted.

In conclusion, we look forward to the day that we begin destroying the chemical agent and treating and disposing of all secondary waste and legacy waste. We believe the counsel of the attorney general in response to the GASP lawsuit was very wise in addressing any delay of weapons destruction "in and of itself constitutes a risk to public health, safety, and welfare[2]." In making your decision we ask that you consider the increased public risk that results from schedule extensions.

We will attend your meeting on March 8 in Portland and will be prepared to answer any questions you may have concerning these suggestions.

[2] *Memorandum in Support of Petition for Alternative Writ of Mandamus to the Oregon Supreme Court*, GASP III litigation, Oregon Attorney General, November 19, 2001.

If you have any questions, please call our technical point of contact, Mr. Wendell Wrzesinski, (541) 564-7053.

Sincerely,

Date of Signature: 5MAR02

Frederick D. Pellissier
Lieutenant Colonel, USA
Commander
*CERTIFICATION STATEMENT

Date of Signature: 5 Mar 02

Don E. Barclay
UMCDF Site
Project Manager
*CERTIFICATION STATEMENT

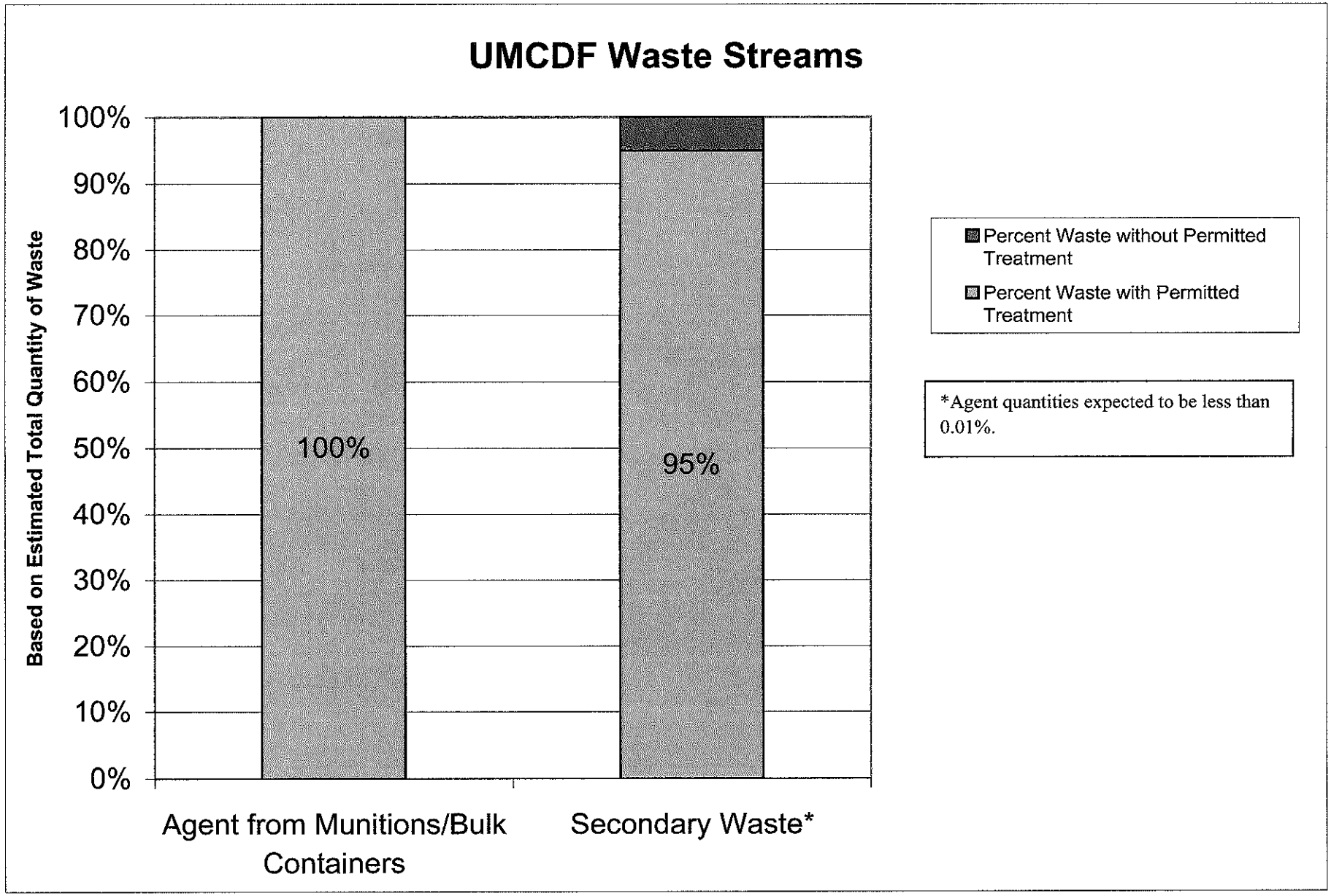
Date of Signature: 3/5/02

Loren D. Sharp
Washington Demilitarization Company
Project Manager
*CERTIFICATION STATEMENT

Enclosure

CC:
Governor John Kitzhaber, M.D.
S. Hallock, Director DEQ
W. Thomas, DEQ

*I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION ACCORDING TO A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.


UMCDF Waste Streams
Based on Estimated Total Quantity of Waste
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
100%
95%
Agent from Munitions/Bulk Containers
Secondary Waste*
Percent Waste without Permitted Treatment
Percent Waste with Permitted Treatment
*Agent quantities expected to be less than 0.01%.

DEPARTMENT OF THE ARMY
PROGRAM MANAGER FOR CHEMICAL DEMILITARIZATION
UMATILLA CHEMICAL AGENT DISPOSAL FACILITY
78072 ORDNANCE ROAD
HERMISTON, OREGON 97838

REPLY TO
ATTENTION OF:

MAR - 5 2002

Project Manager
for Chemical Stockpile Disposal

ENV-02-0034

SUBJECT: Umatilla Chemical Agent Disposal Facility (UMCDF) Hazardous Waste Permit (ORQ 000 009 431) – Off-Site Shipment of Pollution Abatement System (PAS) Wastewater

Wayne C. Thomas, Program Administrator
Chemical Demilitarization Program
Oregon Department of Environmental Quality
256 East Hurlburt Avenue, Suite 105
Hermiston, Oregon 97838

Dear Mr. Thomas:

References:

Letter, Department of Environmental Quality (DEQ), DEQ Item No. 02-0165(27.05), dated February 1, 2002, subject: Off-site Shipment of PAS Liquids (Brines) Prior to the Start of Chemical Agent Operations.

The Permittees sincerely appreciate the opportunity to discuss this important matter with you on January 30, 2002. We feel the open discussion led to a mutually agreed upon management approach in regards to the Brine Reduction Area (BRA). In addition, we appreciate the regulatory analysis recognizing our management approach is supported by regulation and the Permit. We are writing this letter in response to the issues identified in the letter referenced above.

We are systemizing and preparing the Brine Reduction Area (BRA) to support brine treatment during agent operations. Processing PAS liquids on site that are generated prior to agent operations would delay agent operations startup and increase the risk associated with continued agent storage. We recognize the option of shipping PAS liquids off-site is not your preferred approach, but for wastes generated prior to the commencement of agent destruction it is a prudent course of action that will avoid what is now projected to be a four-month delay of agent operations startup

In reference to your concern that we are changing our priorities. Our priority was and remains maximum protection to the public. In this context, we provide maximum protection to the public by ensuring agent destruction operations are our focus and are not delayed by issues presenting little to no public risk.

We will safely and expeditiously destroy the chemical warfare munitions stored at the Umatilla Chemical Depot in an environmentally sound manner. Our top priority is to eliminate the risk of chemical weapons storage to the citizens of Oregon. Our concern regarding the maintenance of an aggressive schedule is evidence we are committed to fulfilling our commitment to the community that wants the chemical weapons stockpile expeditiously destroyed. Our efforts to date reflect our commitment to maintaining schedule along with maintaining excellence in safety and environmental compliance. We share your commitment to move the Umatilla project forward in partnership and look forward to the Department's continued cooperation and commitment to work through the regulatory process.

A copy of this letter is being provided to the members of the Environmental Quality Commission, 811 SW Sixth Avenue, Portland Oregon, 97204; and Ms. Stephanie Hallock, Director, Oregon Department of Environmental Quality, 811 SW Sixth Avenue, Portland Oregon, 97204.

If you have any questions, please call our technical point of contact, Mr. Wendell Wrzesinski, (541) 564-7053.

Sincerely,

Frederick D. Pellissier
Date of Signature: 5 MAR 02
Frederick D. Pellissier
Lieutenant Colonel, USA
Commander
*CERTIFICATION STATEMENT

Don E. Barclay
Date of Signature: 5 Mar 02
Don E. Barclay
UMCDF Site
Project Manager
*CERTIFICATION STATEMENT

Loren D. Sharp
Date of Signature: 3/5/02
Loren D. Sharp
Washington Demilitarization Company
Project Manager
*CERTIFICATION STATEMENT

Enclosures

*I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION ACCORDING TO A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

bcc:

Thomas Beam, DEQ
Sue Oliver, DEQ
Mark Daugherty, UMCD
Catherine Massimino, EPA

State of Oregon

Department of Environmental Quality Memorandum

Date: February 15, 2002

To: Environmental Quality Commission

From: Stephanie Hallock, Director S Hallock

Subject: Agenda Item E, Action Item: Decision on Modification of the Umatilla Chemical Agent Disposal Facility (UMCDF) Hazardous Waste Permit to Incorporate Start-up Approval Conditions
March 7-8, 2002 EQC Meeting

Department Recommendation

The Department recommends the Commission find that sufficient cause exists to unilaterally modify the Umatilla Chemical Agent Disposal Facility (UMCDF) Hazardous Waste Storage and Treatment Permit No. ORQ 000 009 431 (HW Permit) and that the modification is necessary to protect human health and the environment. The Department also recommends that the Commission direct the Department to prepare an Order and Findings in accordance with the requirements of 40 CFR 270.32(b)(2) to modify the UMCDF HW Permit as described in Alternative 1 on Page 11 of this staff report.

The modification adds Permit Condition II.A.5. and Attachment 6 ("Requirements for Commencement of Unit and Facility Operations") to the UMCDF HW Permit. The modification requires UMCDF to obtain written Department approval for the start of surrogate operations, and written Commission approval for the start of chemical agent operations. Attachment A of this staff report contains the full text of the proposed HW Permit Attachment 6 and Permit Condition II.A.5.

Background

On September 21, 2001, the Commission directed the Department to prepare a proposed modification to the UMCDF HW Permit to require Department approval for the start of surrogate testing operations and Commission approval for the start of chemical agent operations. The Department prepared draft HW Permit Conditions and opened a public comment period on October 22, 2001. A public notice was sent to all persons on the Umatilla mailing list, and a detailed Fact Sheet was prepared. The Fact Sheet included a "Start-up Checklist" with associated evaluation criteria that the Department proposed to use as the primary tool for assessing the readiness of UMCDF to begin surrogate and agent operations. A copy of the Fact Sheet (which includes the original proposed Checklist beginning on Page B-9) is included here as Attachment B.

The public comment period opened on October 22, 2001. The Department held a public hearing in Hermiston on November 29, 2001 and received one oral comment. There was an additional opportunity for oral public comment before the Commission on December 7, 2001 (five Commenters provided oral testimony). Transcripts of both the November 29, 2001 and December 7, 2001 oral testimony are included in Attachment C.

The Department received a total of 14 written comments (from 12 Commenters) by December 10, 2001 when the public comment period closed. (Copies of written comments received were previously transmitted to the Commission via overnight mail on December 12, 2001.) The Department reviewed all of the oral and written comments received during the comment period. Attachment D includes a summary of the public comment received and copies of most of the written comments received.

Based on the public comment received, the concerns of the Permittees, and advice of legal counsel concerning enforceability, the Department has removed the two permit conditions originally proposed to be added to Module VI of the HW Permit. Instead, a permit condition will be added to Module II and a portion of the "Start-up Checklist" will be incorporated into the UMCDF HW Permit as Attachment 6 ("Requirements for Commencement of Unit and Facility Operations"). For those Checklist Requirements that were incorporated into Attachment 6, the Department clarified ambiguous language and removed redundant or unclear requirements. A discussion of the revisions the Department made in response to the comments is presented below.

Revisions to the Proposed HW Permit Modification

In response to public comments and upon advice of legal counsel, the Department has revised the HW Permit Modification as originally proposed. The Department has removed the language originally proposed for Module VI and instead added Permit Condition II.A.5 ("Commencement of Hazardous Waste Operations"), which states that "*The Permittee shall not introduce hazardous waste into any permitted hazardous waste treatment or storage unit until the applicable requirements of Attachment 6 have been met.*" The proposed Attachment 6 ("Requirements for Commencement of Unit and Facility Operations") incorporates some of the requirements of the original "Start-up Checklist," and retains the originally proposed requirement for the Permittees to obtain written approval of the Department and the Commission for starting surrogate and agent operations, respectively. (See Attachment A for the full text of the proposed additions.)

Key issues identified by the Department and/or Commenters are presented below, with a discussion on how the Department proposes to resolve the issue.

Key Issues

1. Approval of the proposed HW Permit Modification would delay the start

of surrogate testing and agent disposal operations at UMCDF, therefore increasing the risk to human health and the environment due to extended storage of the chemical weapons stockpile.

The Permittees argue that the proposed Permit Modification will delay the start of chemical agent operations because the Department's requirements "will have a negative effect on the Permittees ability to start-up...per the project schedule." Other Commenters also expressed concern that approval of the proposed Permit Modification would result in a delay of start-up.

The Department shares the concerns expressed by many Commenters that schedule delays will only prolong the risk of storage. The Department certainly does not intend to be the cause of any unwarranted delay. However, the Commission and the Department are tasked with ensuring the maximum protection of human health and the environment in Oregon. The Department believes that it is imperative to confirm that the increasingly intense pressure on the Permittees to begin chemical agent disposal operations will not result in any risk to Oregon's citizens or environment.[1]

The current UMCDF Project Schedule calls for beginning surrogate shakedown operations of Liquid Incinerator #1 on May 25, 2002 and Surrogate Trial Burns (STBs) on June 10, 2002. Other furnaces will subsequently be brought on-line in sequence for shakedown and trial burn operations.[2] GB nerve agent shakedown operations on Liquid Incinerator #1 and the Deactivation Furnace System are scheduled to begin on February 28, 2003. The proposed Permit Modification should not jeopardize either surrogate or agent operational schedules, assuming that UMCDF has demonstrated compliance with all permit conditions.

The Department has planned for a process that will allow the public 30 days to review and comment on the compliance status of UMCDF prior to the start of the first furnace's surrogate shakedown operations. The Department will review UMCDF's compliance status with all HW Permit Conditions (including the new Attachment 6) applicable to the start of surrogate shakedown operations. The Department will prepare a status report

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[1] The Program Manager for Chemical Demilitarization's (PMCD) "Project Schedule" in effect at the time the Commission approved the UMCDF HW Permit (February 1997) called for construction to be completed by December 2000 with agent operations beginning in October 2001 and finishing in early 2005 (40 months). UMCDF actually completed construction in August 2001, and agent operations are not slated to begin until February 2003. A recent revision to the processing schedule shows that PMCD now estimates it will take 70 months to destroy all chemical agent at the Umatilla Chemical Depot. No schedule has yet been produced for the processing of secondary wastes remaining after the completion of agent operations.

[2] Hazardous waste regulations allow a facility to operate with permitted waste feeds for up to 720 hours (equivalent to 30 days at 24 hours/day operation) prior to conducting actual "trial burn" tests. This period is known as a "shakedown" period. Because of the extreme toxicity of chemical warfare agents, UMCDF is required to first shake down and test each of the incineration systems with surrogate waste feeds (chemicals not as toxic as the chemical warfare agents, but more difficult to burn) prior to beginning shakedown operations with actual chemical warfare agents. UMCDF must comply with all the requirements of the HW Permit during the shakedown operations.

assessing UMCDF compliance status and offer the document for public comment.

The schedule for the start-up approval process for chemical agent operations will be similar to the surrogate start-up process, but it will also incorporate steps necessary for Commission review. The agent start-up approval process, like the surrogate process, will be designed to ensure that the approval process itself will not result in operational delays. Note that the public comment process will be applied only to the start of the first furnace to begin surrogate or agent shakedown operations.

Some Commenters felt that the Department's public comment process for the compliance assessment should not be limited to the first furnace, but should be applied on a unit-by-unit basis. However, the Department believes that applying this process on a unit-by-unit basis could easily lead to confusion and delay. The sequential nature of the unit testing, combined with the open public comment periods, would result in an almost continuous public comment process. Due to the administrative processes involved, the delay would be especially extensive if the Commission needed to make unit-by-unit start-up decisions once agent operations began.

The Department does not believe it is necessary to go through the public comment process for each treatment unit before it begins operation. It is the initial start of surrogate operations and subsequent start of agent operations that present the significant decision points warranting the public process.

The Department will of course continue to assess UMCDF's compliance status with applicable permit conditions for each subsequent treatment unit being brought on-line. The inclusion of Attachment 6 into the HW Permit will provide a compliance determination point on a unit-by-unit basis by including specific requirements that must be met prior to the start-up of any of the furnace systems, not just the first to begin operations.

The Department's schedule for both the surrogate and agent start-up public processes is presented in Attachment E. The schedule has been designed to ensure that the public has the most up to date information possible, without affecting the scheduled start date of UMCDF operations. The Department will provide 30 days notice of the public hearing date by sending the notice out to the Umatilla mailing list prior to the actual opening of the comment period. The compliance assessment for public review will be available at information repositories on the opening date of the 30-day public comment period, and will be sent automatically to anyone who requests a copy in response to the public notice.

All dates in Attachment E are approximate and assume that agent operations will begin February 28, 2003 and that this matter will be taken up at the January 2003 regular meeting of the Commission.

2. *The addition of the proposed Permit Conditions imposes an additional*

and unnecessary "approval" step on a Permittee that has already gone through a complete permit approval process. The Department and Commission lack the regulatory authority to modify the UMCDF HW Permit as proposed. There is insufficient justification for the modification as required by 40 CFR 270.41(a)(1) and 40 CFR 270.41(a)(2).

The Permittees argue that there is no need, and no regulatory basis, for the proposed modification. The Associated Oregon Industries expressed concern that this proposed modification could set a precedent for other "controversial" permits and have a "chilling effect" on business in the state. The Department concedes that an additional approval step is being imposed on the Permittees, but does not agree that the approval step is "unnecessary," nor does it agree that the Department lacks the regulatory authority to modify the UMCDF HW Permit as proposed here.

Upon Department request, the Department of Justice reviewed the legal issues raised by the Permittees and concluded that "The EQC has adequate legal authority to modify the UMCDF permit as proposed by the Department if the Commission (1) makes the requisite findings for unilateral permit modifications pursuant to 40 CFR 270.41 and (2) finds on the basis of the administrative record that the permit modification is necessary to protect human health and the environment." (See Attachment F, Memorandum from the Department of Justice.)

The Commission and the Department clearly have broad authority to regulate the treatment, storage, and disposal of hazardous waste. Oregon Revised Statute (ORS) 466.010 states that the Legislative Assembly's purpose is to "protect the public health and safety and environment of Oregon to the maximum extent possible," and to "exercise the maximum amount of control over actions within Oregon relating to hazardous waste and PCB transportation and treatment or disposal."

In addition to the statutory authority cited above, Section 3005 of RCRA gives broad "omnibus" permitting authority to regulatory agencies. 40 CFR 270.32(b)(2) states that "Each permit issued under Section 3005 of this act shall contain terms and conditions as the Administrator or State Director determines necessary to protect human health and the environment."

The Department of Justice identifies one "significant limitation on the invocation of omnibus authority." The administrative record must include a "properly supported finding that an exercise of that discretionary authority is necessary to protect human health or the environment." In addition, there must be a basis to unilaterally modify the permit in the first place.

Any decision to unilaterally modify the UMCDF HW Permit must be based on a determination that sufficient cause exists to warrant such action, as defined in 40 CFR 270.41. The Department believes that sufficient cause does exist to warrant the proposed modification, based on the criteria listed in 40 CFR 270.41(a)(1) and 270.41(a)(2).

40 CFR 270.41(a)(1) gives the following criteria as justification for permit modification:

> *"There are material and substantial alterations or additions to the permitted facility or activity which occurred after permit issuance which justify the application of permit conditions that are different or absent in the existing permit."*

Since the UMCDF HW Permit was issued in early 1997 there have been numerous alterations to the design of UMCDF as permitted, and to the HW Permit itself:

- UMCDF was constructed without the Dunnage Incinerator, which was initially proposed by the Permittees and accepted by the Commission as the primary treatment unit for secondary waste;
- UMCDF submitted an extensive design upgrade to the Pollution Abatement System Carbon Filter System;
- There have been 1,102 "Engineering Change Proposals," representing 4,866 engineering changes made during UMCDF construction;
- The Permittees have made 81 submittals to the Department under HW Permit Condition II.Q., which allows the Permittees to inform the Department when equipment, materials, or procedures are being replaced with "equivalent or superior" items and so do not require a permit modification; and
- The Permittees have submitted 134 Permit Modification Requests to the Department, including five Class 3 modifications, 31 Class 2 modifications and 98 Class 1 modifications.

The UMCDF Waste Analysis Plan (Attachment 2 of the HW Permit) lists 23 different waste streams identified as "process wastes requiring treatment at the UMCDF." With the elimination of the Dunnage Incinerator, over half of the waste streams now have no identified permitted treatment unit.

The Department reviews Engineering Change Proposals with the Permittees through a mutually agreed upon process to identify changes that require permit modifications. Although many of these changes could be deemed "minor," the cumulative impact of so many changes is potentially significant. Class 1 and Class 2 modifications by definition "do not substantially alter the conditions in the permit or operations of the facility." Regardless, Class 2 modifications are considered significant changes and the sheer number of changes again produces a cumulative effect. Class 3 modifications are considered very significant permit modifications and are used only for major changes to the facility or its operation.

The only Class 3 modification approved by the Commission to date added the Army's Systems Contractor (Washington Demilitarization Company, then

known as Raytheon) to the HW Permit as a Co-Permittee. Two Class 3 modification requests (Secondary Waste Compliance Schedule and Dunnage Incinerator Improvements) were withdrawn by the Permittees. The remaining Class 3 requests (Incorporation of Air Emission Standards and Permitted Storage in J-Block) are still in process.

40 CFR 270.41(a)(2) lists additional criteria for determining if sufficient cause exists to modify a permit:

> *"The Director has received information. Permits may be modified during their terms for this cause only if the information was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and would have justified the application of different permit conditions at the time of issuance."*

Because UMCDF has been constructed without the Dunnage Incinerator, there is no permitted treatment technology for the tons of secondary waste that will be generated during operations. The Army has made some progress on developing and demonstrating treatment technologies for secondary waste, but has been unable to keep past commitments to the Commission concerning the schedule for resolution of secondary waste issues. The concern remains that treating and disposing of secondary waste is a low priority for UMCDF, despite repeated assurances that there will be no "legacy wastes" left at the Umatilla Chemical Depot upon completion of stockpile disposal.

Many of the items discussed above are significant issues in and of themselves, and when taken together indicate the extent of the changes that have occurred since UMCDF was originally permitted. Different permit conditions would likely have been applied in 1997 if the Commission and the Department had reason to believe that the Permittees would not construct the Dunnage Incinerator. The extended operational schedule for disposal of chemical agents, and the current lack of a mechanism to enforce requirements concerning treatment and disposal of secondary wastes, all pose potential threats to human health and the environment.

The proposed permit modification gives the Department and the Commission the opportunity to add enforceable conditions to the UMCDF HW Permit related to the development of treatment and disposal technologies for secondary wastes. There is more than adequate justification for the modification due to the unique nature of this facility, the extreme toxicity of the materials to be treated, the potential threat to human health and the environment, the number of changes to the facility during the construction process, the number of permit modification requests submitted by the Permittees, the failure of the Permittees to identify and permit treatment technologies for secondary waste, and the intense pressure being brought to bear on the Permittees to get operations started at UMCDF.

3. *The Permit Modification is unnecessary because the Permittees already require a rigorous and defined internal process ("Pre-Operational Survey") prior to the start-up of a chemical demilitarization facility.*

At the request of the Commission, the Permittees submitted a copy of "*Policy Statement No. 28, Preoperational Surveys and Operational Readiness Evaluations*," Program Manager for Chemical Demilitarization (PMCD), June 1, 2000 (DEQ Item No. 01-1495). Subsequently, the Permittees also sent a binder titled "*PMCD Pre-Op Policy & Program Examples*," (DEQ Item No. 02-0011) which included Policy Statement No. 28 and example reports and results from pre-operational surveys conducted prior to agent operations at the Tooele Chemical Agent Disposal Facility (TOCDF). The Department has reviewed the Policy Statement and the documents pertaining to TOCDF Preoperational Surveys.

The Department agrees that the Preoperational Survey process is extensive and includes review of environmental monitoring, permitting, documentation, and waste management issues. However, the Department notes that the policy and process are required only for the start of agent operations, although PMCD Policy Statement No. 28 states that "the process may be applied to other hazardous operations." It is unclear whether the Permittees intend to conduct such a process prior to the start of surrogate operations, or what the scope of the survey will be if it is conducted.

The Department does not agree that it would be appropriate to simply "fold in" the Department's checklist items into the Army's Preoperational Survey. The Department's start-up checklist was developed only as an internal tool to assess UMCDF's HW Permit compliance status as a prerequisite for approval to start surrogate and agent operations.

The Department has a responsibility to conduct an assessment of UMCDF compliance status that is independent of any internal Permittee process and is in keeping with the Department's commitment for an open and inclusive public process during the life of the Umatilla project. The proposed "Attachment 6" (discussed further below) includes requirements for the Permittees to provide the Department results from any Preoperational surveys conducted at UMCDF, and to verify that the Program Manager for Chemical Demilitarization has authorized start-up of agent operations at the facility.

The final authority to start either surrogate or agent operations at UMCDF resides with the State of Oregon, not with the Permittees.

4. *If the Commission approves the Proposed Modification, the Checklist should be incorporated into the UMCDF HW Permit to reduce the uncertainty faced by the Permittees. The Permittees should not be held responsible for completing Checklist Items that they have no control over. The Checklist is redundant, contains ambiguous language, and incorrectly*

interprets Permit Conditions.

Numerous Commenters noted that many of the items on the Department's checklist were already requirements explicitly stated in the UMCDF HW Permit. The "Start-up Checklist" (Checklist) was originally developed simply as a tool for internal use. It was generated in part by reviewing each condition in the HW Permit and noting any condition that required some specific action by the Permittees, or by the Department, prior to starting surrogate or agent operations in any given hazardous waste treatment or storage unit.

The Checklist was then augmented by reviewing other project documentation and adding items that perhaps did not originate from a specific HW Permit Condition. For example, some Permit Modification Requests are approved contingent upon the Permittees accomplishing some further action at a later date (such as updating a procedure or specification). In some cases this resulted in listing requirements on the Checklist that had already been completed, which would have been noted during the assessment process.

The Checklist was further augmented with requirements related to issues that have been discussed extensively with the Permittees in the past (by both the Department and the Commission), but which were perhaps not explicit in any HW Permit Condition or Permit Modification Request approval (resolution of secondary waste issues, for example). The Department then developed evaluation criteria for determining whether or not a requirement had been met. To resolve these issues, the Department has revised the Permit Modification as originally proposed. Items that were already included in the HW Permit as specific permit conditions, stated as conditions of approval for Permit Modification Requests, resident in other permits under Department control (air and water), and/or already completed were not specifically included in the proposed attachment to the HW Permit discussed below.

Incorporation of Checklist Requirements into the UMCDF HW Permit

The Checklist originally contained 31 individual requirements, each with one or more evaluation criteria. The Department is now proposing to incorporate selected Checklist items into a new attachment to the UMCDF HW Permit as "Requirements for Commencement of Unit and Facility Operations." Attachment A shows the specific requirements that must be met prior to the commencement of surrogate and agent shakedown operations for each permitted treatment unit at UMCDF. When applicable, the original related Checklist item is noted in a text box (See Page B-13 for the original Checklist item.)

The Checklist items that the Department chose to incorporate as permit conditions in the new attachment include those related to updating drawings and specifications; secondary waste identification, characterization, and treatment technologies; tracking of waste and munitions; 24-hour access to Department staff; and conditions related to the "Pre-Operational Surveys" conducted by the Program Manager for Chemical Demilitarization. In

addition, the Permittees must obtain written approval from the Department prior to commencing surrogate operations and written approval from the Commission prior to commencing agent operations.

As shown in Attachment A, Permit Conditions B.1 through B.3 must be met prior to introducing hazardous waste into each of the permitted treatment unit, including the furnaces. Permit Conditions C.1 through C.6 must be met prior to the commencement of surrogate shakedown operations and Permit Conditions D.1 through D.10 must be met prior to the commencement of agent shakedown operations.

Conditions C.2 and C.4. require the submittal of Permit Modification Requests to the Department to add specified secondary wastes to the list of UMCDF's permitted waste feeds. These requirements are not expected to impact UMCDF's schedule. Condition C.3. requires that the Permittees make a decision on the treatment method to be utilized for agent-contaminated carbon and report that decision to the Department. The Permittees have indicated that the decision on carbon treatment is not planned until July 2002.

Since surrogate operations are currently scheduled for May 2002, imposing this requirement as a condition to start surrogate operations has the potential to delay UMCDF surrogate start-up. Alternatively, this requirement could be moved to Section D and made a requirement for the commencement of agent shakedown operations. However, the Department is concerned about the slow progress of demonstrating a carbon treatment technology. UMCDF estimates that it will generate over 700 tons of agent-contaminated carbon, and it all must be stored until the completion of chemical agent munition processing. The Department is extremely concerned that such a significant waste stream still has no identified treatment technology.

It has been over three years since the Army informed the Department that the Dunnage Incinerator (the original unit for carbon disposal) was officially being put on "hold" (August 1998). In October 1998 the Permittees presented a plan to the Department indicating that they would be testing the use of the Deactivation Furnace System (DFS) to treat carbon by using the "Carbon Micronization System" (CMS) to pulverize spent carbon for injection into the DFS. It was apparent at that time that the CMS had been under development for many years prior to that.

The CMS has been installed at the Johnston Atoll Chemical Agent Disposal Facility (JACADS), and the necessary modifications have been made to the JACADS DFS. Some testing has already been conducted (apparently successfully), but the final performance test of the system has been repeatedly delayed and is now scheduled for March 2002. To the Department's knowledge, no other carbon treatment technology is being considered.

Condition C.5. mandates that the Department and the Permittees come to an

agreement on access for Department staff to the facility. Discussions with the Utah DEQ indicate that Utah regulatory staff have unrestricted 24-hour access to the facility at Tooele, and that procedures were developed between the Utah DEQ and the facility to reach agreement on procedures that met the needs of both parties. The Department will work with the Permittees on a mutually acceptable agreement to ensure that Department staff have adequate and prompt access without compromising UMCDF's need to satisfy security and safety concerns.

Prior to beginning agent shakedown operations the Permittees must meet the requirements of Permit Conditions D.1 through D.10. Conditions D.2, D.4, and D.5 are all related to secondary waste issues.

Permit Condition D.4 requires that the Permittees complete the characterization of wastes currently stored at the Umatilla Chemical Depot, but not yet permitted for treatment at UMCDF. The HW Permit requires that the Permittees treat all the wastes at the Umatilla Depot, and yet very little progress has been made to characterize the wastes that will need to be treated. The Permittees have stated that they have every intention of treating Depot or UMCDF secondary wastes whenever the opportunity arises in terms of furnace availability. The Department fully supports that concept, so it is important that these wastes be permitted as waste feeds prior to the start of agent operations.

Permit Conditions D.6 through D.9 are all related to the "Preoperational Survey" material that the Permittees submitted as part of their comments on this proposed modification. The Department identified key activities that, when accomplished, will assure the Department that the necessary reviews have been conducted not only for environmental compliance, but also for areas related to safety, procedures, quality assurance and other operational readiness issues. The Permittees will be required to provide copies of Surveys/Evaluations as well as verification that a corrective action has been taken or scheduled for items classified as "Category 1/Category 2" as defined by the Program Manager for Chemical Demilitarization (PMCD). In addition, the Permittees must provide verification that PMCD has authorized start-up of agent operations.

EQC Action Alternatives

1. *Modify the UMCDF HW Permit in accordance with the Department's recommendation to add Permit Condition II.A.5. and Attachment 6. The new Permit Conditions require UMCDF to obtain written Department approval for start of surrogate operations, written Commission approval for start of chemical agent operations, and lays out the specific requirements that must be met before commencement of hazardous waste operations in permitted treatment or storage units.*

   The Department believes there is sufficient justification for the proposed

modification and recommends that the Commission modify the UMCDF HW Permit as proposed. The proposed modification gives the Department and the Commission explicit authority to authorize start of hazardous waste operations and clearly defines the conditions that must be met by the Permittees prior to such authorization.

There is some chance that the Permittees might not be able to comply with one or more of the conditions in the proposed Attachment 6 prior to the scheduled start of either surrogate or agent operations. This could cause a delay in the start of operations at UMCDF and therefore prolong the risk of storage. Modifying the HW Permit as proposed requires the Commission to make the requisite findings for unilateral permit modifications pursuant to 40 CFR 270.41. The Commission must also find that the permit modification is necessary to protect human health or the environment. These findings, and the approval of start-up operations, will be subject to legal challenges.

2. *Modify the UMCDF HW Permit to add Permit Conditions VI.A.6.ii.a. and VI.A.6.iii.a only (as originally proposed—see Attachment B), which would require UMCDF to obtain written Department approval for start of surrogate operations and written Commission approval for chemical agent operations.*

   This alternative represents very little risk of start-up delay while still providing the Department and the Commission explicit approval authority for the start of UMCDF surrogate and agent operations, respectively. The Department would conduct a compliance assessment prior to surrogate operations and again prior to agent operations. However, some items originally listed on the "Start-up Checklist" would not be enforceable requirements under this alternative because the Checklist would not be incorporated into the HW Permit.

   This alternative does not address the Permittees' concern that any evaluation conducted use clear and concise regulatory standards.

3. *Take no action.*

   This alternative provides the Department and the Commission no role in explicitly approving the start of chemical agent operations. UMCDF would be able to begin hazardous waste operations if they are in compliance with all HW Permit requirements and Permit Modification Request approval conditions applicable to the treatment/storage unit commencing operations. The "no-action" alternative represents the least risk to the Permittees' Project Schedule.

Rationale and Next Steps

The Department has recommended Alternative #1 because it believes that there is sufficient cause and justification to modify the UMCDF HW Permit to

include these new requirements.

Requiring the Permittees to obtain explicit approval for starting both surrogate and agent operations provides the Department, the Commission, and the public a final opportunity to assess the facility's overall compliance status through an open and defined process. The incorporation of selected Checklist Requirements into the HW Permit as "Attachment 6" gives the Department and the Commission an enforcement mechanism and provides clear standards for the Permittees.

If the Commission approves the proposed modification (with or without changes), the Department, in consultation with legal counsel, will prepare the administrative record and the requisite Findings for Commission signature. The public will be sent a Notice of Decision (this Staff Report and the Findings will serve as a Response to Comments).

Attachments

A Additional Conditions Proposed for UMCDF HW Permit

B Fact Sheet for the Proposed Modification of Hazardous Waste Storage and Treatment Permit for the Umatilla Chemical Agent Disposal Facility, Permit Modification No. UMCDF-01-028-MISC(EQC), "Approval Process for UMCDF Operation."

C Transcripts of Oral Testimony Received November 29, 2001 and December 7, 2001.

D Written Comments received related to Proposed Permit Modification No. UMCDF-01-028-MISC(EQC).

E Public Comment Process and Timeline for Start-up Approval of UMCDF Surrogate and Agent Operations.

F Memorandum from Larry H. Edelman, Assistant Attorney General to Wayne C. Thomas, DEQ Program Administrator, "Proposed UMCDF Permit Modification for Operation," January 25, 2002.

Available Upon Request

- Staff Report for the September 21, 2001 meeting of the Environmental Quality Commission, "Agenda Item H: Approval Process for Umatilla Chemical Agent Disposal Facility Operation," dated August 31, 2001. [DEQ Item No. 01-1103]
- Transmittal memorandum from Wayne C. Thomas (Adminstrator, DEQ Chemical Demilitarization Program) to the Environmental Quality Commission and Stephanie E. Hallock (Director). Transmitted 16 documents related to public comments received on Proposed Permit Modification No. UMCDF01-028-MISC(EQC). [DEQ Item No. 01-1494]
- Hearings Officer Report, Public Hearing held November 29, 2001 in Hermiston, Oregon. [DEQ Item No. 01-1425]

- "Program Manager for Chemical Demilitarization Preoperational Policy and Program Examples," Program Manager for Chemical Demilitarization (PMCD), submitted January 2, 2002. [DEQ Item No. 02-0011]

Approved:

Author(s): Sue Oliver

Program: for Wayne C. Thomas / Thomas J Beam

Report Prepared By: Sue Oliver, Sr. Hazardous Waste Specialist

Phone: (541) 567-8297

ATTACHMENT A

Additional Conditions Proposed for UMCDF HW Permit

Permit Condition II.A.5.
and
Attachment 6, "Requirements for Commencement of Unit and Facility Operations"

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[Text in shaded boxes is provided for information only.]

The text below will be incorporated into Module II of the UMCDF Hazardous Waste Storage and Treatment Permit (ID No. ORQ 000 009 431)

MODULE II—GENERAL FACILITY CONDITIONS

II.A. DESIGN AND OPERATION OF FACILITY

II.A.5. Commencement of Hazardous Waste Operations

i. The Permittee shall not introduce hazardous waste into any permitted hazardous waste treatment or storage unit until the applicable requirements of Attachment 6 have been met.

The following section will be incorporated into the UMCDF HW Permit as "Attachment 6"

ATTACHMENT 6
Requirements for Commencement of Unit and Facility Operations

A. Introduction

In accordance with Permit Condition II.A.5., the Permittee shall not introduce hazardous waste into any permitted hazardous waste treatment or storage unit until the requirements of this Attachment have been met. It is the purpose of this Attachment to clarify specific requirements that must be met prior to the commencement of Shakedown Period I (Surrogate Shakedown) and Shakedown Period II (Agent Shakedown) for the first incinerator to commence Shakedown Period I or II. This Attachment also includes requirements for commencement of Shakedown Period I or II on each individual incinerator, and requirements to be met prior to introducing hazardous waste into other permitted treatment and storage units.

B. Requirements for Commencement of Operations of Permitted Hazardous Waste Treatment Or Storage Units

Prior to introducing hazardous waste into any permitted treatment or storage unit, or commencing a Shakedown Period I or II for the Liquid Incinerators (LICs) 1 or 2, Deactivation Furnace System (DFS), or Metal Parts Furnace (MPF), the Permittee must:

B.1. Be in compliance with all HW Permit Conditions applicable to the permitted treatment or storage unit;

B.2. Be in compliance with applicable conditions located elsewhere in this Attachment; and

B.3. Be in compliance with all applicable Permit Modification Request approval conditions imposed by the Department.

C. Requirements for Commencement of Shakedown Period I (Surrogate) on the First Incinerator

Prior to commencing a Shakedown Period I (Surrogate) for the first incinerator, the Permittee must complete all of the following:

[C.1.: Related to Original Checklist Requirement 23]

C.1. No less than 30 days, nor more than 90 days, prior to the beginning of the first Shakedown Period I, the Permittee must notify the Department in writing that each of the UMCDF drawings in Volume V of the HW Permit Application, and the specifications contained in Volumes IV, VI, and VII, have been certified by a qualified Professional Engineer licensed in Oregon within the preceding 12 months, or that the Permittee has reviewed the specification(s) or drawing(s) and determined that no update is needed;

[C.2.-C.4.: Related to Original Checklist Requirement 24]

C.2. The Permittee must submit Permit Modification Request(s) to the Department to add secondary wastes expected to be generated by UMCDF operations to the list of permitted waste feed streams to the Liquid Incinerators, Deactivation Furnace System and/or the Metal Parts Furnace;

C.3. The Permittee must notify the Department in writing that a technical decision has been reached on the treatment method that will be utilized for agent-contaminated carbon. The notification must include supporting information concerning the basis for the decision;

C.4. The Permittee must submit Permit Modification Request(s) to the Department to modify the Metal Parts Furnace (design and permitted waste feed streams) as necessary to treat personal protective equipment and other halogenated and non-halogenated plastics;

[C.5.: Related to Original Checklist Requirement 28]

C.5. The Permittee and the Department must have reached agreement on the procedure to ensure that specified Department staff will have adequate 24-hour access,

without undue delay, to the Department's on-site work spaces both outside the double-fence area of UMCDF, and within UMCDF; and

C.6. The Permittee must have written notification from the Department authorizing the start of surrogate shakedown operations.

D. Requirements for Commencement of Shakedown Period II (Agent) on the First Incinerator

Prior to commencing a Shakedown Period II (Agent) for the first incinerator, the Permittee must complete all of the following:

[D.1.: Related to Original Checklist Requirement 26]

D.1. The Permittee must implement a waste/munitions tracking procedure and system approved by the Department;

[D.2.: Related to Original Checklist Requirement 22]

D.2. The Permittee must obtain approval of the Class 3 Permit Modification Request UMCDF-00-004-WAST(3), "Permitted Storage in J-Block" providing additional permitted storage for secondary wastes generated by UMCDF operations. Any required physical and/or procedural changes necessary for the storage of secondary wastes must be implemented by UMCDF;

[D.3.: Related to Original Checklist Requirement 23]

D.3. No less than 30 days, nor more than 90 days, prior to the beginning of the first Shakedown Period II, the Permittee must notify the Department in writing that each of the UMCDF drawings in Volume V of the HW Permit Application, and the specifications contained in Volumes IV, VI, and VII, have been certified by a qualified Professional Engineer licensed in Oregon within the preceding 12 months, or that the Permittee has reviewed the specification(s) or drawing(s) and determined that no update is needed;

[D.4.: Related to Original Checklist Requirement 24]

D.4. The Permittee must complete the characterization and/or segregation of UMCD wastes and obtain Department approval of Permit Modification Request(s) to add all UMCD wastes to the list of permitted waste feed streams to the Liquid Incinerators, Deactivation Furnace System and/or the Metal Parts Furnace;

[D.5.: Related to Original Checklist Requirement 24]

D.5. No less than 45 days, nor more than 90 days, prior to the beginning of the first Shakedown Period II, the Permittee must submit a progress report to the Department concerning the status of the design and implementation of the carbon treatment technology identified per Permit Condition C.3. of this attachment;

[D.6.-D.9.: Related to Original Checklist Requirement 25]

D.6. The Permittee must provide to the Department copies of any Pre-Operational Survey(s) and/or Operational Readiness Evaluation(s) conducted in accordance with the Program Manager for Chemical Demilitarization's (PMCD) Policy Statement No. 28 governing the conduct of such surveys or evaluations at demilitarization facilities;

D.7. The Permittee must provide to the Department a verification statement that all nonconformances/observations designated as "Category 1" from Pre-Operational Surveys and/or Operational Readiness Evaluations have been resolved in accordance with PMCD's Policy Statement No. 28;

D.8. The Permittee must provide to the Department the schedule for resolution of items identified in Pre-Operational Surveys and/or Operational Readiness Evaluations that were designated as "Category 2," in accordance with PMCD's Policy Statement No. 28;

D.9. The Permittee must provide to the Department a copy of the PMCD authorization to start chemical agent operations; and

D.10. The Permittee must have written notification from the Environmental Quality Commission authorizing the start of agent shakedown operations.

ATTACHMENT B

Fact Sheet
for the
Proposed Modification of the
Hazardous Waste Storage and Treatment Permit
for the
Umatilla Chemical Agent Disposal Facility
Permit Modification No. UMCDF-01-028-MISC(EQC)
"Approval Process for UMCDF Operation."
(DEQ Item No. 01-1296)

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State of Oregon
Department of
Environmental
Quality

FACT SHEET

Proposed Modification of the
Hazardous Waste Storage and Treatment Permit
for the
Umatilla Chemical Agent Disposal Facility
(Permit No. ORQ 000 009 431)

Permit Modification No. UMCDF-01-028-MISC(EQC) "Approval Process for UMCDF Operation"

Introduction

In February 1997, the Environmental Quality Commission ("Commission" or EQC) and the Department of Environmental Quality ("Department" or DEQ) issued a Hazardous Waste Storage and Treatment Permit (HW Permit) to the United States Army[1] to build and operate the Umatilla Chemical Agent Disposal Facility (UMCDF). Construction of UMCDF started in June 1997 and is now essentially complete. The UMCDF is currently in a "systemization"[2] phase prior to the start of actual hazardous waste treatment operations.

On September 21, 2001 the Commission directed the Department to propose a HW Permit modification for public review and comment. The proposed modification will add a HW Permit Condition requiring the UMCDF Permittees to obtain written DEQ approval prior to the start of surrogate testing operations of the UMCDF incinerators. The DEQ is also proposing the addition of a HW Permit Condition requiring the UMCDF Permittees to obtain written approval from the EQC prior to the start of chemical agent treatment operations. This Fact Sheet describes the proposed modification and provides background information concerning the basis for the proposed modification.

Attachment A is a public notice that was mailed to interested parties and contains detailed information concerning information repositories and public hearings related to the proposed modification. Attachments B and C are related to a draft "Start-up Checklist" listing various requirements that must be fulfilled before start of surrogate and/or agent operations at UMCDF (see "How the Department Proposes to Implement the New Permit Conditions" on Page 4 for further discussion of the Start-up Checklist).

<u>Location and Purpose of UMCDF</u>

The UMCDF is located in northeastern Oregon at the Umatilla Chemical Depot, about seven miles west of Hermiston, Oregon (about 175 miles east of Portland, Oregon). The address is 78072 Ordnance Road, Hermiston, OR 97838-9544. The UMCDF is a hazardous waste treatment facility that will use four incinerators to destroy a stockpile of chemical warfare agents that has been stored at the Umatilla Chemical Depot (UMCD) since 1962.

The chemical agents stored at UMCD include nerve agents and blister ("mustard") agents in liquid form. Nerve agents ("GB" and "VX") are contained in munitions, such as rockets, projectiles, and land mines,

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[1] There are three "Permittees" named on the UMCDF HW Permit. The U.S. Army Umatilla Chemical Depot and the U.S. Army Project Manager for Chemical Stockpile Disposal (PMCSD) are named as Owner and Operator of UMCDF. Washington Demilitarization Company (the Army's construction and operations contractor) is named as a co-operator of UMCDF.

[2] Systemization is a pre-operational testing phase that involves testing components, instruments, and associated equipment using non-hazardous materials and waste feeds (such as simulated munitions filled with ethylene glycol to test conveyors, controls, and feed mechanisms).

and in large containers, such as spray tanks, bombs, and "ton containers." Mustard agent is stored only in ton containers.

Description of the UMCDF

UMCDF includes two liquid injection incinerators to destroy liquid nerve and blister agents. In addition to the liquid incinerators there are two other high temperature furnaces that will be used for thermal treatment of metal parts ("Metal Parts Furnace") and destruction of explosives and propellants ("Deactivation Furnace System"). All container handling, munitions disassembly, and incinerator loading will be conducted within an enclosed building. Emissions from the building and the incinerators will be directed through pollution control systems before being released to the atmosphere. Computer controls will shut down waste feed to the incinerators if proper operating conditions are not maintained or if chemical agent is detected in the exhaust from any of the four incinerators.

Proposed Modification to the UMCDF HW Permit

Because the UMCDF HW Permit is considered an operating document, modifications are expected to occur over the duration of the project. For example, modifications are required if there are alterations to the originally permitted facility, new information becomes available to the Permittees or to the Department, or if there are new regulations that apply to the facility. There have already been over 100 modifications made to the HW Permit at the request of the Permittees.

The proposed modification will add two new conditions to the UMCDF HW Permit. The new Permit Conditions will require the UMCDF Permittees to obtain written approval from the Department prior to the start of surrogate "shakedown"[3] operations and written approval from the Commission prior to the start of chemical agent shakedown operations. The approval requirement would not apply to the start-up of each furnace, but rather to the start-up of the first UMCDF furnace to feed surrogate or agent material during the surrogate and agent testing phases. Shakedown and Trial Burns (surrogate and agent) will be conducted on each UMCDF Furnace (Liquid Incinerators 1 & 2, Deactivation Furnace System, and Metal Parts Furnace), but furnace testing will usually be sequential, not simultaneous.

The Department proposes to add two Permit Conditions to Module VI ("Short Term Incineration—Shakedown, Trial Burn and Post-Trial Burn") of the HW Permit in a section titled "Shakedown" (Condition VI.A.6.). The Department proposes to revise Condition VI.A.6. by adding Permit Conditions VI.A.6.ii.a. and VI.A.6.iii.a. as indicated by the underlined text below:

VI.A.6. Shakedown

i. Shakedown Periods I and II for each incinerator shall be conducted in accordance with the approved trial burn plans provided for in Permit Condition VI.A.5.

ii. Shakedown Period I for each incinerator shall begin with the initial introduction of surrogate into the furnace system following construction and shall end with the start of the surrogate trial burn.

Proposed Text Addition →

a. The Permittee shall not commence Shakedown Period I for the first furnace system to begin surrogate shakedown until it has received written notification from the Department approving the commencement of surrogate operations.

[3] Hazardous waste regulations allow a facility to operate with permitted waste feeds for up to 720 hours (equivalent to 30 days at 24 hours/day operation) prior to conducting actual "trial burn" tests. This period is known as a "shakedown" period. Because of the extreme toxicity of chemical warfare agents, UMCDF is required to first test the incineration systems with surrogate waste feeds (chemicals not as toxic as the chemical warfare agents, but more difficult to burn) prior to beginning shakedown operations with actual chemical warfare agents.

iii. Shakedown Period II for each incinerator shall begin with the introduction of chemical agent into the incinerator system and shall end with the start of the chemical agent trial burn. There shall be a separate Shakedown Period II for each chemical agent for each incinerator.

Proposed Text Addition ⇨

a. The Permittee shall not commence Shakedown Period II for the first furnace system to begin agent shakedown until it has received written notification from the Environmental Quality Commission approving the commencement of chemical agent operations.

iv. Each shakedown period shall not exceed 720 operating hours. The Permittee may petition the Department for one extension of any shakedown period for up to 720 additional operational hours for the surrogate test or chemical agent tests in accordance with 40 CFR §270.62(a).

Regulatory Basis to Modify UMCDF HW Permit

Regulations regarding the permitting and operation of hazardous waste treatment, storage, and disposal facilities are known as the "Resource, Conservation and Recovery Act" (RCRA) regulations. They are contained in Title 40 of the Code of Federal Regulations (CFR). In accordance with the RCRA regulations, the State of Oregon has been authorized by the U.S. Environmental Protection Agency to implement its own hazardous waste program. Oregon has adopted RCRA regulations as Oregon Administrative Rules.

In accordance with 40 CFR §270.41, the Department/Commission may not modify the UMCDF HW Permit unless sufficient cause [as defined in 40 CFR §270.41(a) and (b)] exists to warrant such action. If the Department/Commission determines that sufficient cause exists to modify the UMCDF HW Permit, a draft Permit must be prepared and processed in accordance with the applicable requirements of 40 CFR Part 124, Subpart A.

The Department believes that sufficient cause, based on two of the criteria listed in 40 CFR §270.41(a), does exist to warrant a modification of the UMCDF HW Permit to require Department/Commission approval to initiate each of the two phases of facility hazardous waste operations (surrogate and chemical agent). These two applicable causes for modification are:

- 40 CFR §270.41(a)(1) -- "*There are material and substantial alterations or additions to the permitted facility or activity which occurred after permit issuance which justify the application of permit conditions that are different or absent in the existing permit.*"
- 40 CFR §270.41(a)(2) -- "*The Director has received information. Permits may be modified during their terms for this cause only if the information was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and would have justified the application of different permit conditions at the time of issuance.*"

There have been a significant number of changes made to the original design and operating parameters of UMCDF, and public interest and concern remains high. For example, the Permittees have indicated that they do not intend to operate UMCDF with the Dunnage Incinerator. The Dunnage Incinerator was originally permitted to treat a significant portion of the secondary waste that will be generated during chemical agent disposal operations. The proposed modification will allow the Department and the Commission to ensure that appropriate secondary waste treatment methodologies are identified prior to approval of the start of surrogate operations.

In addition, the significant compression of the UMCDF systemization and testing schedule has affected the ability of the Department to evaluate UMCDF readiness with a relatively informal process and in a sequential manner. Modification of the HW Permit provides the tool necessary for the Commission and

Department to make a determination in an open public process that UMCDF has satisfied the requirements of the State of Oregon prior to the operational start-up.

The Department's Recommendation to the Commission

On September 21, 2001 the Department presented a report[4] to the Commission recommending that the Commission modify the UMCDF HW Permit to explicitly require the Permittees to obtain Department approval prior to starting surrogate operations and Commission approval prior to the start of chemical agent operations. The Department believes that requiring the Permittees to obtain explicit approval for starting both surrogate and agent operations provides the Department, the Commission, and the public a final opportunity to assess UMCDF's overall readiness through an open and defined process.

The Department recommended to the Commission that it delegate the authority to approve the start of surrogate operations to the Department. Surrogate operations are, in effect, part of the testing process for UMCDF. Success during surrogate operations will then become a significant factor in the Department's evaluation and recommendation to the Commission on whether UMCDF is prepared to go to chemical agent operations. Commission approval for the start of chemical agent operations is appropriate, since it is the chemical agent that presents the greatest risk to human health and the environment.

How the Department Proposes to Implement the New Permit Conditions

The Department proposes to use a defined, rigorous, and public evaluation process to assess UMCDF's readiness to begin surrogate operations (similar to the current process, with a Request for Comments and a Public Hearing). Successful demonstration of furnace operations during surrogate trial burns is required before UMCDF is considered ready to move into operations with chemical agent. After completing its review of the results of the surrogate trial burns, the Department would again undertake a public evaluation process and make a recommendation to the Commission on whether UMCDF has demonstrated readiness to move to chemical agent operations. The Commission will make the final decision on whether UMCDF will be allowed to begin agent operations.

To complete the operational readiness evaluation the Department has developed a "Start-up Checklist" that includes requirements that must be fulfilled prior to the beginning of surrogate and/or chemical agent operations. Each Checklist Requirement is accompanied by a defined set of criteria that will be used to evaluate whether the requirement has been met. The Department would use the Start-up Checklist (with associated evaluation criteria), a public comment process, and field evaluations to complete its review and make the surrogate start-up decision. The Department would follow the same process to develop its recommendation to the Commission on agent start-up.

The Draft Start-up Checklist is not being proposed for inclusion in the HW Permit, but is provided here (See Attachments B and C) to show how the Department and the Commission propose to evaluate UMCDF's operational readiness. To maintain sufficient flexibility to respond to changing circumstances, new information, and emerging issues, the Checklist is subject to further revision.

The Checklist includes numerous Requirements that are already incorporated into the UMCDF HW Permit. Attachment B presents a summary list of the Checklist Requirements organized into groupings based on whether the Requirement originated from (1) an existing HW Permit Condition, (2) a Requirement imposed as a condition of approval for a past permit modification, or (3) an additional Requirement being imposed by the Department. The additional Requirements are being proposed because the Department and the

[4] The Staff Report was presented as Agenda Item H at the September 20-21, 2001 meeting of the Commission. It was titled "Approval Process for Umatilla Chemical Agent Disposal Facility Operation" and is available upon request from DEQ's Chemical Demilitarization Program in Hermiston. Please see contact information in Attachment A of this Fact Sheet to request a copy of the Staff Report.

Commission believe that the Requirements reflect a significant issue or activity that must be resolved. Significant issues include resolution of secondary waste treatment processes, successful completion of systemization and operational testing activities, and final modifications to the HW Permit and Permit Application to reflect the "as-built" configuration of UMCDF.

Attachment B is a summary list of the Requirements in the draft Start-up Checklist. It includes an indication in the last two columns of the table noting whether the Department is proposing that the Requirement be completed prior to surrogate start-up and/or prior to agent start-up. Attachment B shows that some Requirements would be evaluated prior to both surrogate and agent start-up. In some cases that means that the Requirement (and all of its associated evaluation criteria) will be evaluated in full prior to each operational phase (surrogate and agent). In other cases it means that there is more than one component of the Requirement to be evaluated, one or more of which must be completed before start of surrogate operations, and others that must be completed prior to agent operations.

Attachment C presents each Checklist Requirement and its associated evaluation criteria. Each criterion is followed by a notation in brackets indicating whether the Department is proposing that the criterion be fulfilled prior to surrogate or agent operations (in some cases, both will apply).

Opportunity for Public Comment

The Department, on the behalf of the Commission, is inviting public comment not only on the proposed modification to the UMCDF HW Permit, but also on the need for the modification. The modification will add two Permit Conditions (described on Page 2) requiring the Permittees to obtain Department approval prior to starting surrogate operations and Commission approval prior to starting chemical agent treatment operations. **The Department is seeking comment not only on the proposed language of the new Permit Conditions, but also on whether the public believes that there is a need to impose these additional requirements on the Permittees, given the possibility that additional public processes have the potential to delay the start of operations.**

The original 1997 decision to issue the HW Permit was based in part on the need to destroy the chemical weapons stockpile at the Umatilla Chemical Depot as soon as possible because of the extreme hazard it presents to public health and the environment. Requiring formal start-up approval processes does have the potential to delay the beginning of surrogate and/or agent operations. Of the alternatives the Department presented to the Commission in September 2001, Department approval of surrogate start-up and Commission approval for agent start-up presented the least risk of a schedule delay (with the exception of taking no action). The Department and the Commission would do everything they could to minimize the possibility of delay by coordinating the decision approval processes to parallel facility operational schedules.

The Commission's decision to approve and issue the original UMCDF HW Permit was reached through a very open and public process. Approval to start UMCDF operations, especially for chemical agent operations, represents a decision of similar magnitude. The Department believes there is an expectation by both the Commission and interested members of the public that the decision to approve the start of operations at UMCDF should also be conducted in an open and public forum. The use of a defined approval process will facilitate such an approach.

Although the Draft Start-up Checklist is not being proposed for inclusion in the HW Permit, it is being provided to illustrate how the Department and the Commission propose to evaluate UMCDF's operational readiness. **The public is invited to comment not only on the individual Checklist Requirements, but also on the evaluation criteria for each Requirement, including whether the Requirement (in its entirety or on a component basis) must be completed prior to surrogate operations and/or prior to agent operations.**

The Department will review and consider all oral and written comments received during the comment period. Department staff will then prepare a report with a recommendation to the Environmental Quality Commission. The report will include the Department's response to all significant comments received during the open public comment period. The Commission is anticipated to make a final decision on the proposed modification to the UMCDF HW Permit in January 2002 at its regularly scheduled meeting (January 24-25, to be held in Pendleton, Oregon). The Commission may decide to modify the HW Permit as proposed or with changes, or may decide against modifying the HW Permit.

How to Submit Comments on the Proposed Permit Modification

The public comment period on this proposed Permit Modification will remain open from October 22 through 5:00 p.m. on December 10, 2001. Written comments may be submitted by e-mail, fax, or regular mail any time during the comment period, provided the comment is received by the Department no later than 5:00 p.m. on December 10. E-mail comments should be submitted to **markham.trisha@deq.state.or.us** and include the words "Public Comment" in the subject line. Comments submitted by facsimile transmission should be sent to (541) 567-4741. Comments sent by regular mail should be addressed to Mr. Wayne C. Thomas, Administrator, Chemical Demilitarization Program, 256 E. Hurlburt, Hermiston, Oregon 97838. There will be two opportunities for the public to provide oral comments to the Department: November 29, 2001 in Hermiston, Oregon (Good Shepherd Medical Center, 610 N.W. 11th, beginning at 7:00 p.m.) and December 7, 2001 in Portland, Oregon (DEQ, 811 S.W. Sixth Ave., Room 3A, beginning at 9:30 a.m.).

For More Information

For more information about this Permit Modification, or for information on UMCDF, please contact Trisha Markham, Chemical Demilitarization Program, Hermiston office of the DEQ [Phone 541-567-8297 (ext. 25) or toll free in Oregon (800) 452-4011, E-mail: markham.trisha@deq.state.or.us]. The Department's Chemical Demilitarization Program has prepared numerous fact sheets about the chemical weapons destruction process at the Umatilla Chemical Depot, available upon request:

- Storage and Management of Hazardous Waste (June 2000, also available in Spanish)
- Public Participation (June 2000, also available in Spanish)
- Hazardous Waste Storage Permit Application (June 2000, also available in Spanish)
- Modification of a Hazardous Waste Permit (June 2000, also available in Spanish)
- Metal Parts Furnace (September 2000, also available in Spanish)
- Liquid Incinerator (September 2000, also available in Spanish)
- Dunnage Incinerator (September 2000, also available in Spanish)
- Deactivation Furnace System (September 2000, also available in Spanish)
- Rocket Processing (January 2001)
- Projectile Processing (January 2001)
- Mine Processing (January 2001)
- Bulk Item Processing (January 2001)

Attachments

A Public Notice: Request for Comments and Notice of Public Hearing

B Start-Up Checklist Requirements (Summary List)

C Start-up Checklist Requirements with Evaluation Criteria

Public Notice: Request for Comments and Notice of Public Hearing

Proposed Modification of the Hazardous Waste Storage and Treatment Permit for the Umatilla Chemical Agent Disposal Facility (Permit No. ORQ 000 009 431)

[Permit Modification No. UMCDF-01-028-MISC(EQC), "Approval Process for UMCDF Operation"]

State of Oregon
Department of Environmental Quality

Office of the Director
Chemical Demilitarization Program
256 E. Hurlburt
Hermiston, OR 97838
Phone: (541) 567-8297
(800) 452-4011
Fax: (541) 567-4741
Contact: Trisha Markham
DEQ Item No. 01-1284

www.deq.state.or.us

Notice issued: October 22, 2001

Written comments due: 5:00 p.m., December 10, 2001

Public Hearings/Meetings:
Public Hearing: 7:00 p.m., November 29, 2001. Good Shepherd Medical Center, 610 N.W. 11th, Hermiston, Oregon. (DEQ staff will be available to answer questions before the meeting from 6:00-7:00 p.m.)

Environmental Quality Commission meeting: 9:30 a.m., December 7, 2001. DEQ Headquarters Building, Meeting Room 3A, 811 S.W. Sixth Ave., Portland, Oregon. (The Commission will receive a brief presentation from DEQ staff and then will accept public testimony about the proposed modification.)

How can I send comments?
DEQ will accept oral comments at either of the two meetings listed above, or by mail, fax and e-mail.

Contact Name: Trisha Markham, Chemical Demilitarization Program, Hermiston DEQ

Phone: 541-567-8297 (ext. 25) or toll free in Oregon (800) 452-4011

Mailing address: DEQ Chemical Demilitarization Program, 256 E. Hurlburt, Suite 105, Hermiston, OR 97838

Fax: 541-567-4741

E-mail: markham.trisha@deq.state.or.us
(Please include "Public Comment" in the subject line. E-mail comments will be acknowledged as soon as possible. The DEQ is not responsible for delays between servers that result in missed comment deadlines.)

How can I review documents?
You can review documents related to the proposed permit modification and the Umatilla Chemical Agent Disposal Facility (UMCDF) at the Hermiston DEQ office (please call ahead for an appointment) or at one of the following information repositories:

Hermiston Public Library
235 E. Gladys Avenue
Hermiston, OR 97838
(541) 567-2882

Mid Columbia Library (Kennewick Branch)
1620 S. Union St.
Kennewick, WA 99336
(509) 586-3156

Pendleton Public Library
502 S.W. Dorion Avenue
Pendleton, OR 97801
(541) 966-0210

Portland State University Library
951 S.W. Hall, Fifth Floor
Portland, OR 97204
(503) 725-4617

What are DEQ's responsibilities?
The Oregon Department of Environment Quality (DEQ) is the regulatory agency that helps protect and preserve Oregon's environment. DEQ is responsible for protecting and enhancing Oregon's water and air quality, for cleaning up spills and releases of hazardous materials, and for managing the proper disposal of hazardous and solid wastes. One way DEQ does this is by requiring permits for certain activities.

A Hazardous Waste Storage and Treatment Permit (HW Permit) for UMCDF was issued by the DEQ and the Environmental Quality Commission (DEQ's policy and rule-making board) in February 1997. It is DEQ's responsibility, under the direction of the EQC, to process permit modification requests and to ensure that UMCDF complies with the conditions of the HW Permit.

What kind of facility is this?

The UMCDF is a hazardous waste treatment facility that will use four incinerators to destroy a stockpile of chemical warfare agents that has been stored at the Umatilla Chemical Depot (UMCD) since 1962. The chemical agent stockpile at UMCD includes about 3,717 tons of nerve agents ("VX" and "GB") and blister ("mustard") agents in liquid form.

Nerve agents are contained in munitions, such as rockets, projectiles and land mines, and in large containers, such as spray tanks, bombs, and "ton containers." Mustard agent is stored only in ton containers. All of the chemical warfare agents are highly toxic.

Who are the UMCDF Permittees?

There are three Permittees named on the UMCDF HW Permit. The U.S. Army Umatilla Chemical Depot and the U.S. Army Project Manager for Chemical Stockpile Disposal (PMCSD) are named as Owner and Operator of UMCDF. Washington Demilitarization Company (the Army's construction and operations contractor) is named as a co-operator of UMCDF.

Where is the facility located?

The UMCDF is located in northeastern Oregon at the Umatilla Chemical Depot, about seven miles west of Hermiston, Oregon (about 175 miles east of Portland, Oregon). The address is 78072 Ordnance Road, Hermiston, OR 97838-9544.

What is proposed?

At the direction of the EQC, the DEQ is proposing to modify the UMCDF HW Permit. The proposed modification will add a HW Permit Condition requiring the UMCDF Permittees to obtain written DEQ approval prior to the start of surrogate testing operations of the UMCDF incinerators. The DEQ is also proposing the addition of a HW Permit Condition requiring the UMCDF Permittees to obtain written approval from the EQC prior to the start of chemical agent treatment operations.

Who is affected?

Residents in the Mid-Columbia Basin.

Where can I get more information?

Each of the Information Repositories listed above has information about UMCDF and the proposed modification. You can also call or e-mail the DEQ Office in Hermiston (markham.trisha@deq.state.or.us) to have an information package sent to you by mail or electronic transmission.

The information package includes a Fact Sheet that details the proposed modification, including draft permit language and the DEQ's justification and legal authority for proposing the modification. The Fact Sheet also includes a description of the process that the DEQ will use to decide whether to approve the start of surrogate operations at UMCDF.

The information package also includes a draft "Start-up Checklist," one of the tools that DEQ is proposing to use to evaluate the readiness of UMCDF to begin surrogate or agent operations. The Checklist is not being proposed for inclusion in the HW Permit, but is being provided to illustrate how DEQ and EQC propose to conduct the readiness evaluation. The public is invited to comment not only on the draft HW Permit language, but also on the evaluation process and the draft Start-up Checklist.

What happens next?

After the completion of the public comment period the DEQ will review and consider all oral and written comments received during the comment period. DEQ staff will prepare a report with a recommendation to the EQC on whether to adopt the proposed modification. The report will include the DEQ's response to all significant comments received during the open public comment period.

The EQC is anticipated to make a final decision on the proposed modification in January 2002 at its regularly scheduled meeting (January 24-25, to be held in Pendleton, Oregon). The EQC may decide to modify the HW Permit as proposed or with changes, or may decide against modifying the HW Permit.

Accessibility information

DEQ is committed to accommodating people with disabilities at our hearings. Please notify DEQ of any special physical or language accommodations or if you need information in large print, Braille or another format. To make these arrangements, contact Trisha Markham at (541) 567-8297 (ext. 25) or toll free in Oregon at (800) 452-4011.

People with hearing impairments may call DEQ's TTY number, (503) 229-6993.

ATTACHMENT B
SUMMARY OF DRAFT START-UP CHECKLIST REQUIREMENTS

Listed below is a tabular summary of the Department's current draft checklist requirements that must be completed prior to the start of either surrogate testing operations or chemical agent disposal operations at UMCDF. Notations are included to clarify the Department's current proposal on which Requirements are associated with surrogate operations and which are associated with agent operations. Some Requirements may be applicable to both phases and would require two separate assessments to determine their current status. The checklist requirements are organized into three categories: 1) those which are specifically required by the HW Permit; 2) those which have been required as conditions of approval for Permit Modification Requests; and 3) other requirements established by the Department. A more detailed listing of the specific evaluation criteria for these checklist requirements is provided in the accompanying Attachment C of this information package.

NO.	REQUIREMENT	REQUIREMENT BASIS	OPERATIONAL PHASE	
			SURROGATE	AGENT
REQUIRED BY EXISTING HW PERMIT CONDITIONS				
1.	All required surrogate trial burn plans submitted (at least 180 days prior) and approved.	HW Permit Condition VI.A.5.ii.	X	
2.	All required surrogate trial burn reports, and necessary Permit Modification Requests (PMR) to revise UMCDF operating parameters in preparation for agent trial burns, submitted and approved.	HW Permit Conditions VI.A.5.iv. and VI.A.5.v.		X
3.	All required agent trial burn plans submitted (at least 180 days prior) and approved.	HW Permit Condition VI.A.5.ii.		X
4.	Umatilla Chemical Depot (UMCD)/UMCDF in compliance with all remaining HW Permit Conditions not already specifically addressed in this list.	HW Permit	X	X
5.	40 CFR 264 Subpart AA/BB/CC (Air Emission Standards for Process Vents, Equipment Leaks, and Tanks/Containers) requirements incorporated into HW Permit and Application, as well as the UMCDF design and operational configuration.	HW Permit Condition II.P.2.	X	X

NO.	REQUIREMENT	REQUIREMENT BASIS	OPERATIONAL PHASE	
			SURROGATE	AGENT
6.	UMCDF Perimeter Monitoring Network (PMN) for Comprehensive Monitoring Program (CMP) baseline air monitoring activated at least one calendar year prior.	HW Permit Condition II.A.4.ii.	X	
7.	UMCDF Independent Oversight Program structure and implementation acceptable to DEQ.	HW Permit Condition II.E.5.	X	X
8.	All required tank and tank system certifications, including primary containment sumps, submitted to DEQ.	HW Permit Conditions IV.B.4., IV.C.4. through IV.C.7.	X	X
9.	Information demonstrating the planned surrogate materials for the Liquid Incinerators (LICs) are "non-ignitable" submitted to and approved by DEQ.	HW Permit Conditions IV.N.1.	X	
10.	All required miscellaneous treatment unit certifications submitted to DEQ.	HW Permit Conditions V.A.3.iv. and V.A.3.v.	X	
11.	At least eight CMP sampling events completed and resulting data included in the CMP baseline dataset, and all required quarterly sampling events completed to date.	HW Permit Conditions II.A.4.ii.a. and II.A.4.ii.b.	X	X
12.	Remote UMCDF monitoring stations(s) installed and operational per DEQ request.	HW Permit Condition I.N.1.v.	X	
13.	UMCD/UMCDF standard operating procedure(s) related to operational limitations during adverse weather conditions submitted at least 180 days prior.	HW Permit Condition II.A.3.i.	X	
14.	Brine Reduction Area (BRA) limited stack test plan submitted to DEQ (90 days prior to test) and approved.	HW Permit Condition V.A.4.i. and V.A.4.iv.	X	
15.	Chemical Stockpile Emergency Preparedness Program (CSEPP) readiness approval received from the Oregon Governor's office.	HW Permit Condition II.H.4.i.	X	
16.	All required Facility Construction Certification (FCC) packages submitted and accepted.	HW Permit Condition I.R.	X	X

NO.	REQUIREMENT	REQUIREMENT BASIS	OPERATIONAL PHASE	
			SURROGATE	AGENT
17.	Post-Trial Burn Risk Assessment Protocol completed and issued by DEQ.	HW Permit Conditions II.N.2. and II.N.3.	X	
18.	Brine Reduction Area (BRA) performance test plan submitted to DEQ (180 days prior to test) and approved.	HW Permit Conditions V.A.4.i. and V.A.4.iv.		X
REQUIRED AS PERMIT MODIFICATION REQUEST (PMR) APPROVAL CONDITIONS				
19.	Revisions to Oregon Administrative Rules (OAR) 340-101 and 340-102 to address the appropriate application of the Oregon state-only waste codes F998/F999 and P998/P999 promulgated and corresponding changes properly incorporated into the HW Permit and Permit Application.	PMR UMCDF-99-021-WAP(2)	X	
20.	Unlined carbon steel duplex strainers removed from Pollution Abatement System (PAS) and replaced by new dual simplex strainer design.	PMR UMCDF-98-021-PAS(1R)	X	
Other Requirements Established by DEQ				
21.	UMCD Hazardous Waste (HW) Storage Permit approved, issued and implemented.	DEQ/EQC	X	X
22.	UMCDF Class 3 J-Block Permitted Storage Permit Modification Request (PMR) UMCDF-00-004-WAST(3) approved and implemented.	DEQ/EQC	X	X
23.	UMCDF Hazardous Waste Treatment and Storage Permit (HW Permit) and RCRA Part B Permit Application (Permit Application) current and approved. All information, attachments and documentation revised and updated, including valid Professional Engineer (PE) stamps where required.	DEQ/EQC	X	X
24.	Treatment and disposal options, including sampling and analytical requirements, identified and implemented for all expected UMCDF secondary waste streams.	DEQ/EQC	X	X

NO.	REQUIREMENT	REQUIREMENT BASIS	OPERATIONAL PHASE	
			SURROGATE	AGENT
25.	UMCDF construction complete, facility turned over to operations and maintenance, and all systemization activities successfully completed, including preparation of necessary operational and maintenance procedures.	DEQ/EQC	X	X
26.	UMCDF waste/munitions tracking procedure and system developed, approved and implemented.	DEQ/EQC		X
27.	All necessary waste management processes and contracts implemented to manage all waste streams generated during operations.	DEQ/EQC	X	X
28.	Appropriate DEQ personnel approved for unescorted access to UMCDF.	DEQ/EQC	X	
29.	UMCD/UMCDF in compliance with approved/issued Air Quality Permit and all applicable Maximum Achievable Control Technology (MACT) and air quality regulations. All outstanding air quality issues resolved to DEQ's satisfaction.	DEQ/EQC	X	X
30.	UMCD/UMCDF in compliance with all applicable water quality regulations. All outstanding water quality issues resolved to DEQ's satisfaction.	DEQ/EQC	X	X
31.	UMCD/UMCDF in compliance with all remaining requirements determined by DEQ to be necessary for facility start-up, and not otherwise addressed in this list.	DEQ/EQC	X	X

ATTACHMENT C
COMPLETE LIST OF DRAFT START-UP CHECKLIST REQUIREMENTS
(INCLUDING ASSOCIATED EVALUATION CRITERIA DEVELOPED TO DATE)

Listed below is the Department's current draft list of activities and requirements that must be completed prior to the start of either surrogate testing operations or chemical agent disposal operations at UMCDF. Notations are included to clarify the Department's current proposal on which Requirements/criteria are associated with surrogate operations and which are associated with agent operations. Some Requirements may be applicable to both phases and would require two separate assessments to determine their current status. Some Requirements related to the operation of certain treatment systems not planned to be operated in the initial stages of either surrogate and/or agent operations [such as the Deactivation Furnace System (DFS), Metal Parts Furnace (MPF) or Brine Reduction Area (BRA)], may not need to be completed prior to allowing the start of operations for the initial treatment system [the Liquid Incinerator (LIC)]. This list includes the Measurement Criterion for each Requirement summarized in the accompanying Attachment B of this information package.

REQUIREMENT NO. 1: All required surrogate trial burn plans submitted (at least 180 days prior) and approved. [HW Permit Condition VI.A.5.ii.]

Measurement Criterion #1a: UMCDF submitted Class 2 PMR to update and revise the LIC#1 Trial Burn Plan (TBP) in preparation for surrogate trial burn operations. *[surrogate]*

Measurement Criterion #1b: DEQ approved the surrogate TBP for LIC #1 and issued page changes for both the HW Permit and Permit Application, as appropriate, to all controlled copy holders. *[surrogate]*

Measurement Criterion #1c: UMCDF submitted Class 2 PMR to update and revise the LIC#2 TBP in preparation for surrogate trial burn operations. *[surrogate]*

Measurement Criterion #1d: DEQ approved the surrogate TBP for LIC #2 and issued page changes for both the HW Permit and Permit Application, as appropriate, to all controlled copy holders. *[surrogate]*

Measurement Criterion #1e: UMCDF submitted Class 2 PMR to update and revise the DFS TBP in preparation for surrogate trial burn operations. *[surrogate]*

Measurement Criterion #1f: DEQ approved the surrogate TBP for DFS and issued page changes for both the HW Permit and Permit Application, as appropriate, to all controlled copy holders. *[surrogate]*

Measurement Criterion #1g: UMCDF submitted Class 2 PMR to update and revise the MPF TBP in preparation for surrogate trial burn operations. *[surrogate]*

Measurement Criterion #1h: DEQ approved the surrogate TBP for MPF and issued page changes for both the HW Permit and Permit Application, as appropriate, to all controlled copy holders. *[surrogate]*

REQUIREMENT NO. 2: All required surrogate trial burn reports, and necessary Permit Modification Requests (PMR) to revise UMCDF operating parameters in preparation for agent trial burns, submitted and approved. [HW Permit Conditions VI.A.5.iv. and VI.A.5.v.]

Measurement Criterion #2a: UMCDF submitted the LIC#1 Surrogate Trial Burn Report (TBR) within 90 days of completing the LIC#1 surrogate trial burn. *[agent]*

Measurement Criterion #2b: DEQ approved the LIC#1 Surrogate TBR. *[agent]*

Measurement Criterion #2c: UMCDF submitted PMR to update HW Permit emission limits and operating conditions based on results of LIC#1 surrogate trial burn. *[agent]*

Measurement Criterion #2d: DEQ approved the PMR updating LIC#1 emission limits and operating conditions, and issued page changes for the HW Permit to all controlled copy holders. *[agent]*

Measurement Criterion #2e: UMCDF submitted the LIC#2 Surrogate TBR within 90 days of completing the LIC#2 surrogate trial burn. *[agent]*

Measurement Criterion #2f: DEQ approved the LIC#2 Surrogate TBR. *[agent]*

Measurement Criterion #2g: UMCDF submitted PMR to update HW Permit emission limits and operating conditions based on results of LIC#2 surrogate trial burn. *[agent]*

Measurement Criterion #2h: DEQ approved the PMR updating LIC#2 emission limits and operating conditions, and issued page changes for the HW Permit to all controlled copy holders. *[agent]*

Measurement Criterion #2i: UMCDF submitted the DFS Surrogate TBR within 90 days of completing the DFS surrogate trial burn. *[agent]*

Measurement Criterion #2j: DEQ approved the DFS Surrogate TBR. *[agent]*

Measurement Criterion #2k: UMCDF submitted PMR to update HW Permit emission limits and operating conditions based on results of DFS surrogate trial burn. *[agent]*

Measurement Criterion #2l: DEQ approved the PMR updating DFS emission limits and operating conditions, and issued page changes for the HW Permit to all controlled copy holders. *[agent]*

Measurement Criterion #2m: UMCDF submitted the MPF Surrogate TBR within 90 days of completing the MPF surrogate trial burn. *[agent]*

Measurement Criterion #2n: DEQ approved the MPF Surrogate TBR. *[agent]*

Measurement Criterion #2o: UMCDF submitted PMR to update HW Permit emission limits and operating conditions based on results of LIC#1 surrogate trial burn. *[agent]*

Measurement Criterion #2p: DEQ approved the PMR updating MPF emission limits and operating conditions, and issued page changes for the HW Permit to all controlled copy holders. *[agent]*

REQUIREMENT NO. 3: All required agent trial burn plans submitted (at least 180 days prior) and approved. [HW Permit Condition VI.A.5.ii.]

Measurement Criterion #3a: UMCDF submitted Class 2 PMR to update and revise the LIC#1 Trial Burn Plan (TBP) in preparation for agent trial burn operations. *[agent]*

Measurement Criterion #3b: DEQ approved the agent TBP for LIC #1 and issued page changes for both the HW Permit and Permit Application, as appropriate, to all controlled copy holders. *[agent]*

Measurement Criterion #3c: UMCDF submitted Class 2 PMR to update and revise the LIC#2 TBP in preparation for agent trial burn operations. *[agent]*

Measurement Criterion #3d: DEQ approved the agent TBP for LIC #2 and issued page changes for both the HW Permit and Permit Application, as appropriate, to all controlled copy holders. *[agent]*

Measurement Criterion #3e: UMCDF submitted Class 2 PMR to update and revise the DFS TBP in preparation for agent trial burn operations. *[agent]*

Measurement Criterion #3f: DEQ approved the agent TBP for DFS and issued page changes for both the HW Permit and Permit Application, as appropriate, to all controlled copy holders. *[agent]*

Measurement Criterion #3g: UMCDF submitted Class 2 PMR to update and revise the MPF TBP in preparation for agent trial burn operations. *[agent]*

Measurement Criterion #3h: DEQ approved the agent TBP for MPF and issued page changes for both the HW Permit and Permit Application, as appropriate, to all controlled copy holders. *[agent]*

REQUIREMENT NO. 4: UMCD/UMCDF in compliance with all remaining HW Permit Conditions not already specifically addressed in this list.

Measurement Criterion #4a: DEQ verified within the last 3 months that Permittees are in compliance with all applicable HW Permit Conditions. *[surrogate and agent]*

REQUIREMENT NO. 5: 40 CFR 264 Subpart AA/BB/CC requirements incorporated into HW Permit and Application, as well as the UMCDF design and operational configuration. [HW Permit Condition II.P.2.]

Measurement Criterion #5a: DEQ approved PMR UMCDF-00-022-MISC(3) and issued page changes for both the HW Permit and Permit Application to all controlled copy holders. *[surrogate]*

Measurement Criterion #5b: UMCDF implemented all design and operational changes required by DEQ as part of approval of PMR UMCDF-00-022-MISC(3). *[surrogate and agent]*

REQUIREMENT NO. 6: UMCDF Perimeter Monitoring Network (PMN) for Comprehensive Monitoring Program (CMP) baseline air monitoring activated at least one calendar year prior. [HW Permit Condition II.A.4.ii.]

Measurement Criterion #6a: PMN activated and producing air monitoring data acceptable for use in establishing a baseline at least one calendar year prior to the start of surrogate operations. *[surrogate]*

REQUIREMENT NO. 7: UMCDF Independent Oversight Program structure and implementation acceptable to DEQ. [HW Permit Condition II.E.5.]

Measurement Criterion #7a: DEQ reviewed the UMCDF Independent Oversight Program within the last 6 months and determined it to be acceptable and consistent with the EQC's intent in Permit Condition II.E.5. *[surrogate and agent]*

REQUIREMENT NO. 8: All required tank and tank system certifications, including primary containment sumps, submitted to DEQ. [HW Permit Conditions IV.B.4. and IV.C.4. through IV.C.7.]

Measurement Criterion #8a: UMCDF submitted the required construction, installation, structural integrity and suitability certifications for the Agent Collection Tank System, including associated piping, pumps and ancillary equipment (ACS-TANK-101 and –102). *[surrogate or agent, depending on use]*

Measurement Criterion #8b: UMCDF submitted the required construction, installation, structural integrity and suitability certifications for the Spent Decontamination Holding Tank System, including associated piping, pumps and ancillary equipment (SDS-TANK-101, -102 and –103). *[surrogate or agent, depending on use]*

Measurement Criterion #8c: UMCDF submitted the required construction, installation, structural integrity and suitability certifications for the Brine Surge Tank System , including associated piping, pumps and ancillary equipment (BRA-TANK-101, -102, -201, and –202). *[surrogate]*

Measurement Criterion #8d: UMCDF submitted the required construction, installation, structural integrity and suitability certifications for the Primary Containment System Sumps (MDB-SUMP-106 thru –110, -112 thru –118, -124 thru –126, -134, -135, -145 thru –149, -153, -154, -164, -168, -169, -174, -175, -179, -184, -189, -190; and DDYR-CHPAN-101, -102, -201). *[surrogate]*

REQUIREMENT NO. 9: Information demonstrating the planned surrogate materials for the LIC are "non-ignitable" submitted to and approved by DEQ. [HW Permit Condition IV.N.1.]

Measurement Criterion #9a: Measurement Criterion # UMCDF submitted information demonstrating the "non-ignitability" of LIC surrogate materials at least 6 months prior to the start of Shakedown Period I. *[surrogate]*

REQUIREMENT NO. 9 (Continued):

Measurement Criterion #9b: DEQ approved the submitted information as sufficient to demonstrate that LIC surrogate materials are "non-ignitable." *[surrogate]*

REQUIREMENT NO. 10: All required miscellaneous treatment unit certifications submitted to DEQ. [HW Permit Conditions V.A.3.iv. and V.A.3.v.]

Measurement Criterion #10a: UMCDF submitted the required construction, installation, structural integrity and suitability certifications for the BRA Drum Dryers, including associated piping and ancillary equipment (DDRY-101, DDRY-102, DDRY-103). *[surrogate]*

Measurement Criterion #10b: UMCDF submitted the required construction, installation, structural integrity and suitability certifications for the BRA Evaporator Packages, including associated piping and ancillary equipment (EVAP-101, EVAP-201, EXCH-101, EXCH-201). *[surrogate]*

REQUIREMENT NO. 11: At least eight CMP sampling events completed and resulting data included in the CMP baseline dataset, and all required quarterly sampling events completed to date. [HW Permit Conditions II.A.4.ii.a. and II.A.4.ii.b.]

Measurement Criterion #11a: UMCDF completed at least eight CMP sampling events in accordance with the CMP Workplan and Sampling and Analysis Plan (SAP), and submitted the results to DEQ. *[surrogate]*

Measurement Criterion #11b: DEQ accepted at least eight sets of CMP sampling data, which have been generated in accordance with the CMP Workplan and SAP, to establish the baseline conditions. *[surrogate]*

Measurement Criterion #11c: UMCDF completed all quarterly CMP sampling events since the initiation of the baseline phase. *[surrogate and agent]*

REQUIREMENT NO. 12: Remote UMCDF monitoring stations(s) installed and operational per DEQ request. [HW Permit Condition I.N.1.v.]

Measurement Criterion #12a: UMCDF installed and made operational remote monitoring stations, which provide unrestricted 24-hr DEQ access to facility operating and monitoring data, at the following locations: DEQ Hermiston office, DEQ field office in the Personnel Support Building (PSB), and engineering office adjacent to the UMCDF Control Room. *[surrogate]*

REQUIREMENT NO. 13: UMCD/UMCDF standard operating procedure(s) related to operational limitations during adverse weather conditions submitted at least 180 days prior. [HW Permit Condition II.A.3.i.]

Measurement Criterion #13a: UMCD/UMCDF submitted standard operating procedure(s) (SOP) describing the specific operational limitations that will be in effect during adverse weather conditions at least 180 days prior to the start of surrogate operations. *[surrogate]*

REQUIREMENT NO. 14: Brine Reduction Area (BRA) limited stack test plan submitted to DEQ (90 days prior to test) and approved. [HW Permit Conditions V.A.4.i. and V.A.4.iv.]

Measurement Criterion #14a: UMCDF submitted to DEQ the BRA limited stack test plan that will demonstrate compliance of the BRA with HW Permit emissions and operating limits prior to conducting the formal BRA Performance Test during initial GB brine operations. *[surrogate]*

Measurement Criterion #14b: DEQ approved the BRA limited stack test plan. *[maybe surrogate, but definitely before test]*

REQUIREMENT NO. 15: Chemical Stockpile Emergency Preparedness Program (CSEPP) readiness approval received from the Oregon Governor's office. [HW Permit Condition II.H.4.i.]

Measurement Criterion #15a: Documentation on file from the State of Oregon, Governor's Office, notifying DEQ that CSEPP is sufficiently ready to adequately respond to events at UMCD and UMCDF. *[surrogate]*

REQUIREMENT NO. 16: All required Facility Construction Certification (FCC) packages submitted and accepted. [HW Permit Condition I.R.]

Measurement Criterion #16a: DEQ accepted all required Container Handling Building (CHB) 100% FCC packages, including the following subsystems: CHB60, CHB81. *[surrogate]*

Measurement Criterion #16b: DEQ accepted all required Laboratory (LAB) 100% FCC packages, including the following subsystem: LAB22. *[surrogate]*

Measurement Criterion #16c: DEQ accepted all required Brine Reduction Area (BRA) 100% FCC packages, including the following subsystems: BRA00, BRA10, BRA20, BRA60, BPS80. *[surrogate]*

Measurement Criterion #16d: DEQ accepted all required Liquid Incinerator (LIC) 100% FCC packages, including the following subsystems: LC101, LC160, LC100, LC201, LC260, LC200, LC220, LC120. *[surrogate]*

REQUIREMENT NO. 16 (Continued):

Measurement Criterion #16e: DEQ accepted all required Deactivation Furnace System (DFS) 100% FCC packages, including the following subsystems: DFS01, DFS30, DFS60, DFS61, DFS00, DFS10, DFS20. *[surrogate]*

Measurement Criterion #16f: DEQ accepted all required Metal Parts Furnace (MPF) 100% FCC packages, including the following subsystems: MPF01, MPF60, MPF00. *[surrogate]*

Measurement Criterion #16g: DEQ accepted all required Pollution Abatement System (PAS) 100% FCC packages, including the following subsystems: PAS00, PAS01, PAS10, PAS20, PAS30, PAS40, PAS81, PAS82, PAS84. *[surrogate]*

Measurement Criterion #16h: DEQ accepted all required Agent Collection System (ACS) 100% FCC packages, including the following subsystems: ACS00, ACS11, ACS12, ACS21, ACS22, ACS40, ACS31, ACS32, ACS33. *[surrogate or agent, depending on use]*

Measurement Criterion #16i: DEQ accepted all required Heating, Ventilation and Air Conditioning (HVC) 100% FCC packages, including the following subsystems: HVC40, HVC00, HVC41, HVC42, HVC43, HVC60, HVC30, HVC44. *[surrogate]*

Measurement Criterion #16j: DEQ accepted all required Process Utility Building (PUB) 100% FCC packages, including the following subsystem: PUB83. *[surrogate]*

Measurement Criterion #16k: DEQ accepted all required Demilitarization Equipment 100% FCC packages, including the following subsystems: MMS40, MMS41, MMS42, PHS31, PHS32, PHS41, PHS42, PHS61, PHS62, PHS63, RHS31, RHS32, BDS80, MMS11, MMS12, PHS11, PHS12, PHS21, PHS22, RHS11, RHS12, RHS21, RHS22. *[surrogate or agent, depending on use]*

Measurement Criterion #16l: DEQ accepted all required Spent Decontamination System (SDS) 100% FCC packages, including the following subsystems: SDS00, SDS11, SDS12, SDS13, SDS20. *[surrogate or agent, depending on use]*

Measurement Criterion #16m: DEQ accepted all required Munitions Demilitarization Building (MDB) 100% FCC packages, including the following subsystems: MDB02, MDB03, MDB04, MDB05, MDB06, MDB07, MDB08, MDB12, MDB21, MDB22, MDB23, MDB24, MDB25, MDB26. *[surrogate]*

Measurement Criterion #16n: DEQ accepted all required General Site 100% FCC packages, including the following subsystem: STE81. *[surrogate]*

REQUIREMENT NO. 17: Post-Trial Burn Risk Assessment Protocol completed and issued by DEQ. [HW Permit Conditions II.N.2. and II.N.3.]

Measurement Criterion #17a: DEQ issued final scope of work and contract with Ecology and Environment to take the lead in preparation of the Post-Trial Burn Risk Assessment (RA) Workplan. *[surrogate]*

REQUIREMENT NO. 17 (Continued):

Measurement Criterion #17b: DEQ and the Post-Trial Burn RA Workgroup completed a draft Workplan for public review and comment. *[surrogate]*

Measurement Criterion #17c: Public review and comment process for draft Workplan completed. *[agent]*

Measurement Criterion #17d: DEQ approved and issued a final Post-Trial Burn RA Workplan which contains the required Protocol and guidance. *[agent]*

REQUIREMENT NO. 18: Brine Reduction Area (BRA) performance test plan submitted to DEQ (180 days prior to test) and approved. [HW Permit Conditions V.A.4.i. and V.A.4.iv.]

Measurement Criterion #18a: UMCDF submitted to DEQ the BRA performance test plan that will demonstrate compliance of the BRA with HW Permit emissions and operating limits during initial GB brine operations. *[agent]*

Measurement Criterion #18b: DEQ approved the BRA performance test plan. *[maybe agent, but definitely before test]*

REQUIREMENT NO. 19: Revisions to Oregon Administrative Rules (OAR) 340-101 and 340-102 to address the appropriate application of the Oregon state-only waste codes F998/F999 and P998/P999 promulgated and corresponding changes properly incorporated into the HW Permit and Permit Application. [PMR UMCDF-99-021-WAP(2)]

Measurement Criterion #19a: DEQ promulgate revised OARs clarifying the proper waste designation procedures for hazardous wastes carrying Oregon state-only waste codes. [*surrogate]*

Measurement Criterion #19b: OAR changes regarding Oregon state-only hazardous waste codes F998/F999 and P998/P999 incorporated into the HW Permit and Permit Application via an approved PMR from UMCDF. *[surrogate]*

REQUIREMENT NO. 20: Unlined carbon steel duplex strainers removed from PAS and replaced by new dual simplex strainer design. [PMR UMCDF-98-021-PAS(1R)]

Measurement Criterion #20a: UMCDF submitted PMR for approval to replace unlined carbon steel duplex strainers from the PAS with new dual simplex strainers. *[surrogate]*

Measurement Criterion #20b: DEQ approved submitted PMR. *[surrogate]*

Measurement Criterion #20c: UMCDF completed installation and testing of new dual simplext strainers in the PAS. *[surrogate]*

REQUIREMENT NO. 21: Umatilla Chemical Depot (UMCD) Hazardous Waste (HW) Storage Permit approved, issued and implemented.

Measurement Criterion #21a: DEQ determined UMCD RCRA Part B Storage Permit Application complete. *[surrogate]*

Measurement Criterion #21b: DEQ approved UMCD Storage Unit Operations and Management Plan (SUOMP) submitted per OAR 340-104-1201. *[surrogate]*

Measurement Criterion #21c: DEQ completed draft UMCD HW Storage Permit and issued for public comment. *[surrogate]*

Measurement Criterion #21d: DEQ approved and issued final UMCD HW Storage Permit. *[surrogate]*

Measurement Criterion #21e: UMCD on schedule with implementation of required changes to chemical agent munition storage areas and management program. *[surrogate]*

Measurement Criterion #21f: UMCD completed implementation of all required changes to chemical agent munition storage areas and management program. *[agent]*

REQUIREMENT NO. 22: UMCDF Class 3 J-Block Permitted Storage Permit Modification Request (PMR) UMCDF-00-004-WAST(3) approved and implemented.

Measurement Criterion #22a: EQC approved PMR UMCDF-00-004-WAST(3) and DEQ issued page changes for both the HW Permit and Permit Application to all controlled copy holders. *[surrogate]*

Measurement Criterion #22b: UMCDF implemented all physical and procedural changes required by DEQ for storage of secondary wastes in J-Block. *[agent]*

REQUIREMENT NO. 23: UMCDF Hazardous Waste Treatment and Storage Permit (HW Permit) and RCRA Part B Permit Application (Permit Application) current and approved. All information, attachments and documentation revised and updated, including valid Professional Engineer (PE) stamps where required.

Measurement Criterion #23a: All UMCDF specifications, and the RCRA Tank Assessment, in the Permit Application (Volumes IV, VI and VII) have been PE-certified within the last 12 months, or a review has determined no update is needed. Specifications include the following: 13201, 13202, 13215, 15120, 15160, 16641, 2210, 2511, 2512, 2556, 3100, 3200, 3250, 3300, 5500, 9850, 9900, 11510, 11522, 11524, 13185, 13186, 13187, 13188, 13210, 13211, 13212, 13213, 15161, 15828, 15829, 15830, 15831 and 15987. *[surrogate and agent]*

Measurement Criterion #23b: All UMCDF drawings in the Permit Application (Volume V) have been PE-stamped within the last 12 months, or a review has determined no update is needed. *[surrogate and agent]*

REQUIREMENT NO. 23 (Continued):

Measurement Criterion #23c: The entire Permit Application has been updated and transitioned to the revised administrative organizational structure approved on March 4, 1999 as a part of PMR UMCDF-98-019-MISC(1R). *[surrogate]*

Measurement Criterion #23d: All Attachments to the Permit Application have been updated, as appropriate, within the last 12 months, or a review has been performed to document that an update is not needed. *[surrogate and agent]*

Measurement Criterion #23e: All Attachments to the HW Permit have been updated, as appropriate, within the last 12 months, or a review has been performed to document that an update is not needed. *[surrogate and agent]*

Measurement Criterion #23f: TBD as necessary. *[surrogate and/or agent]*

REQUIREMENT NO. 24: Treatment and disposal options, including sampling and analytical requirements, identified and implemented for all expected UMCDF secondary waste streams.

Measurement Criterion #24a: Permittees completed characterization of UMCD secondary waste streams necessary for development of permitting documentation to feed these waste streams to UMCDF treatment units. *[surrogate]*

Measurement Criterion #24b: UMCDF submitted all necessary PMRs to DEQ for adding UMCDF and UMCD secondary waste feed streams to the UMCDF Liquid Incinerators, Deactivation Furnace System and Metal Parts Furnace. *[surrogate]*

Measurement Criterion #24c: DEQ approved all PMRs for adding UMCDF and UMCD secondary waste feed streams to the UMCDF Liquid Incinerators, Deactivation Furnace System and Metal Parts Furnace. *[agent]*

Measurement Criterion #24d: Permittees made technical decision on the treatment method that will be developed/utilized for personal protective equipment and halogenated plastic secondary waste at UMCDF. *[surrogate]*

Measurement Criterion #24e: UMCDF submitted PMR to DEQ for the treatment of personal protective equipment and other halogenated plastic secondary waste streams. *[agent]*

Measurement Criterion #24f: Permittees made technical decision on the treatment method that will be developed/utilized for agent-contaminated carbon. *[surrogate]*

Measurement Criterion #24g: UMCDF submitted PMR to DEQ for the treatment of agent-contaminated carbon. *[agent]*

Measurement Criterion #24h: UMCDF on schedule and making acceptable progress toward completion of all secondary waste management and treatment activities not otherwise addressed in this Requirement. *[surrogate and agent]*

Measurement Criterion #24i: TBD as necessary. *[surrogate and/or agent]*

REQUIREMENT NO. 25: UMCDF construction complete, facility turned over to operations and maintenance, and all systemization activities successfully completed, including preparation of necessary operational and maintenance procedures.

Measurement Criterion #25a: UMCDF completed all required construction activities, and facility turned over to operations and maintenance. *[surrogate]*

Measurement Criterion #25b: UMCDF completed preparation of all necessary operational and maintenance procedures. *[surrogate and agent]*

Measurement Criterion #25c: UMCDF completed all required systemization activities, and resolved any outstanding "punch list" items. *[surrogate and agent]*

Measurement Criterion #25d: Operations staff from the Program Manager for Chemical Demilitarization (PMCD) Headquarters declared UMCDF ready for operations. *[surrogate and agent]*

MeasurementCriterion #25e: TBD as necessary. *[surrogate and/or agent]*

REQUIREMENT NO. 26: UMCDF waste/munitions tracking procedure and system developed, approved and implemented.

Measurement Criterion #26a: UMCDF completed development of waste/munitions tracking procedure and system for use during operations. *[agent]*

Measurement Criterion #26b: UMCDF completed changes to facility and operational procedures to implement the approved waste/munitions tracking system. *[agent]*

REQUIREMENT NO. 27: All necessary waste management processes and contracts implemented to manage all waste streams generated during operations.

Measurement Criterion #27a: UMCDF implemented processes and contract(s) to facilitate management and off-site disposal of salts generated from operation of the BRA. *[surrogate and agent]*

Measurement Criterion #27b: UMCDF implemented processes and contract(s) to facilitate management and off-site disposal or treatment of munition casings. *[agent]*

Measurement Criterion #27c: UMCDF implemented processes and contract(s) to facilitate management and off-site disposal of various furnace and treatment unit ashes or similar residues. *[surrogate and agent]*

Measurement Criterion #27d: UMCDF implemented processes and contract(s) to facilitate management of all remaining waste streams destined for off-site disposal or treatment. These waste streams include, but are not limited to, refractory brick, LIC slag, maintenance residues and sludges, miscellaneous parts and debris, miscellaneous liquid wastes, and non-process wastes. *[surrogate and agent]*

Measurement Criterion #27e: UMCDF implemented processes to facilitate management of all generated waste streams destined for further on-site treatment. These waste streams include, but are not limited to, spent carbon, miscellaneous liquid wastes, explosives residues, agent-contaminated maintenance residues, laboratory wastes, and personal protective equipment. *[surrogate to some extent, but mostly agent]*

REQUIREMENT NO. 28: Appropriate DEQ personnel approved for unescorted access to UMCDF.

Measurement Criterion #28a: Tom Beam approved for UMCDF unescorted access and all appropriate security badges and clearances issued. *[surrogate]*

Measurement Criterion #28b: Ken Chapin approved for UMCDF unescorted access and all appropriate security badges and clearances issued. *[surrogate]*

Measurement Criterion #28c: Nick Speed approved for UMCDF unescorted access and all appropriate security badges and clearances issued. *[surrogate]*

Measurement Criterion #28d: Dan Duso approved for UMCDF unescorted access and all appropriate security badges and clearances issued. *[surrogate]*

Measurement Criterion #28e: Sue Oliver approved for UMCDF unescorted access and all appropriate security badges and clearances issued. *[surrogate]*

REQUIREMENT NO. 29: UMCD/UMCDF in compliance with approved/issued Air Quality Permit and all applicable MACT and air quality regulations. All outstanding air quality issues resolved to DEQ's satisfaction.

Measurement Criterion #29a: Current documentation on file (within last six months) from the DEQ Air Quality Program, Eastern Region, stating that there are no outstanding air quality issues related to the operation of UMCD or UMCDF. *[surrogate and agent]*

Measurement Criterion #29b: DEQ issued the revised Air Contaminant Discharge Permit (ACDP) for UMCD/UMCDF. *[surrogate]*

REQUIREMENT NO. 30: UMCD/UMCDF in compliance with all applicable water quality regulations. All outstanding water quality issues resolved to DEQ's satisfaction.

Measurement Criterion #30a: Current documentation on file (within last six months) from the DEQ Water Quality Program, Eastern Region, stating that there are no outstanding water quality issues related to the operation of UMCD or UMCDF. *[surrogate and agent]*

REQUIREMENT NO. 31: UMCD/UMCDF in compliance with all remaining requirements determined by DEQ to be necessary for facility start-up, and not otherwise addressed in this list.

Measurement Criterion #31a: TBD as necessary. *[surrogate and agent]*

ATTACHMENT C

Transcripts of Oral Testimony Received
November 29, 2001 and December 7, 2001

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01-1478

BEFORE THE DEPARTMENT OF ENVIRONMENTAL QUALITY

FILE

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STATE OF OREGON

PUBLIC HEARING

PROPOSED MODIFICATION OF THE

HAZARDOUS WASTE STORAGE AND TREATMENT PERMIT

FOR THE UMATILLA CHEMICAL AGENT DISPOSAL FACILITY

(Permit No. ORQ 000 009 431)

November 29, 2001
7:00 p.m.
Good Shepherd Health Care System
Hermiston, Oregon

BRIDGES & ASSOCIATES
Freelance Court Reporters
P. O. Box 223
Pendleton, Oregon 97801
(541) 276-9491 - (800) 358-2345

MR. DANIELLO: I'll now call the hearing to order. If you'll please take your seats, or join us here. Thank you all for coming. My name is Paul Daniello, and I will be the presiding officer for tonight's hearing.

The purpose of this hearing is to take comments on the proposed modification to the hazardous waste permit for the Umatilla Chemical Agent Disposal Facility. The proposed modification will add two new conditions to the facility's permit.

The new permit conditions will require the permittees to obtain written approval from the Department, prior to the start of surrogate shakedown operations, and to obtain written approval from the Environmental Quality Commission prior to the start of chemical agent shakedown operations.

For the record, today is November 29th, 2001. Thank you all for taking the time to share your comments with the DEQ. If you want to submit formal comments at this hearing, please sign in and fill out the yellow registration card, so that we can have the correct spelling of your name and address.

You will receive a copy of the notice of decision and the Department's response to your comments. If you want to be on the DEQ mailing list

pertaining to this facility, please indicate that on the registration card. I will call people to comment in order of sign up.

This meeting is being tape-recorded. And by signing up to testify, you are consenting to be taped. I'd also like to let you know that Oregon law prohibits smoking while the meeting is in progress.

We are here today because we want your comments on the proposed modification to the Umatilla Chemical Agent Disposal Facility permit. We appreciate your willingness to take the time to get involved. And we will make sure that everyone who wants to give formal comments has the opportunity to do so.

Please come to the table when you are called, and speak into the microphone, so your comments will be recorded. Please respect the rights of individuals who are making formal comments, and do not interrupt while they are speaking.

You may submit oral or written comments at tonight's hearing, or send you comments by mail, e-mail, or fax. The addresses and numbers for submitting comments are included on the blue notice of public hearing that is on the back table.

There will also be another opportunity to

provide oral comments on this permit modification on December 7th at 9:30 a.m., in Portland, at the regular meeting of the Environmental Quality Commission. The address and meeting information for the Portland meeting is also included on the blue notice.

The comment deadline for this permit modification is 5:00 p.m., December 10, 2001. And please note that the DEQ must receive your comments by 5:00 p.m. deadline on December 10th.

Now, is there anyone that has some formal comments to make?

We'll let the record know that there are no formal comments at this time. And we'll keep the hearing open until 7:15 to see if there are any people that wish to submit comments.

(Short recess).

MR. DANIELLO: Yes. Okay. I'm going to resume the hearing here. So, I'm going to call it to order. And please come to the table when you are called and speak into the microphone, so your comments will be recorded. The time is 7:14 p.m.

Please respect the rights of individuals who are making formal comments, and do not interrupt while they are speaking. And I'm going to call a witness to the table. Karyn Jones. Hi, Karyn.

MS. JONES: Hello.

MR. DANIELLO: Thanks for coming this evening.

MS. JONES: Thank you.

Am I close enough?

MR. DANIELLO: Yeah.

MS. JONES: Okay. Ready?

MR. DANIELLO: Anytime you are.

MS. JONES: Okay. My name is Karyn Jones. I'm representing both myself, GASP, the Oregon Wildlife Federation, and Sierra Club Oregon Chapter.

First of all, I would like to say that we will be submitting detailed written comments to Mr. Thomas before the comment period ends. We'll also be giving detailed oral comments at the meeting next week to the EQC.

But briefly, I just wanted to state that we're encouraged that the Department is taking the steps to move forward to make sure that the public is protected. And I noted that on Page 5 of the explanation of the Section A, I guess, on the fax sheet, that the Department had highlighted that the potential new permit conditions may actually extend the time period that it will take before the start of

operations in order to include the public process.

And we want to state emphatically that we do support the public process, that the public must be involved in this, and that that's our first priority; and, of course, safety for the local communities.

And as I said before, we will be adding additional comments in Portland, both written form and orally. And in some cases, I think I could safely say that we would even like to see the Department go beyond what they're proposing. Thank you.

MR. DANIELLO: Thank you, Karyn.

Anyone else wishing to give formal comments? If not, then I will close the hearing. The time is 7:17 p.m., 29 November, 2001. Thank you all very much for attending. And have a safe trip home.

(7:17 p.m.)

* * *

STATE OF OREGON)
)
County of Umatilla)

I, Susanne Starkweather, do hereby certify that at the time and place heretofore mentioned in the caption of the foregoing matter, I was a Professional Shorthand Reporter and Notary Public for Oregon; that at said time and place I reported in stenotype all testimony adduced and proceedings had in the foregoing matter; that thereafter my notes were reduced to typewriting and that the foregoing transcript consisting of 6 pages is a true and correct transcript of all such testimony adduced and proceedings had and of the whole thereof.

Witness my hand at Pendleton, Oregon, on this 7th day of December, 2001.

Susanne Starkweather
Professional Court Reporter
Notary Public for Oregon
My commission expires: 12-26-2004

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Page 1

ENVIRONMENTAL QUALITY COMMISSION

December 7, 2001

9:55-11:25 a.m.

Transcription of comments received on

Permit Modification UMCDF-01-028-MISC(EQC)

Agenda Item I: Discussion and Public Comment on an Approval Process for Umatilla Chemical Agent Disposal Facility Operation

BEFORE THE EQC BOARD OF COMMISSIONERS

Melinda Eden - Chair

Tony Van Vliet - Vice Chair

Harvey Bennett - Member

Deidre Malarkey - Member

Mark Reeve - Member

ALSO PRESENT

Stephanie Hallock - DEQ Director

Larry Knudsen - EQC Counsel

Mikell O'Mealy - Assistant to Director

Wayne Thomas - Administrator, Chemical Demilitarization Program

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PROCEEDINGS

CHAIR EDEN: The Environmental Quality Commission is back in session and we are proceeding with Agenda Item I. Mr. Thomas.

MR. THOMAS: Good morning, Madam Chair, members of the Commission. For the record, my name is Wayne Thomas. I'm the Administrator for the Chemical Demilitarization Program with DEQ in Hermiston. We're here today to receive public comment on the proposed permit modification. That modification was developed at the request of the Commission at your September meeting in Ashland.

The Department opened the public comment period on October 22nd and that comment period ends on December 10th. We have held a public hearing on November 29th, and today's opportunity we thought was purposeful so that the Commission would hear directly from interested parties for your consideration when you consider a decision at your January meeting in Pendleton.

The purpose of the modification is to add a condition to the permit requiring that the permittees obtain written DEQ approval prior to the start of surrogate testing operations and, secondly, that the permittees receive EQC approval prior to the start of chemical agent operations.

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The Department issued the public notice with an accompanying fact sheet and that fact sheet included the details of the modification, the Department's justification and authority for that modification, the process that we will use in terms of considering facility startup.

As part of that, we included a startup checklist to receive comment on that checklist. The checklist is a tool that we will use in assessing facility readiness. The Department is not proposing that that checklist be part of the permit, but we thought it was useful to put it out for public comment to receive input as part of this process.

Today, there are several folks that have signed up to provide testimony, and in the interest of time I'll kind of end my opening comments there and Department staff are available to come back at the end of the testimony if you have any questions.

CHAIR EDEN: Thank you very much. At this point let me say that I have requests to speak from four parties, and if there's anyone else here who has not yet asked to speak, there are some forms on the table in the back and the procedure is to fill out that form and hand it to Mikell here on my left and she'll make sure that it gets to me so we know who wants to appear before the Commission.

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What I'd like to do is separate this from our usual public forum, which we regularly schedule at 11:30 in regular meetings, and save that forum today for issues that are not related to this because you have an opportunity to speak during this period. So, with that, the first request is from the Umatilla permittees.

Good morning gentlemen.

ALL: Good morning.

LT. COL. PELLISSIER: Madam Chair, Commissioners, Miss Hallock, distinguished guests, ladies and gentlemen, thank you for giving me the opportunity to speak on this, the 60th anniversary of the attack on Pearl Harbor. To my left is Mr. Don Barclay, who will be giving a presentation, and he represents the program manager for Chemical Demilitarization. To the left of him is Mr. Dave Nylander representing the

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Washington Demil group, and also, Mr. Stuart Hunt, who is the Army's legal advisor.

I want to mention there is heightened security at the Umatilla Chemical Depot. My main concern is the security of the stockpile and the safety of the public, and the Department of Defense has done a number of things and looked into a number of options to make the stockpile safer. I felt that when I heard some of these that it was necessary that the state, and specifically the governor, had the right to know.

I called the Governor's Office and I said, you know, if something is going to happen on the depot, I think you have the right to know. I discussed this with Chris Dearth and he recommended that, in order to do that, I'd expect that Department of Defense clearances should be given to a number of people. He recommended that I ensure that our DEQ representative on site, Mr. Wayne Thomas, receive one. I agreed with him and we're in the process of making that happen.

I think it's necessary that if anything does happen or if anything should be discussed with concern for the environment and safety of the public that he should be involved in it, so

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we are pursuing that. It does take quite some time and we continue to work that process. We meet on a monthly basis and, if things do come up, we will further discuss this at a later date, and our next meeting is the 19th of December to discuss further issues.

One thing I failed to do at the very beginning is mention who I was. I'm Lt. Col. Fred Pellissier and I am the Commander of the Umatilla Chemical Depot.

CHAIR EDEN: Thank you.

LT. COL. PELLISSIER: I'd like to now turn it over to Mr. Don Barclay unless you have any questions.

CHAIR EDEN: Well, my understanding is that the security clearance for Mr. Thomas will take several months; is that correct?

LT. COL. PELLISSIER: That's correct. Normally, they take between one year to 18 months. I felt that that is unworkable as far as I'm concerned, so I think it's necessary that whatever is done, and I did mention this to Chris Dearth from the Governor's Office, that the state has the right to know and I feel that is necessary. So, before anything is done, I will

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ensure that that does occur, clearance or no clearance.

CHAIR EDEN: Well, my understanding is that you're considering a nondisclosure agreement so that you can talk to Wayne about some of these issues from now until the time that the security clearance comes in.

LT. COL. PELLISSIER: Yes, ma'am. And that is a very tough thing because, as Wayne has mentioned to me, it's something that is open in the public forum if I discuss one of those things, and that's something we're trying to work through, you know, without having to openly make it in the public domain.

So, in order to ensure the security of the stockpile and safety of the public, we're trying to work that right now. That's why it is such an important point to me and not an easy thing to do.

CHAIR EDEN: Thank you. Mr. Barclay.

MR. BARCLAY: Thank you. Madam Chair, for the record, my name is Don Barclay. I'm the Umatilla Chemical Agent Disposal Facility's Stockpile Manager. I've handed out an eight-page briefing chart which I'll be referring to and

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what I would like to do, Madam Chair, is to basically summarize the comments that we will be providing and why during this part of the public comment period and we're not here so much to discuss the specifics of the proposed permit modification request, but more importantly to discuss the process of startup.

When we were here or in Ashland in September, our comments were we supported this concept of the permit modification request but reserved comments until we had a chance to review it. We've now had that opportunity and we'd like to share and provide some thoughts on this.

And I would like to say up front, before I get started, is that my focus on this project is to safely start the facility. I've been here five months, my family is a member of the Hermiston community, and I am a member of the public and my role is to reduce that risk to the public, and I'm part of that public. And that's the focus of my efforts in what I do to safely reach that startup.

And what I've observed in relationship to this program, the community, the Army, the Department of Environmental Quality is that this

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is a significant collaborative effort on the part of everyone. I see that everyone shares that vision of destroying the stockpile and getting on with the process and eliminating the risk to the public. So, it's a teaming effort and has to continue to be a teaming effort as well, and it's my responsibility as I manage that facility to ensure that we continue that teaming process.

Page 2, introduction, as I've said, we would like to agree, go back to what I said in September. We agree in concept, we still agree there needs to be a startup process. There has to be a clearly defined startup process for beginning the facility. I've worked with the program manager for chemical demilitarization. They have been designing, constructing, operating facilities for about 30 years, and back in 1973, I believe, they actually defined a very rigid protocol for starting an agent facility and which does include the engagement of the regulatory body. So, we're right in line with what the Commission has requested from the Department.

And again, it has to be a collaborative effort. We may differ in approaches at some point in time, but the common vision I think is

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shared and we still stand by that statement in September.

CHAIR EDEN: What I remember is that your lawyer said in September that the devil was in the details.

MR. BARCLAY: I've heard that statement before and he did say that, and some of our thoughts or recommendations and concerns that I'll share are due to the details of that, but basically what I see, to continue, is that collaborative effort and it has to continue, so we do agree with this process, but we do want to share some of those thoughts with you.

And, to emphasize, the key focal point for me and the permittees is safely starting that facility in trying to keep all the stakeholders focused on eliminating the risk to the public, because that's what the public is telling me they want: Don, get started. We want this stuff gone. But at the same time there's a safety protocol involved that we must rigidly follow, so that's what we're all about.

Page 3, this is just a refresher of the commitments that we have concerning -- that has been of some concern by the EQC in the past. It

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is my goal to ensure that the safety of the workers exists; the permittees that manage the facility from the perspective of protecting our workers; then we, in turn, protect the public because they're at a greater distance from us. And in order for us to adequately and effectively continue this project, the top three priorities have to be safety, safety, safety, and we cannot relinquish that. It has to exist. And so that guides us in all that we do. There can be nothing more important to us than that.

Reducing the risk to the public; they are the ultimate customers of risk. I'm a public, my family's a public, and I want to see that risk to them eliminated.

Ensure public awareness; critical piece of this project. We do have an outreach program, we have an outreach plan that we engage in. We continue to update that. We're currently updating it, strategizing what needs to be done as we approach the surrogate operations that are currently scheduled in May, and then ultimately agent operations which are currently scheduled to begin in February.

And in managing the facility, regarding

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the schedule, we are on schedule in facility preparations. I have a critical path review every week on this project to look at what that critical path is, and the critical path in a schedule is the longest path of activities that must be accomplished, and we currently look at the top six critical paths so that if I eliminate one, I'm looking at the next one. So, our focus is to stay on that schedule safely and we're currently on that schedule.

CHAIR EDEN: The CSEPP people are very interested in whether you're on schedule, so to me this is a significant public statement that the Army says it's still on schedule.

MR. BARCLAY: The facility schedule, when I'm talking about the facility preparation and the activities that we have to accomplish on our schedule, Madam Chair, we have approximately 10,000 milestone activities that we have to accomplish and manage. And so when I talk about the facility schedule, I'm looking at preparing that facility for its intended function.

There are peripheral issues that have to be addressed, CSEPP being one. I do not manage that and I think you probably are more

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aware of the situation than I am, but my goal is to prepare that facility so that it's ready to begin and that's why I say we're on schedule with that.

And then the final objective or commitment is the no legacy waste or no secondary waste. Agent is the critical risk factor in storage and to the public and so our focus is on that. Secondary waste, from a risk scenario, is a smaller risk to the public, but the Army, my project has made a commitment to not leave legacy waste, to process secondary waste as we go, and what I'm currently doing with that issue, Madam Chair, is building the schedule for secondary waste disposal into my operational schedule. We do spend a lot of time and a lot of focus on eliminating the agent risk, but we are now building into that schedule the secondary waste piece of the pie.

Page 4, just quickly some accomplishments which to me emphasizes the safety of this process and the commitment of the Army. The JACADS facility on the Johnston Atoll is completed, still under closure, still performing a very critical task to the Umatilla project and

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that is the testing of the carbon micronization system for the disposal of carbon. That is the only remaining secondary waste that we owe the Department a commitment regarding. They are scheduled to begin those tests early in calendar year 2002.

CHAIR EDEN: Are those the ones at JACADS?

MR. BARCLAY: Yes, ma'am. At JACADS, they are encountering some difficulty with some of the refractory in one of the furnaces and we have people on site right now to solve that problem for us and to keep us on schedule with that testing.

The Tooele facility is scheduled to complete their GB campaign before the Olympics. That's the target. No GB by Olympics time. And that's a significant accomplishment for the citizens of that community because that takes the significant threat of GB away. And they've exceeded in destruction the amount of agent we have stored at Umatilla, using the same technology as we are preparing to start.

The Anniston facility is scheduled to begin their surrogate trial burns early in 2002

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and then move into the agent trial burns. As I said, the waste streams anticipated from the burns, we've made the decision for all, with the exception of the carbon system, and if we stay on schedule with that, that decision would be in the April-May time frame.

CHAIR EDEN: Commissioner Bennett.

MR. BARCLAY: Yes, sir.

COMMISSIONER BENNETT: Just for our record, long term, it might be good if these acronyms are spoken to rather than stated for whoever reads this in 2089 --

MR. BARCLAY: That's an excellent point.

COMMISSIONER BENNETT: -- so it's in the record. Thank you.

MR. BARCLAY: Thank you. We did issue a decision -- regarding secondary waste and I've talked about the carbon micronization system.

Turning to Page 5, as I said earlier, the startup process is critical. The Army has a startup process that it's used for the past 28 years in time. It does provide for engagement by the state regulatory bodies. I managed agent operations for eight years in Utah, and one of

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the critical pieces of the Army startup process is that it has a checklist item on there to verify that we had the DEQ's permission or concurrence before we started. So, that is a very critical piece of our startup and that's why I say we concur with your proposed concept, because we think it's critical to the success of the project.

That startup process also has non-Army individuals on it. We have some of our independent groups like the Department of Health and Human Services sitting on that team as well. So, it is not just an Army team; we've engaged several stakeholders in that process.

So, it is very crucial to us to have the state's authority, concurrence, comfort before we start up. If we don't have all of our stakeholders together, we really can't be successful with this, and the startup process does include an evaluation of the public process that we have been through.

So, our comments are based on we agree with this. We do have an alternative measure that we'd like to propose, but I want the focus to stay on the startup process. It is critical

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to this project.
Let me step from Page 6, stepping through the concerns that we do have as we read through the intent of the proposed modification and some of the items that will be used for startup. And bear in mind what I said at the beginning. My focus is to keep the facility on schedule because our ultimate customers are the citizens of the Columbia Basin and we need to reduce their risk.
So, as I go through and evaluate changes, I evaluate them from that perspective. And so, the proposed mod does target a safe startup, but it does have the potential for slipping in the schedule. At least that's how we view this and that concerns us.
Reviewing through the checklist and the criteria, some of the items that are identified as part of the approval process are not regulatory based. The standards that we have to meet are not clearly defined for us. They're not necessarily fixed in time and we're not comfortable that they will be identified early enough for us to lay down the planning and know what the target is in order for us to hit it on a

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parallel path with our facility readiness preparation.
CHAIR EDEN: Can you give me an example of a standard that you're concerned about?
MR. BARCLAY: Yes. There's one standard that requires us to provide the Department of Environmental Quality unescorted access to the facility. That is not a safety-based criteria, it is basically a security issue that the base commander controls. We agree that the Department needs 24-hour access and must have it, but there are alternative methods to achieving that; for example, escorted access.
So, we're concerned with some of the items that we see that we could be held responsible for implementing and have not gone through the collaborative process of agreeing to those. And without those being a part of the process or fixed as part of the permit, then they could come in late in the game and we not have the opportunity to address it and thus extend the schedule. And that is our basic concern.
We agree with the concept of defining what we need to do to start that facility. We think it should be a collaborative process, fixed

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so that the permittees have the opportunity to manage it on a parallel basis -- facility readiness, so it would not add time to the preparation.
Now, if there's a critical safety issue that's identified late, either by the Army or by the state, then those type of changes require potential delays to the schedule because our commitment is maximum safety. So, we don't have a disagreement with that, but the standards in general, with some of those being there that aren't regulatory based, fixed, cause us concern that we be able to hit them commensurate with our schedule.
CHAIR EDEN: Question. That's why you have the opportunity now to tell us about this, and I assume you're in ongoing discussions with Mr. Thomas about some of these issues and continue to be.
MR. BARCLAY: Yes. And that's what we would hope for, that the development of the standards would be a bilateral, collaborative effort.
MR. NYLANDER: Another example, if I might interject, Dave Nylander with Washington

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Demil Company, is the requirement to have all of our waste contracts completed prior to starting up operations. And from the standpoint of the regulations, we don't see it as a requirement, it's more of a business management practice that we have. We know we have to have contracts in order to dispose of our waste off site, so it's a concern that we have to have those contracts in place prior to startup. It could impact us if we haven't negotiated those contracts with the receiving facilities.
CHAIR EDEN: Well, we've been sensitive all along about secondary waste, as you know, so I assume you will be discussing that with Mr. Thomas as well.
MR. HUNT: Madam Chair, if I could, one other issue that we do have concern with in terms of open-ended is checklist item 31.
CHAIR EDEN: You need to identify yourself for the record.
MR. HUNT: I'm sorry, Stuart Hunt.
CHAIR EDEN: For our recorded record.
MR. HUNT: Thank you. Checklist item 31 essentially provides that such other measures as DEQ may deem appropriate, and that is very

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hard for anyone to get a fix on, and you'll find a similar type open-ended in Appendix C to the draft notice where I know in 24F, for instance, it has a similar and such other as the DEQ deems appropriate, and that's hard for us to get a fix on. So, again, we hope we can collaborate, make it manageable, make it discrete, so we know what we have to do.

CHAIR EDEN: We look forward to your written comments.

MR. HUNT: Those will be submitted Monday.

CHAIR EDEN: Sure. Commissioner Bennett.

COMMISSIONER BENNETT: I think that fits with the Uniform Code of Military Justice, Article 123.

LT. COL. PELLISSIER: Well, yes, sir.

COMMISSIONER BENNETT: Crime that might be committed.

MR. BARCLAY: We're committed to doing as we've demonstrated over 20 years of disposing of agent. We will do whatever is necessary to ensure the safety of our workers and thus the public. Having managed those for eight years, I

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know that that is a -- it has to be done. There's no breaching that commitment, cannot be.

COMMISSIONER BENNETT: Madam Chair?

CHAIR EDEN: Commissioner Bennett.

COMMISSIONER BENNETT: Well, if the word reduced could be changed to remove, then we wouldn't have the discussion about the other issues as to how the Commission might work with it at another time. But no one can say, "Remove the risk." I'm looking at remove public risk. You say reduce.

MR. BARCLAY: Yes, sir. Yes, sir. And the key point is I can't remove it until I start, okay? So, anything that threatens the startup concerns me because that's why I was brought to this state was to start the facility and remove that risk.

COMMISSIONER BENNETT: And, in fact, you can't remove it until it's done.

MR. BARCLAY: That's correct. So, when we reviewed this, what the permit proposed per mod, we realized that you're basically requesting what the Army does currently. And flipping to Page 7, our recommendations, the first one is that we consider as an alternative to this

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request the utilization of the Army process. And, as I said, it does have independent groups. The DEQ can engage in that process, watch what we do, concur in what we do.

We do include in that, will include in that a public involvement process. As I said, we're working together with the DEQ to develop that public involvement process as we approach surrogates because the public does need to know more. We do need to do a better job of getting out to the public.

There was also some concern expressed in the proposal that because of our compressed schedule that the Department may not have the resources necessary to adequately assess readiness. We can negotiate and provide those resources so that you are comfortable in following along the Army's process, commensurate with facility readiness.

The secondary waste, as I've said, that is also part of the process and we've built our commitments to date and we have the one commitment left. However, if you must enact this or choose to enact this, what we would basically ask is that the standards you hold us to are

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defined and fixed; that those standards be added to the permit as a checklist item, that the public process be parallel or commensurate with facility readiness and, as much as possible, these activities be done in parallel rather than in a series with the facility readiness so as not to continue to push the schedule out to the right. Again, my focus is to hold it and push it left, not to push it right, unless there's an overriding safety issue that must be addressed.

CHAIR EDEN: I don't mean to be rude, but what occurs to me is if we just, by some magic process, tossed out what we've been considering as a permit modification and substituted the Army's checklist or the Army's process, wouldn't we then have a delay just because of additional public hearings and comments; in other words, we'd be kicking the process back if we consented to what you apparently are requesting.

MR. NYLANDER: We didn't -- my apologies. Dave Nylander with Washington Demil Company. When we wrote up the alternative, we didn't envision this to be public hearings on the startup process, but an open public forum to

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allow the public to see how we do it, to have an opportunity to express their concerns and we can address their concerns.

CHAIR EDEN: So what you're saying is basically you wouldn't want a permit modification?

MR. NYLANDER: Correct.

MR. BARCLAY: Correct. That would be the alternative. Just expressing my background again of eight years of experience, this is the process we utilized in Utah, but the final checklist item was did we have the state's approval of, for example, the surrogate trial burn plan or the agent trial burn plan. And the way that that generally worked was the state withheld the authority of that until they were comfortable that we were ready, and they looked at the process we utilized to become ready and then they issued their approval for the surrogate trial burn plan and that was the last checklist item on my Army checklist and then we made the decision to go forward.

We never went forward without first having the state's concurrence with what we were doing, not once, and I started over 20 operations

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and we did that without permit modification.

Then, in conclusion, Page 8, we do ask that you -- Again, we've summarized our comments. We would ask that you read those comments. They go into a lot more detail than what we've been able to share with you. And just again, the significant point is maintaining the focus on safely starting that facility and we cannot relinquish that responsibility.

CHAIR EDEN: Do you anticipate submitting those comments before December the 10th?

MR. BARCLAY: No.

CHAIR EDEN: Okay. Just checking.

MR. BARCLAY: We will submit them Monday, December 10th.

CHAIR EDEN: Commissioner Malarkey?

COMMISSIONER MALARKEY: Would it help if we had a copy of standards and procedures that you used to --

MR. BARCLAY: I can provide --

COMMISSIONER MALARKEY: I don't know if that would help.

CHAIR EDEN: Would that be part of your comments?

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MR. BARCLAY: It will be part of our comments. I can provide that separate from the comments.

COMMISSIONER MALARKEY: That would be fine.

MR. BARCLAY: We have a policy statement that lines out what we do. We have copies available of the process that we went through at Tooele. I have them here with me; I could provide copies. We even have examples of where the Army team did not authorize startup after the final survey because the facility was not ready.

So, it's not a rubber stamp process, as you can see, and I'd be glad to step either the Commission or the Department through that.

CHAIR EDEN: Well, for some reason I was thinking December the 10th is a long ways away, but it's not, so we'll be getting your comments in detail very soon, as soon as the Department can get it to us.

Commissioner Reeve?

COMMISSIONER REEVE: Just one quick question about, I forget what page this is now; there aren't numbers here. The one that you said

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if we go with what the Department recommends, we suggest adding the checklist as a permit condition. I wanted to ask you, is that suggestion because you're concerned that the checklist, if it's not a permit condition, would be subject to further modification or what's behind your suggestion that that --

MR. BARCLAY: The basis for our concern is the collaborative, mutually negotiable standard, okay? And that's really what we're after. If we can come to an agreement on that these conditions are collaboratively developed and accepted, then it would not necessarily have to be in the permit. But if we're not allowed to, then we would like to go through the permit process so we can then have opportunity to comment as the permittee on the proposed standards.

MR. NYLANDER: When we looked at the checklist items, we found that 18 of them are already -- Dave Nylander with Washington Demil Company. Of the 31 items, 18 are already a permit condition that we have to comply with. Four of the others are other permits such as the Clean Water Act permit, Hermiston County

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discharge permit or the Umatilla Depot permit. And the nine remaining deal with items that we could address quite easily under operational standards or they're not supported by a regulation and we're concerned about the open-ended of them.

So, we felt that of those items that are on a checklist, if the desire is to have them as part of a startup process, we can integrate any of those items out of the checklist into our startup process. It's very simply done. We just have to make sure that that permit condition is met, but we have to meet them anyway because it is a regulatory requirement.

MR. BARCLAY: Yes, sir. And the key again is planning, planning commensurate with facility readiness. What we wanted to know is what standards we must hit in order to start well enough in advance so that I can engage the resources that I need in order to pursue that and implement it commensurate with my facility readiness schedule which, as I said earlier, is on schedule. And if we can do that, then we're good with this.

COMMISSIONER REEVE: Okay. It sounds

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to me that the last nine out of those 31 that you mentioned are probably going to be the focus both of your comments and, I would hope, the Department response so that we can see the comments, the response, and then get a better understanding of the devil that is in these details.

MR. NYLANDER: Dave Nylander for Umatilla WDC. Yes, we have provided detailed comments on each of the 31 items. We comment on those that we feel are not supported by regulation, as well as those permit conditions that have an expanded description of the interpretation of them. We sometimes wonder why we're going down this path when it has potential to add risk to getting to the first agent campaign in rockets.

MR. HUNT: Stuart Hunt. We will also have a portion of our comments detailing certain legal concerns we have with the proposed approach. And again reflecting what Mr. Barclay has said today, the purpose there is to hopefully get people to reconsider and see if there's a better way of doing this, the shared goal that we have of starting this facility safely.

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CHAIR EDEN: Are there other questions or comments? We sort of interrupted your presentation, Mr. Barclay, but then you made it to the last page. So, do you have anything further?

MR. BARCLAY: No, Madam Chair.

CHAIR EDEN: No other questions or comments at this point? Thank you very much. We appreciate it.

The next person I have listed to speak is Dan Brosnan, but let me remind the audience, please, if you wish to address the Commission on this topic, please fill out one of the slips on the back table and give it to Mikell O'Mealy, who is sitting at the table to my left, so we will know who wants to address this. Mr. Brosnan.

MR. BROSNAN: Good morning.

CHAIR EDEN: Good morning. Welcome.

MR. BROSNAN: Madam Chair, members of the Commission, I apologize for the informal attire, I had a rough time getting here. We have prepared testimony which I would like to read, copies are being given to you, and then if there are any questions, I'd be happy to entertain them.

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My name is Dan Brosnan. I'm a County Commissioner for Morrow County and with me is Tamra Mabbott, County Planning Director. As you know, Morrow County is one of the host counties for the Umatilla Chemical Depot, along with Umatilla County. These two counties, together with Benton County, Washington, comprise the three counties involved in the Chemical Stockpile Emergency Preparedness Program.

Morrow County has been involved with and heavily impacted by the military for over 60 years. The condemnation of private and public land to establish the Depot and Navy Bombing Range had a devastating impact on some of our citizens and the county. The influx of workers led to rapid, unregulated building of substandard housing, inadequate water and sewer systems, and roads which in many cases were simply tracks across the desert. We're still trying to correct many of these problems.

With the signing of the international treaty mandating destruction of chemical weapons, a new burden was created for the host counties. We moved from having a terrible but relatively inert threat in our midst to an active program,

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which hopefully will remove the danger but which raises a whole new host of concerns. Make no mistake, Morrow County wants these weapons destroyed. We are, however, determined just as you are that it be done in a safe, timely and environmentally acceptable manner.

To that end, we have been paying close attention to the permitting and construction of the incinerator as we move forward to thermal operations. We have attended many of the public meetings, had numerous discussions with the Department of Environmental Quality staff, and Mr. Wayne Thomas has briefed the county commissioners several times. He, in fact, supported and was instrumental in our acquiring funding from the Department of the Army to enable us to hire a consulting firm to help us understand and comment on the permit process. We appreciate his help and assistance. Also, I might say, Miss Hallock.

We understand you're considering adding a condition to the permit which would require sign-off by this body prior to the startup of operations. This new condition would be additional to and proceed the governor's

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approval. We strongly support this concept. As a state body charged with developing and implementing the permit, this seems only appropriate.

And I might just make as an aside, the Army just stated a concern about the delays and slippage in the schedule. I guess my response to that would be that the schedule has already slipped, as we're all aware, a whole bunch, and if it has to slip a little bit more for safety, then that doesn't really concern me.

On a related matter, and to further the county's interests, we have had discussion with Mr. Thomas and with Miss Hallock regarding additional language in the permit to address one of our concerns. As you may or may not be aware, Morrow County has an ordinance passed several years ago requiring storage fees for toxic chemicals stored in Morrow County. We have billed the Army repeatedly for these fees. They have refused payment based on their opinion that there is no authority or authorization for them to make payment. We propose adding a condition to the permit that would state that the Army must comply with all state laws and local ordinances

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requiring payment of fees for storage or disposal of hazardous waste.

The rationale for these fees is that the U.S. Government has waived sovereign immunity under RCRA for payment of reasonable service charges in connection with state RCRA programs. The Federal Facility Compliance Act clarified the scope of this waiver as including any "substantive or procedural requirement including, but not limited to, fees or charges in connection with permits, planning, inspections, or other nondiscriminatory charges that are assessed in connection with a federal, state, interstate or local solid waste or hazardous waste regulatory program." These fees, under RCRA, must be used for purposes related to emergency preparedness such as maintaining roads for emergency response, emergency medical response, law enforcement and other health and safety purposes. We are prepared to use the fees for these explicit purposes.

Additionally, CSEPP funding is limited and does not cover expenses for many items covered under RCRA. CSEPP funds are also limited to current storage in the period during

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incineration, not post incineration, nor for other related hazardous waste needs. CSEPP will not fund emergency response programs, law enforcement and other health and safety programs needed for other hazardous waste programs. The funding burden for those services falls on the county; a burden we suspect is growing, especially given the fact that the Army has requested permission through a Permit Modification Request to not install the dunnage incinerator and to significantly increase the storage of waste in J-Block. Additionally, given that the Army has not identified methods of destruction for all waste, secondary and hazardous waste, and has not identified the treatment and final disposition of waste, we are even more concerned with the long-term implications and our ability to deal with hazardous wastes on the depot. It appears to us that long-term storage of some waste may occur well past the end of the CSEPP program funding. We must have funds and programs in place to deal with that.

When we first approached DEQ staff about adding a permit condition, they sought

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advice from the Attorney General's office. The A.G.'s advice was that the permit condition could be added but that enforcement of county ordinances would be up to the county, not the state. We understand and agree and would still like to request the EQC include the permit condition. By including our proposed permit condition, it will better position the county to collect fees authorized by RCRA.

Another aside, the county has been told in the past repeatedly by the Army that there is a way to make -- to collect the fees, we simply had to find them. We think we found them.

Unlike the state, which collects taxes from salaries, cities and counties do not have a method for recovering costs to mitigate impacts. When the boom cycle of incineration ends and the workers leave, CSEPP funding will stop and local government will be left to fund emergency response and health and safety programs. We need a mechanism to fund those programs.

While we at the county recognize the right thing to do is destroy the weapons, we are adamant in our insistence that we not inherit any legacy waste. The Army must be required to leave

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us with a totally clean site. With this in mind, Morrow County would like to request of you, the permitting agency, that the Army comply with certain conditions prior to the Environmental Quality Commission authorizing startup of thermal operations. Those prerequisite conditions should require that the Army submit detailed plans regarding waste, and that those plans be approved by the Commission, that all waste streams be identified by type and amount, the treatment methods for waste be identified and approved by the Commission and that final disposal of treated residue be identified.

Finally, we ask you that the Army be required to agree to treatment and restoration of the site to an acceptable level and not to allow them to get away with "only what is absolutely necessary," as the Deputy Assistant Secretary told us recently. Legacy waste is simply not acceptable to the citizens of Morrow and Umatilla Counties.

Finally, I would like to thank the DEQ staff for their hard work on this project. We recognize the long hours and negative feedback they frequently endure. Also, I would like to

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thank you for this opportunity to share our concerns. We'd be happy to answer any questions.

CHAIR EDEN: Thank you very much, Commissioner. Any questions or comments from the commissioners? Commissioner Reeve.

COMMISSIONER REEVE: I just have one. It has to do with your comment that the Federal Security Compliance Act had waived sovereign immunity. Is it your understanding that the Army says they're immune from the county fee or is the Army simply saying we may not be immune, but we just haven't been authorized or budgeted for this expenditure?

MR. BROSNAN: The letters that we've received in reply to our demand for payment from Army headquarters, or wherever it goes in the labyrinth, have said that we are not authorized or empowered. We believe, and the legal advice we're receiving now is that that is not quite true, that as long as we collect the fees under RCRA and apply them to the conditions of RCRA that we certainly are entitled.

COMMISSIONER REEVE: Okay. Thanks.

CHAIR EDEN: Any other questions or comments? Commissioner Bennett.

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COMMISSIONER BENNETT: Military bases typically have been required to pay into local schools where they have an impact in terms of enrollment and other kinds of things.

MS. MABBOTT: Tamra Mabbott, Morrow County Planning Director. I can't speak historically for the project, but for the demil project that has not been the case because, and my dates might be wrong, but there was a significant downscaling of the Army depot and the staff there, so at the same time we have an upscaling of incineration workers and those are not military personnel; that when we looked into that federal law, that's based on military staff there, and I think now there's one family that lives out there.

COMMISSIONER BENNETT: Have to hit them pretty hard.

MS. MABBOTT: Pretty expensive schools, right. So, they've been exempt from that.

COMMISSIONER BENNETT: Thank you.

CHAIR EDEN: Other questions or comments? We appreciate your coming through what's probably crummy weather to address us on this issue.

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MS. MABBOTT: It's shorter this way, you know.
CHAIR EDEN: Next is Armand Minthorn.
MR. MINTHORN: Good morning. My name is Armand Minthorn. I'm a member of the Confederated Tribes of Umatilla Board of Trustees and Governing Body. This morning I wish to make comments on behalf of my tribe to this Commission and these comments, both written and unwritten, are for the record on behalf of my tribe. In addition, the tribes today come here to make comment to this Commission as a sovereign nation.
On October 15 of 2001, the Board of Trustees of the Confederated Tribes of Umatilla adopted Resolution 01106 to define a formal policy position on chemical agent, related activities at the Umatilla Depot and Umatilla facility. This document states that the Board of Trustees supports the application of the stringent storage standards outlined in OAR 340-101-0030, 340-104-1201 and 340-108-0010 to the chemical weapons and bulk containers stored at UMCD; further, that the Board of Trustees supports the timely destruction of all chemical weapons and bulk items stored at UMCD

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provided that said destruction is carried out in a manner that is consistent with the Resources Conservation and Recovery Act permit for the incinerator facility, as well as other applicable environmental standards and it is protective of tribal rights and resources; and that once all weapons and bulk items are destroyed, the Board of Trustees supports the immediate treatment and off-site disposal of any remaining secondary waste and the subsequent restoration of the land to its original condition by decontaminating, dismantling and disposing of the UMCD incinerator facility; and finally, that under no circumstances does the Board of Trustees support on-site storage of waste generated either from chemical munitions and bulk item processing or from decommissioning and dismantling the incinerator facility beyond the time period that can reasonably be expected for its treatment and/or preparation for transport off site once the last munitions campaign has been completed.
Simply stated, the Confederated Tribes of Umatilla desires to see the munitions destroyed, the facility removed, no legacy waste remaining, and the site restored to a pristine

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condition in as rapid a manner as possible within the constraints imposed by the necessity of protecting the environment. Any action taken by the Department of Environmental Quality and the Environmental Quality Commission must seriously consider this opinion.
The current permit modification request UCMD 01028 that is before the Commission is intended to give the DEQ and the EQC explicit authority over the initiation of surrogate and agent trial burns respectfully. If adopted, this permit modification request would require the DEQ to submit written approval to the permittee before surrogate trial burns can commence.
Similarly, the EQC would provide written approval to the permittee before agent trial burns can commence. The DEQ is proposing to judge operational readiness through a defined, rigorous and public evaluation process that will include evaluating the completion of items on a startup checklist.
This checklist is not being proposed as part of the permit and is subject to DEQ revisions as deemed appropriate. It is important that the Commission note that of the 31 items on

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this checklist, the first 20 are already explicit permit requirements.
Today, the permittee could not start the facility until these items are in compliance with the Department's expectations. This fact is clear, from the Attachment B of the PMR. Furthermore, many of the remaining 11 requirements are also implicit requirements for starting thermal operations.
For example, it would not be possible for the plant to run trial burns or even have approved trial burn plans without adequate waste storage. Thus, the waste storage permit for the J-Block would need to be approved prior to thermal operations. The only items that might not be viewed as implicit requirements are items 21, 23 and 27, the last of which the Confederated Tribes would also like to see in place prior to startup. However, even in these cases, it seems reasonable that the DEQ could invoke Permit Condition IC3 to delay plant startup if they are not satisfied with the readiness of the facility.
The CTUIR is appreciative of the DEQ's rigorous efforts to ensure the public is adequately informed about and protected from

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activities of the UMCD. The Department has made numerous attempts to reach out to the surrounding communities and to the tribes to provide forums for involvement in the permitting process; however, the tribes is also aware that we are entering a critical phase of process startup at UMCD, hence, it is vital that the UMCD staff not lose focus in their efforts to bring the unit on line and begin destruction of the UMCD chemical weapons stockpile, a stockpile that puts the public and the environment at risk.

For this reason, we are asking the EQC to seriously consider whether the proposed benefit of the current PMR enhance public process to assess UMDC readiness is great enough to warrant potential negative impacts on project schedule and worker morale. If the EQC decides to move forward with this PMR, then we would request that the Commission considers limiting items on the checklist to only those which are critical for a safe startup of the incinerator facility. Specifically, items 21, 23, 30 and 31 should be considered for removal from that checklist.

In addition, Madam Chair and Commission

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members, I wish to make some additional comments. The tribes are a primary stakeholder within this whole proposed operation. The tribes' basis from which our concerns derive are a treaty of 1855. We have treaty resources, both on post and off post, at the Umatilla Depot. This makes us a primary stakeholder and the tribes continue to express our concern to be treated as such.

The tribes continuing concerns are the level of emergency preparedness. It seems there's a disconnect. We have a permit requirement for governor approval for CSEPP. We have a trial burn schedule and a CSEPP exercise schedule. These are disconnected, they are not in unison, and this is a very grave concern of the tribes. It has been stated and noted at past Executive Review Panel meetings: We are not at an acceptable level of emergency preparedness.

The tribes want to state for the record here that we do not receive any CSEPP funding. This puts the tribes at a disadvantage. The tribes are going to continue to press environmental monitoring before, during and after the incinerator process because of our explicit concern with our treaty resources.

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It has been mentioned several times in several forums, including Executive Review Panel, about recovery and reentry. There has been not any indication, any action, any follow-up to recovery and reentry, the example being in the event that there's an incident at the depot, what will the citizens, as well as my tribal members, know what to do when they come out of a protected environment? What about the resources? What can they do and not do once they reenter? This has not been addressed. This has been raised with the governor's office. He is aware.

The tribes will be concerned as well with the micronization technology. In hearing the Army's presentation earlier, we need to be assured that the micronization technology will be adequate. It is being tested, I understand, at JACADS. This is an unproven technology.

These are my concerns. These are the tribes' concerns. I express these today as a sovereign nation and I express them in hoping that our continued working relationship with the Department of Environmental Quality will be enhanced and I truly support your involvement and your -- in protecting the land, the water and the

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air. These are the tribes' concerns before you today. If there are any questions or concerns, I will attempt to address. Thank you.

CHAIR EDEN: Thank you. Questions or comments?

COMMISSIONER MALARKEY: I have a question.

CHAIR EDEN: Commissioner Malarkey.

COMMISSIONER MALARKEY: Mr. Minthorn, would you clarify for me what you mean by recovery and reentry. I assume that means recovery and reentry on traditionally held tribal lands. Is that what you mean?

MR. MINTHORN: Yes. There has been no indication from anyone at any forum, both formal and informal, on what the public is to do after an incident or accidental release from the depot.

MR. SKEEN: I'm Rod Skeen. I'm a staff member of the tribe. If I might just make a comment on what Armand said, there's really been no work on and no indication on what will be done if there is an event and how, you know, when people are evacuated and children placed and evacuating the houses will be done. The tribe has substantial facilities as well as treaty

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rights just, you know, feet from fence lines and that has not been addressed and it sort of seems to be one of those issues that just somebody else is going to do it.

COMMISSIONER MALARKEY: So, that's in the context then of CSEPP emergency preparedness, not in future reclamation?

MR. SKEEN: It's in the concept of if there is ever a release, be it from the facility or from the storage facility activities.

CHAIR EDEN: Other questions or comments? I appreciate your appearing and your giving us your comments. The permit does include a condition that there be monitoring of the soil and the air and the water before, during and after incineration, but I agree that there hasn't been much discussion, if any, about the connection between that data and what happens to people, both tribal and nontribal, after an incident, if there is an incident. Of course, that's what we're all working to avoid.

MR. MINTHORN: In addition, Madam Chair, this is an avenue of insurance that the tribes have in knowing that the activities at the depot will be monitored before, during and after,

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but the question will remain, understanding that the monitoring is going to establish a baseline, what happens in the event that there is a deviation from that baseline and what kind of mitigation activities or assurances can the tribes have because of that deviation from that baseline? I would be very concerned about my resources that are a responsibility of the Department of Defense and this U.S. Government.

CHAIR EDEN: Thank you very much. The last person who stepped up at this point to speak is, I'm not sure I can read the last name, Dr. Robert Palzer.

MR. THOMAS: Correct.

DR. PALZER: For the record, my name is Dr. Robert J. Palzer. I live at 501 Euclid Street in Ashland, Oregon. Chair Eden, Commissioners, Director Hallock and other guests, I thank you for letting me speak today on the Umatilla issue.

Before I begin my remarks, I would like to remind you, as earlier presenters have done, that this is 60 years to the day when there was a nonprovoked attack on the U.S. in Pearl Harbor. This resulted in a great loss of life and was a

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day that will live in infamy, as President Roosevelt stated at the time. This began our involvement in what is now known as World War II.

It also happens to be three months and four days since there was a nonprovoked attack on the World Trade Center and the Pentagon. I would like to pause here before I present my comments in commemoration of those who lost their lives and those whose families were greatly affected by both of those events.

I lived through both events and was personally affected by them. My father closed his business and served the country by building submarines that were used in World War II. Several of my uncles enlisted and served directly in action in World War II. I remember almost as if it were yesterday the VE parade that was held in my hometown with my Uncle Bill decked out in a Scottish kilt and full military regalia as they paraded, celebrating the victory they had had in that great war. He had been actively involved in the Battle of the Bulge. He fortunately survived. He lived to well into his eighties and died in a veterans home.

I remember my Uncle Clarence's funeral

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with a 21-gun salute and the flag over the coffin as it was to be turned over to his mother because he died before he was able to get married to his fiancee.

The more recent attack affected our view, and I'm referring to the event on 9/11, of how vulnerable we are to terrorist attack. There isn't a day that passes we don't realize how it can affect our lives, and I think it is only appropriate that we keep this in mind as we deal with this issue.

Let me tell you a little bit more about myself. I've been here on numerous occasions on different issues. Some of you know me, to some of you I'm just a name but not a face. I'm a retired chemistry professor. I was formerly on the faculty at UC Berkeley, I taught at what is now Southern Oregon University, and now I work as a non-paid volunteer for the Sierra Club.

I chair the national Sierra Club's air committee and I represent the Sierra Club on the ACWA Dialogue. I think you folks are aware of what the ACWA Dialogue is. Is that correct? I also serve on the Citizen's Advisory Technical Team, which is a subset of the Dialogue that

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works hand in hand with the Army and their support personnel in looking at alternatives to incineration of chemical weapons. On this ACWA Dialogue, Wayne Thomas, your employee, serves on that Dialogue.

This program was set up by Congressional mandate to come up with not less than two alternatives to incineration of assembled chemical weapons that are publicly acceptable. To date, four technologies have met all of the criteria that were established by the ACWA Dialogue and reviewed independently by the National Research Council.

I just finished co-authoring a report to Congress that will be formally submitted within this month to give the results of the program to date. To date, there are four technologies that meet the basic criteria; three of them use as the critical, primary first step a neutralization method that was developed by this country's U.S. Army. I will later make some comments about the Army, and I'm talking about another branch of the Army; some of those folks are sitting here today.

I should also mention I am a named

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plaintiff in a suit against the EQC and DEQ and I'm point person for the Sierra Club in that litigation.

CHAIR EDEN: Excuse me, Dr. Palzer. I hope that your comments are going to be related to the permit modification request that's before us now.

DR. PALZER: Indeed.

CHAIR EDEN: Thank you.

DR. PALZER: I'm here to say that PMCD's record is replete with instances where the Army, and I'm referring to that specific branch of the Army and not the other entities associated with them, whether it be their subcontractors, contractors, et cetera, where they have intentionally misled you, DEQ, the citizens.

There's a 20-year history that was proudly spoken of by someone at the table earlier in the day. If you carefully review that 20-year history, it is not a history that I would be proud of as a U.S. citizen.

It is my view that PMCD is requesting what they're requesting right now using the 9/11 event as a veil to cover the eyes of DEQ and the public under the guise of national security. The

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mere fact that Wayne Thomas would require a special security clearance and sign a nondisclosure agreement is to me an intolerable situation that will not guarantee the safety that we in Oregon are required to have by state statute, by the permit conditions that were issued by this body years ago.

The Sierra Club supports DEQ's need to have all the relevant information on CSEPP issues, what is going to be done with secondary waste and all of these matters before any test burns begin at Umatilla. That is consistent with the recommendation that the Umatilla tribe presented today, that is consistent with the testimony that was given earlier today from the representative of Morrow County. In those aspects, we agree.

We're not just nay-sayers in this process. We want to get rid of the chemical weapons. The chemical weapons do represent a real threat. It is one of many threats. Who would have considered before the 9/11 event that opening the U.S. mail would be the problem that it has been? We're living in a different world.

Last month, the Sierra Club, along with

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a number of other organizations, submitted a letter to President Bush that was hand delivered by Senator Mitch McConnell that, if implemented, would require Congress to approve the appointment of a commission that would have representatives of all the affected states, representatives of the governors' offices in affected states and a broad cross-section of people that know this issue well, with the sole objective of reducing in the most expeditious manner possible the immediate threat that is posed by these chemical weapons.

We don't know whether that committee will meet or not. The president has his hands full with other activities right now. But in that proposal what we have suggested is that the Army's technique of neutralization could be applied to all of the components that are in the Umatilla stockpile; 63.9 percent of that stockpile contains mustard agent.

Mustard agent, there is a facility that is being built at Edgewood on the Aberdeen proving ground to deal with disposal of the exact same agent that constitutes almost two-thirds of the stockpile at Umatilla. We're not talking

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about an unproven technology. This is the Army's own technology. It represents a large part of our stockpile. That method has already been given the blessing by another NRC panel as being a way to deal with the first step, the removal of that agent and rendering it a nonthreat to the public.

We are then proposing that that material be stored temporarily until further steps can be done so that material can then be disposed of in a manner that's environmentally acceptable and that that site can be remediated so it can be used for whatever other purposes.

I know you have a time limit here. I would like to just remind you that I will be submitting more extensive comments in written testimony, I will submit them by e-mail, and I will do that by your deadline of Monday. I'm here to answer any questions you might have.

CHAIR EDEN: Thank you very much. Questions or comments? Apparently there are none at this time. Thank you very much.

DR. PALZER: Thank you.

CHAIR EDEN: I have one other person who has signed up to address the Commission on

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the topic of this permit modification request. If there are any others, this is just about your last chance to fill out one of the slips at the back of the room and give it to Mikell O'Mealy on your left. Karyn.

MS. JONES: Hello. For the record, my name is Karyn Jones. I live in Hermiston, Oregon, within the immediate response zone for the Umatilla Army Depot. I'm here representing myself, GASP and the Oregon Wildlife Federation. First of all, I'd like to state that we are fully supportive of DEQ and the EQC's ensuring that they remain in control and not submitting to the fearmongering tactics of the permittees.

Anything that strengthens the Department's ability to protect human health and the environment is within the clear authority of the state. Oregon Revised Statutes do not include language that I'm aware of, anyway, that makes you focus on cost and schedule delays.

I'd also like to point out that in over 10 years of being involved in this program, I'm still not aware of any time delays that were caused because of public involvement.

The state being required to sign a

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nondisclosure agreement with the permittees we believe undermines the credibility and the authority of the state to fulfill its mission to protect public health and the environment and we would strongly oppose that from happening.

The secondary legacy waste has created a nightmare for generations to come at the Hanford, Washington site and we hope that Oregon will not allow a similar situation at Umatilla with the chemical weapons waste.

We'd further like to state that many of the issues that have been pointed out by the Department in the document we believe should have been resolved prior to the RCRA permit being issued and we certainly are supportive of them being resolved at this point.

I think I'll leave it at that other than to say we are submitting detailed comments and that they will be in by Monday.

CHAIR EDEN: Thank you very much.

MS. JONES: Thank you for the opportunity.

CHAIR EDEN: Any questions or comments of Ms. Jones? None at this time. Thank you very much.

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MS. JONES: Thank you.

CHAIR EDEN: Is there anyone else who has not filled out a slip who wants to testify? You have to fill out a slip before you testify, but this is the last chance, I think, at this time.

Seeing and hearing none, Mr. Thomas, do you want to wrap this up for us?

MR. THOMAS: Madam Chair, for the record, Wayne Thomas. We appreciate the comments that we've heard today. We look forward to receiving written testimony or written comments by the end of business on Monday. I would stress for everybody to please get them in before 5:00, it makes it difficult for us if they come after that, and we will consider them very seriously as we develop our staff report and recommendation for the Commission and we will come back to you at your January meeting in Pendleton. If you have any questions of the Department on any of the comments you've heard today, we'd be pleased to respond.

CHAIR EDEN: Are there any questions?

COMMISSIONER VAN VLIET: One. We hope you get back on post soon with a clearance. I

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think probably, in all fairness, if I understand procedure, probably the Army was reflecting what has been passed down from the head person's office in Washington, D.C. and Attorney General Ashcroft and some of his more profound ways of handling security.

So, I'm not sure I'd quite take it out on the Army 100 percent the fact that you're having troubles, but it would be good maybe to write him and see if you can't get your clearance a little faster. I don't think they'd allow me to lend you my top-secret card from ages old.

MR. THOMAS: I'd probably have to go before some tribunal or something.

COMMISSIONER VAN VLIET: That's right.

MR. THOMAS: I would say that I think challenges of not being an Army employee or a federal employee and at the state level not being a state police type of person, they're not sure how to deal with us in terms of clearance and that's the difficulty.

COMMISSIONER BENNETT: Question.

CHAIR EDEN: Mr. Bennett?

COMMISSIONER BENNETT: How would they deal with the EPA?

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MR. THOMAS: I'm not sure. I think with a federal employee, it's a little different.

COMMISSIONER BENNETT: I understand, but I think the mandate is ridiculous.

CHAIR EDEN: Mr. Reeve.

COMMISSIONER REEVE: Just a general question, and feel free to depart when you come up with your staff report, but I'd asked a question about putting the checklist in the permit because I see some pros and cons to that. It would seem that having the checklist clarified or sort of set in stone certainly would make it clearer to the Army or the permittee exactly what the steps would be and remove some potential uncertainty, and yet potentially from the DEQ standpoint, it deprives the Department of some flexibility if things come up or change in the future. Have I pretty much got the competing interests?

MR. THOMAS: I think that's accurately capturing the issue. The original checklist concept has been around since, I think, April of 2000 was when I sent a letter to the Army saying, Hey, be aware that we're looking at this as a process to start the facility up, so this should

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not be a late, a last minute surprise to them. But then again, we've had numerous changes of management out there and that always causes a problem for us in transferring agreements and understandings that have been in place for some time.

But our commitment is to work with the Army to come to a mutually acceptable process here, but I think it's important that we communicate to the Army that our entire process from day one in Oregon has been to ensure that the public is adequately part of our decision.

And we were concerned and it was the original starting point for the checklist was, How do we do this? Does the Army just say, "We're starting tomorrow because you've approved all the plans"? Is that acceptable to the people of this state and those people that live close to the installation or do we want to have some process where we lay out what we've assessed and how we decided that things are good to go?

And that's kind of where we ended up, that we felt this should be a process that the public can say, "We're comfortable with this now. We understand how it's going to work and

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everybody's done the job that they committed to doing."

CHAIR EDEN: Other questions or comments? I'm looking forward to seeing those comments.

COMMISSIONER BENNETT: One.

CHAIR EDEN: Commissioner Bennett.

COMMISSIONER BENNETT: Since we heard today several times in different ways about on-site storage and legacy waste and so forth, what can you comment on that?

MR. THOMAS: One of our basic principles, I think, is that there be no legacy waste and we've communicated that many times to the Army, as has the Commission, both verbally and in writing, and the commitments we've always received are that the Army supports that. The challenge will be -- there's a competing interest in a way of to reduce the risk of the public as soon as possible, you really want to process the munitions as opposed to the secondary waste.

So, if we force the Army's hand to process secondary waste as it's generated, perhaps, perhaps we're not processing the stockpile as quickly as we can, so there's a

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balancing act there where we need to figure out with the Army. But in terms of legacy waste, in a way I consider it a non-issue because there will be none.

COMMISSIONER BENNETT: Thank you. I just hoped you would finish that statement.

COMMISSIONER MALARKEY: Madam Chair, can I ask a question?

CHAIR EDEN: Yes, you may.

COMMISSIONER MALARKEY: In the testimony, one of the people that testified said that items 1 through 20 in the checklist are already in the permit. Was that a correct statement?

MR. THOMAS: I think it's actually 18 as opposed to 20, but they are already in the permit, that's correct. And with those specific ones, I think maybe the Army's issue is how we interpret those conditions.

CHAIR EDEN: While I have the opportunity, there is some internal discussion about whether that January meeting will be in Pendleton. It'll be in Pendleton or Portland, but we need to discuss that further. Right now, it's scheduled to be in Pendleton.

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MR. THOMAS: Whatever the Commission's pleasure.

COMMISSIONER VAN VLIET: Have bag, will travel.

MR. THOMAS: Right.

CHAIR EDEN: Thank you very much.

(Requested portion of proceedings concludes at 11:25 a.m.)

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CERTIFICATE

I, Kathleen M. Marshall, Certified Shorthand Reporter for Oregon, do certify that: At the time and place heretofore mentioned in the caption of the foregoing matter I reported in stenotype all testimony adduced and other oral proceedings had in the foregoing matter; that thereafter my notes were transcribed using computer-aided transcription; and the foregoing transcript is a true and accurate transcript of all testimony adduced and oral proceedings had and of the whole thereof.

ON WITNESS WHEREOF, I have hereunto set my hand and stamp this 14th day of December, 2001, in the City of McMinnville, County of Yamhill, State of Oregon.

Kathleen M. Marshall
Oregon Certified Shorthand Reporter No. 90-0092

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ATTACHMENT D

Written Comments received related to Proposed Permit Modification No. UMCDF-01-028-MISC(EQC).

Other written comments received, available upon request:

Item No. 01-1486	Permittees' Comments—overhead slides from 12/7/01
Item No. 01-1473	Comments of Mr. Armand Minthorn, Confederated Tribes of the Umatilla Indian Reservation (revised comments submitted)
Item No. 01-1465	Comments of Mr. Stephen McFadden, Dallas, Texas
Item No. 01-1487	Comments from Stephen McFadden, Dallas, Texas

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SUMMARY OF PUBLIC COMMENTS RECEIVED
Permit Modification UMCDF-01-028-MISC(EQC)
"Approval Process for UMCDF Operation"

The public comment period for Permit Modification UMCDF-01-028-MISC(EQC), "Approval Process for UMCDF Operation," opened on October 22, 2001. The Department held a public hearing in Hermiston on November 29, 2001, and there was an additional opportunity for oral public comment before the Commission on December 7, 2001. The Department received a total of 14 written comments (from 12 Commenters) by December 10, 2001 when the public comment period closed. (See the cover sheet to this Attachment for a listing of the comments included here. Transcripts of oral testimony are included in Attachment C)

Two sets of written comments were received from Mr. Stephen A. McFadden of Dallas, Texas. Mr. McFadden stated his view that the lack of access to information, lack of funding, and military secrecy resulted in barriers to public involvement. Mr. McFadden also expressed his concern that the toxicity of nerve agents has been severely understated and poorly studied, as evidenced by the health problems experienced by veterans of the Gulf War. Mr. McFadden also urged the Department to add a permit condition requiring the evaluation of the health effects of nerve agents and a community health study. Mr. McFadden did not offer any comments specific to this proposed Permit Modification.

Mr. Andrew Butz of Portland, Oregon (Page D-3) expressed his support of the proposed modification, although Mr. Butz pointed out that he considered incineration the "least advisable method of disposal." Commissioner Dan Brosnan of Morrow County (Page D-21) also expressed support for the proposed modification. Morrow County requested that an additional permit condition be added that would state that "the Army must comply with all state laws and local ordinances requiring payment of fees for storage or disposal of hazardous waste."

Mr. Bob Severson (Mayor of Hermiston, Oregon) and Mr. Frank Harkenrider (ex-Mayor of Hermiston) both urged that no additional delay be imposed through "duplication of permits" (See Pages D-15 and D-17). Other Commenters [Mr. James Wilkinson, Pendleton; Ms. Karyn Jones, G.A.S.P., Hermiston (Page D-33); Dr. Robert Palzer, Sierra Club, Ashland (Page D-19)] believe that the Department and the Commission should not forego an extensive facility evaluation with an open public process before start-up, even if it causes a schedule delay. Mr. Wilkinson (Page D-25) encouraged the Commission to "pull the permit" due to unresolved issues concerning the treatment and disposal of secondary wastes. He stated that the effectiveness of the oversight program should be evaluated, and that any start-up evaluation process should be on a furnace-by-furnace basis. Several Commenters pointed out that since UMCDF is already far behind the original schedule anyway, operations should not be allowed to begin until issues such as disposition of secondary wastes are resolved.

The Confederated Tribes of the Umatilla Indian Reservation (CTUIR), represented by Mr. Armand Minthorn, CTUIR Board of Trustees, expressed its appreciation of "DEQ's rigorous efforts to ensure the public is adequately informed about, and protected from, activities at the UMCDF" (Page D-11). However, the CTUIR requested that the Commission "seriously consider whether the proposed benefit of the [proposed modification] is great enough to warrant potential negative impacts on project schedule, worker moral[e], and community risk." The CTUIR also requested that, if the Commission approves the modification, it consider eliminating certain Start-up Checklist items that are "ambiguous." Other Commenters (Mr. John Herron of Hermiston and the UMCDF Permittees) also expressed concern about Checklist items that are not clearly defined.

Mr. Herron (Page D-5) and the UMCDF Permittees (Page D-37) both objected to the proposed modification not only because of the potential for schedule delays, but also because neither party believes that the Department or the Commission have the regulatory authority to impose additional requirements on the UMCDF Permittees. Mr. John Ledger, representing Associated Oregon Industries (AOI), also expressed "substantial concerns" that the proposed modification "significantly changes the permitting process" and "sets a bad precedent of future permitting of any potentially controversial start-ups." AOI believes that the uncertainty imposed on businesses would adversely affect new business development (Page D-9).

In addition to the written comments received during the open comment period, the Permittees (as requested by the Commission at the December 7, 2001, meeting) forwarded additional information to the Department and the Commission concerning the Army's "Pre-Operational Surveys and Operational Readiness Evaluations." The Permittees contend that their Pre-Operational Survey is "a very rigorous process dedicated to safety and environmental compliance" and that the [Army's] "start-up evaluation process is extensive when compared to the [Department's] draft checklist."

MARKHAM Trisha

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01-1385

FILE

From: MARKHAM Trisha
Sent: Tuesday, November 27, 2001 9:01 AM
To: 'Andrew Butz'
Subject: RE: Public Comment

Your comments have been received and will be put into the record.

-----Original Message-----
From: Andrew Butz [mailto:abutz@pcc.edu]
Sent: Monday, November 26, 2001 10:26 PM
To: MARKHAM Trisha
Subject: Public Comment

I support the DEQ proposal to modify the UMCDF HW Permit, adding the requirement that UMCDF Permittees obtain written DEQ approval prior to start of surrogate testing operations of the UMCDF incinerators. I also support requiring UMCDF Permittees to obtain written EQC approval prior to start of chemical agent treatment operations.

This is in keeping with my view that incineration is the least advisable method of disposal; and use of that option, as last resort, must commence with the most rigorous Start-up Checklist possible. Thank you for considering my comment.

Sincerely,
Andrew Butz
411 NE 22nd Ave., #15
Portland, OR 97232

MARKHAM Trisha

From: Andrew Butz [abutz@pcc.edu]
Sent: Monday, November 26, 2001 10:26 PM
To: MARKHAM Trisha
Subject: Public Comment

I support the DEQ proposal to modify the UMCDF HW Permit, adding the requirement that UMCDF Permittees obtain written DEQ approval prior to start of surrogate testing operations of the UMCDF incinerators. I also support requiring UMCDF Permittees to obtain written EQC approval prior to start of chemical agent treatment operations.

This is in keeping with my view that incineration is the least advisable method of disposal; and use of that option, as last resort, must commence with the most rigorous Start-up Checklist possible. Thank you for considering my comment.

Sincerely,
Andrew Butz
411 NE 22nd Ave., #15
Portland, OR 97232

November 30, 2001

DEQ Chemical Demilitarization Program
256 E. Hurlburt
Suite 105
Hermiston, OR 97838

Dear Sir or Madam:

SUBJECT: COMMENTS ON PROPOSED MODIFICATION OF THE HAZARDOUS WASTE STORAGE AND TREATMENT PERMIT FOR THE UMATILLA CHEMICAL AGENT DISPOSAL FACILITY (PERMIT NO. ORQ 000 009 431) [PMR #. UMCDF-01-028-MISC(EQC), "APPROVAL PROCESS FOR UMCDF OPERATION"]

Enclosed (enclosure 1) you will find my comments concerning the subject permit modification request (UMCDF-01-028-MISC(EQC), "Approval Process for UMCDF Operation) by the Department of Environmental Quality. As a resident of Hermiston, Oregon, my family and I are interested in the activities of the UMCDF and its' impact upon the community and us. It is my belief that the proposed permit modification request is unnecessary since DEQ and EQC are already involved in the permitting process and have been made aware of all changes at UMCDF. Also, the permit modification does not provide enough detail as to how DEQ/EQC will validate some of the proposed checklist items.

The greatest risk to my family and I is from the continued storage of the chemical munitions. The risk of storage is considerably greater than that of incineration (*The U.S. Chemical Weapons Destruction Program: Views, Analysis, and Recommendations*, The Henry L. Stimson Center, 1994). Any request, permit modification or challenge to the present schedule of the destruction of these weapons must be scrutinized to ensure that the proposal is so necessary that the risk or length of storage time must be increased to satisfy this request.

I look forward to receiving answers to my comments from the department.

Sincerely,

John Herron

Enclosure (1)

325 SE 9TH DRIVE
HERMISTON, OR 97838

ENCLOSURE 1

Comments on: PROPOSED MODIFICATIONOF THE HAZARDOUS WASTE STORAGE AND TREATMENT PERMIT FOR THE UMATILLA CHEMICAL AGENT DISPOSAL FACILITY (PERMIT NO. ORQ 000 009 431)[PMR No. UMCDF-01-028-MISC(EQC), "APPROVAL PROCESS FOR UMCDF OPERATION"]

1. The department is requesting this permit modification based upon the regulations stated under 40 CFR 270.41. In 40 CFR 270.41 it states: *If cause exists, the Director may modify or revoke and reissue the permit accordingly.* Please provide a detail list of all of the causes the department has identified, which prompts this permit modification.

2. The department states that this Permit modification request is necessary on the regulatory basis of 40 CFR 270.41(a)(1 and 2). Hasn't the department been involved with the permittees on all changes made to the facility and hasn't the department already approved these changes? Please provide a list of what the department feels it has not been informed on in regards to the facility modifications.

3. Is it a regulatory requirement that this type of approval process—state agency and appointed commission—be placed on the permittees? If so, what other TSDF facilities permitted under 40 CFR 260-272 are required to have this layered oversight? Please provide the name and location of these facilities and provide the reasons whether or not it a permit condition similar to DEQ's proposal was imposed on these facilities.

4. In the proposed modification request, DEQ states that "*There have been a significant number of changes made to the original design and operating parameters of UMCDF, and public interest and concern remains high.*" Please provide a list of these concerns and resolution the department provided to the public. What was the basis DEQ used to establish "*public interest and concern remains high*"? Please provide the analysis or survey results that indicate this statement to be true.

5. By requesting another set of requirements to be met prior to the start of surrogates and agent operations, there is a possibility that further delays may result in the start of agent operations. With the greatest risk to the public coming from the storage of the M-55 rockets, has DEQ evaluated what potential impacts it will have on the risks to the public by possibly extending the start of agent operations? If so, please provide the results of this study and DEQ's validation to possibly extend storage of M-55 rockets at UMCD.

6. Under what guidance will the EQC make their decision to authorize the start of agent operations? Will this be data provided by the DEQ? Will EQC simply

follow the recommendations of the DEQ? If, so is this not simply another redundant step in the process?

7. In the checklist item #4, DEQ is requiring that UMCD/UMCDF be in compliance with all remaining HW Permit Conditions not already specifically addressed in this list. Please identify all outstanding items identified by DEQ. Also, what regulatory requirements exist in which DEQ can link two separate permits together?

8. In the checklist item #7, DEQ requires that the UMCDF Independent Oversight Program structure and implementation be acceptable to DEQ. Hasn't the department already approved the independent oversight program? Why is it necessary to approve again? What criteria will DEQ use to evaluate an Oversight body? What qualifications does DEQ have that allows them to understand the qualifications, roles and type of work performed by an oversight body?

9. In the checklist item #12, DEQ requires that the remote UMCDF monitoring station(s) be installed and operational per DEQ request. This is already a permit condition (Condition I.N.1.v) that must be met. Why does DEQ want to include in the checklist permit conditions? Are there other request that the DEQ is making that are not permit conditions concerning remote monitoring? If so, what is DEQ requesting and what is the need for the request not identified by the permit condition?

10. In the checklist item #21, DEQ is requiring that UMCD have its storage permit approved, issued and implemented. Please identify all outstanding items identified by DEQ. Also, what regulatory requirements exist in which DEQ can link two separate permits together? Explain what effects the UMCD storage permit has upon the UMCDF HW permit.

11. In checklist item #27, DEQ states that the permittees must have all necessary waste management processes and contracts implemented to manage all waste streams generated during operations. What is the regulatory requirement DEQ is using to support this item? What other TSDF facilities in the nation are required under state or federal agencies regulations to meet this type of requirement? What is the method DEQ will use to evaluate the contracts?

12. In checklist item #29, DEQ requires UMCD/UMCDF to be in compliance with approved/issued Air Quality Permit and all applicable MACT and air quality regulations and that all outstanding air quality issues resolved to DEQ's satisfaction. Please explain in detail what the meaning of "*DEQ's satisfaction*". Is there a standard? If so please provide these standards.

13. In checklist item #30, DEQ requires UMCD/UMCDF to be in compliance with all applicable water quality regulations and that all outstanding water quality issues are resolved to DEQ's satisfaction. Please explain in detail what the meaning of

"*DEQ's satisfaction*". Is there a standard? If so please provide these standards. Also, what regulatory requirements exist in which DEQ can link two separate permits together? Explain what effects the UMCD permit has upon the UMCDF HW permit.

14. In checklist item #31, DEQ requires UMCD/UMCDF to be in compliance with all remaining requirements determined by DEQ to be necessary for facility start-up, and not. Please explain in detail what the meaning of "*DEQ's satisfaction*". Is there a standard? If so please provide these standards. Also, the measurement criterion is: TBD as necessary. Please elaborate and provide examples of what might be construed as necessary to the department. This type of open ended criteria cannot be validated unless specifics are given and regulatory or statutory references to base decisions upon are cited.

1149 Court Street NE
Salem, OR 97301-4030

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FAX 503/588-0052
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Web page: http://www.aoi.org

01-1474

ASSOCIATED OREGON INDUSTRIES

December 10, 2001

Ms. Trisha Markham
DEQ Chemical Demilitarization Program
256 East Hurlburt Suite 105
Hermiston Oregon 97838

VIA FAX: 541-567-4741

Subject: Comments Concerning Permit Modification Number UMCDF-01-028-MISC (EQC) "Approval Process for UMCDF Operation"

Dear Ms. Markham:

Please accept these comments to this proposed permit modification.

Associated Oregon Industries has substantial concerns regarding policy and process issues that involve and extend beyond this individual permit. The proposal adds two new conditions to the Umatilla Chemical Agent Disposal Facility Hazardous Waste Storage and Treatment Permit. The conditions would require DEQ authorization before the start of surrogate shakedown operations, and Environmental Quality Commission approval prior to the start of agent shakedown operations. This proposal significantly changes the permitting process by adding new rounds of approval and review prior to facility operations, rounds that occur only after the permittees have already obtained a permit, demonstrated compliance through the existing regulatory process, and met all the current regulation-required aspects of their permit.

Oregon businesses count upon the predictability and finality of the regulatory process in making business judgments. Here, the DEQ places very heavy investments, made under approved permits, at risk based upon a new after-the-fact Director and Commission process, completely unforeseeable and unexpected by any permittee at the outset. Not only does it diminish the regulatory authority of DEQ staff, it sets bad precedent for future permitting of any potentially controversial start-ups. Little that the EQC or DEQ could do would be more chilling to new business development than to subject enterprises to this uncertainty.

Thank you in advance for your consideration of these comments.

Sincerely,

John Ledger
Legislative Representative
Environment & Natural Resources

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ENVIRONMENTAL, SCIENCE
& TECHNOLOGY PROGRAM

CONFEDERATED TRIBES
of the
Umatilla Indian Reservation

P.O. Box 638
73239 Confederatetd Way
PENDLETON, OREGON 97801
Phone (541) 966-2400
Fax (541) 278-5380

01-1475

STATE OF OREGON
DEPARTMENT OF ENVIRONMENTAL QUALITY
RECEIVED
DEC 11 2001
HERMISTON OFFICE

7 December, 2001

Mr. Wayne Thomas
Department of Environmental Quality
Eastern Region Hermiston Office
256 East Hurlburt, Suite 105
Hermiston, OR 97838

Dear Mr. Thomas;

On behalf of the Board of Trustees of the Confederated Tribes of the Umatilla Indian Reservation (CTUIR), I am submitting the following comments to the Permit Modification Request (PMR) UMCDF-01-028-MISC(EQC). This PMR is for the RCRA Hazardous Waste Permit for the Umatilla Chemical Agent Disposal Facility (UMCDF).

If you have any questions concerning this matter please feel free to contact me at (541) 966-2020.

Sincerely;

Armand Minthorn
CTUIR Board of Trustees Member

Cc:
CTUIR Board of Trustees
Richard Gay, Acting Program Manager, CTUIR, ESTP
John Kitzhaber, Governor, State of Oregon
Melinda Eden, Chair, Environmental Quality Commission
Don Barclay, Site Project Manager, Umatilla Chemical Agent Disposal Facility
James Bacon, Program Manager for Chemical Demilitarization

Enclosure

Simply stated the CTUIR desires to see the munitions destroyed, the facility removed, no legacy waste remaining, and the site restored to a pristine condition in as rapid a manner as possible within the constraints imposed by the necessity of protecting the environment. Any action taken by the Department of Environmental Quality and the Environmental Quality Commission must seriously consider this opinion.

The current permit modification request (UMCDF-01-028-MISC(EQC)) that is before the commission is intended to give the DEQ and the EQC explicit authority over the initiation of surrogate and agent trial burns, respectively. If adopted, this PMR (permit modification request) would require the DEQ to submit written approval to the Permittee before surrogate trial burns can commence. Similarly, the EQC would provide written approval to the Permittee before agent trial burns can commence. The DEQ is proposing to judge operational readiness through "*...a defined, rigorous, and public evaluation process...*" that will include evaluating the completion of items on a Start-up Checklist. This Checklist is not being proposed as part of the permit, and is subject to DEQ revisions as deemed appropriate.

It is important that the Commission note that of the 31 items on this checklist, the first 18 are already explicit permit requirements. Today, it would seem that the Permittee could not start the facility until these items are in compliance with the Department's expectations. This fact is clear from Attachment B of the PMR. Furthermore, many of the remaining thirteen requirements are also implicit requirements for starting thermal operations. For example, it would not be possible for the plant to run trial burns (or even have approved trial burn plans) without adequate waste storage. Thus, if J-Block were needed for surrogate waste storage then the waste storage permit for J-Block would need to be approved prior to thermal operations. The only items that might not be viewed as implicit requirements are Items 21, 23, 27 (which the CTUIR would also like to see in place prior to start-up), 29, 30, and 31. However, even in these cases it seems reasonable that the DEQ could invoke permit condition I.C.3 to delay plant start-up if they are not satisfied with the readiness of the facility. Condition I.C.3 states:

"*In accordance with ORS 466.200, if the Department or Commission finds that there is reasonable cause to believe that a clear and immediate danger to the public health, welfare or safety or to the environment exists from continued operation of the site, the Department may halt demilitarization operations at the UMCDF.*"

The CTUIR is appreciative of the DEQ's rigorous efforts to ensure the public is adequately informed about, and protected from, activities at the UMCDF. The Department has made numerous attempts to reach-out to the surrounding communities, and to the Tribes, to provide forums for involvement in the permitting process. However, the CTUIR is also aware that we are entering a critical phase of process start-up at the UMCDF. Hence, it is vital that the UMCDF staff not lose focus in their efforts to bring the unit on-line and begin the destruction of the UMCD chemical weapons stockpile; a stockpile that daily puts the public and the environment at risk. For this reason, we are asking the EQC to seriously consider whether the proposed benefit of the current PMR (an enhanced public process to assess the UMCDF readiness) is great enough to warrant potential negative impacts on project schedule, worker moral, and community risk.

If the EQC does decide to move forward with this PMR then we would request that the Commission considers eliminating Checklist items that are ambiguous and including only those items which are both measurable and critical for safe start-up of the incineration facility. Specifically, Items 21, 23, 29, 30, and 31 should be considered for removal from the Checklist.

Comments to UMCDF-01-028-MISC(EQC)

Provided by the

Confederated Tribes of the Umatilla Indian Reservation

To the

Department of Environmental Quality

On 15 October 2001 the Board of Trustees of the Confederated Tribes of the Umatilla Indian Reservation adopted Resolution 01-106 to define a formal policy position on chemical agent related activities at the Umatilla Chemical Depot and the Umatilla Chemical Agent Disposal Facility. This document states:

"*That the Board of Trustees supports thet application of the stringent storage standards outlined in OAR 340-101-0030, 340-104-1201, and 340-108-0010 to the chemical weapons and bulk containers stored at the UMCDF;*"

and:

"*That the Board of Trustees supports the timely destruction of all chemical weapons and bulk items stored at the UMCD provided that said destruction is carried out in a manner that is consistent with the Resource Conservation and Recovery Act Permit for the incinerator facility, as well as any other applicable environmental standards, and is protective of Tribal rights and resources;*"

and:

"*That, once all weapons and bulk items are destroyed, the Board of Trustees supports the immediate treatment and off-site disposal of any remaining secondary waste, and the subsequent restoration of the land to its original conditions by decontaminating, dismantling, and disposing of the UMCDF incinerator facility;*"

and finally;

"*That under no circumstances does the Board of Trustees support on-site storage of waste, generated either from chemical munitions and bulk item processing or from decommissioning and dismantling the incinerator facility, beyond the time period that can reasonably be expected for its treatment and/or preparation for transport off-site once the last munition campaign has been completed.*"

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01-1476

DEQ Chemical Demilitarization Program
256 E. Hurlburt Ave., Suite 105
Hermiston, Or 97838

Subject: Comments on Proposed Modification of the Harardous Waste Storage and Tratment Permit for the Umatilla Chemical Agent Disposal Facility (PermitNo. ORQ 000 009 431) {PMR # UMCDF-01-028-MISC (EQC) "Approval Process For UMCDF Operation".

December 7, 2001

Dear Sir or Madam:

As a lifetime citizen, former 30 year Councilman and former 10 year Mayor of the City of Hermiston, I have worked closely with the Officers and personnel of the Umatilla Chemical Depot. Having attended many, many, many meetings, and having been involved in numerous "studies", and having listened to some of the best scientists in the world, it is my opinion that storage of chemical munitions is much more dangerous than incineration.

Therefore, I respectfully submit than any further delay in the form of duplication of permits or any other delay is not only dangerous, it is costly.

Thank you for your consideration.

Sincerely,

Frank J. Harkenrider
935 S. First (P O Box 7)
Hermiston, Or 97838

STATE OF OREGON
DEPARTMENT OF ENVIRONMENTAL QUALITY
RECEIVED
DEC 10 2001
HERMISTON OFFICE

cc: Mayor Bob Severson
Senator Gordon Smith

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92-94

01-1477

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December 8, 2001

DEQ Chemical Demilitarization Program
256 E Hurlburt Ave Su 105
Hermiston, Oregon 97838

RE: Comments on Proposed Modification of the Hazardous Waste Storage and Treatment Permit for the Umatilla Chemical Agent Disposal Facility (Permit No. ORQ 000 009 431) PMR #UMCDF-01-028-MISC (EQC) Approval Process for UMCDF Operation

Dear Sir or Madam:

Since there has been an excellent track record in destroying chemical weapons on Johnson Isle and also an excellent record at Tooele, Utah, I would question the reasoning for the duplication of permits for the incineration of these weapons at the Umatilla Army Depot.

Further delay only increases the danger to our citizens.

I would urge that these weapons be destroyed as quickly as possible. We are already 18 months behind schedule.

It is time to move ahead.

Sincerely,

Bob Severson

BOB SEVERSON, MAYOR
HERMISTON, OREGON

RES/jms

cc: Senator Gordon Smith
Senator Ron Wyden

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9294

MARKHAM Trisha

FILE

From: MARKHAM Trisha
Sent: Monday, December 10, 2001 3:42 PM
To: 'Bob Palzer'
Subject: RE: Approval Process for UMCDF Hazardous Waste Permit "Approval Process for UMCDF Operaation"

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01-1483

Thank you. Your comments have been received.

-----Original Message-----
From: Bob Palzer [mailto:palzer@prodigy.net]
Sent: Monday, December 10, 2001 3:36 PM
To: MARKHAM Trisha
Cc: Craig Williams; Karyn June Jones; Stuart A. Sugarman
Subject: Approval Process for UMCDF Hazardous Waste Permit "Approval Process for UMCDF Operaation"

To: DEQ
Date: 12/10/2001
Re: Approval Process for UMCDF Operations

This is an elaboration and extension of my remarks at the EQC hearing on Umatilla made personally in Portland on Dec 7, 2001.

The operations at Umatilla do not presently meet the permit requirements to commence surrogate burns as a prelude to the start of operations.

The Sierra Club is supportive of DEQ's proposal of how to proceed with the following additions. This series of actions MUST be treated as the equivalent to a Class III permit modification in that it include proper public notice and public hearings to ensure that all permit conditions are met prior to the start of any trial burns. It is our strong opinion that UMCDF currently does not meet even the most minimal requirements at this time. The operational and safety procedures that MUST be included are not satisfactory. Furthermore, there is no method to deal with secondary wastes by any means that has been tested elsewhere. Those proposed by the Army are merely a concept at this time. The Army's request that we just trust them is not acceptable. In our view, they are merely trying to get the incinerators on line so as to preclude other alternatives that will provide a total solution for the entire stockpile at Umatilla. The Army's definition of a public process by holding briefings with a select group and not providing adequate documentation does not meet a public involvement test required for a class III RCRA modification as required by public law. While DEQ proposes these as a clarification of conditions already in the permit, we considrer these to be a Class III permit modification that we support support provided we have an opportunity to be involved in the permitting process. In our opinion the Army's position in the DEQ proposal are not consistent with the permit requirements or state law.

All deficiencies that still exist at Umatilla must be fully met prior to any trial burns. DEQ's proposal is not intended to delay destruction of the chemical weapons and agents that are stored at the facility. Rather this is the only way to prevent possible accidents and protect the public fully from any possible accidents that are likely to result from operations at Umatilla.

It should be pointed out that 63.9% of the stockpile at Umatilla consists of bulk HD stored in ton containers. This is the same material that Maryland has already approved a non-incineration technology developed by the Army to

neutralized and treat the material at Aberdeen in a publicly acceptable manner.

We are also deeply concerned that the Army is now requiring that Wayne Thomas must sign a non-disclosure requirement in order to be further involved in making sure that the permit conditions are made and followed. We believe this to be in violation of the permit conditions, Oregon law, and common sense. The permittee wants to have free reign to self regulate themselves when we are dealing with chemical weapons that were designed to kill people. PMCD has demonstrated that they cannot and will not protect the public in this process. We do not want to see Oregonians to be guinea pigs in this process.

In conclusion, I believe these comments are acceptable with those of GASP and the Oregon Wildlife Foundation and these are being made with the understanding that they wish to be included as co-signers to these comments.

Thank you for this opportunity to comment on this extremely important matter. Please don't hesitate to ask if I can be of further assistance.

Bob

Bob Palzer, Ph.D.
Chair, National Sierra Club Air Committee, Chemical Weapons Coordinator,
Oregon Chapter Sierra Club
501 Euclid.
Ashland, OR 97520
541-482-2492
palzer@prodigy.net

12/7/01 EQC Meeting, Item I, handout.

9299

01-1484

Testimony before the Environmental Quality Commission
December 7, 2001

Madame Chair and Members of the Commission:

My name is Dan Brosnan. I'm a County Commissioner from Morrow County and with me is Tamra Mabbott, County Planning Director.

As you know, Morrow County is one of the host counties for the Umatilla Chemical Depot, along with Umatilla County. These two counties, together with Benton County, Washington, comprise the three counties involved in the Chemical Stockpile Emergency Preparedness Program.

Morrow County has been involved with and heavily impacted by the military for over sixty years. The condemnation of private and public land to establish the Depot and Navy Bombing Range had a devastating impact on some of our citizens and the county. The influx of workers led to rapid, unregulated building of substandard housing; inadequate water and sewer systems; and roads which in many cases were simply tracks across the desert. We are still trying to correct many of these problems.

With the signing of the international treaty mandating destruction of chemical weapons, a new burden was created for the host counties. We moved from having a terrible but relatively inert threat in our midst, to an active program, which hopefully will remove the danger, but which raises a whole host of new concerns. Make no mistake, Morrow County wants these weapons destroyed. We are, however, determined, just as you are, that it be done in a safe, timely, and environmentally acceptable manner.

To that end, we have been paying close attention to the permitting and construction of the incinerator as we move forward to thermal operations. We have attended many of the public meetings, had numerous discussions with Department of Environmental Qualify staff, and Mr. Wayne Thomas has briefed the County Commissioners several times. He, in fact, supported and was instrumental in our acquiring funding from the Department of the Army to enable us to hire a consulting firm to help us understand and comment on the permit process. We appreciate his help and assistance.

We understand you are considering adding a condition to the permit which would require sign-off by this body prior to the start up of operations. This new condition would be additional to and precede the Governor's approval. We strongly support this concept. As the state body charged with developing and implementing the permit this seems only appropriate.

On a related matter, and to further the county's interests, we have had discussion with Mr. Thomas and with Ms. Hallock regarding additional language in the permit to address one of our concerns. As you may or may not be aware, Morrow County has an ordinance, passed several years ago, requiring

storage fees for toxic chemicals stored in Morrow County. We have billed the Army repeatedly for these fees. They have refused payment based on their opinion that there is no authority or authorization for them to make payment. We propose adding a condition to the permit that would state that the Army must comply with all state laws and local ordinances requiring payment of fees for storage or disposal of hazardous waste.

The rationale for these fees is that the U.S. Government has waived sovereign immunity under RCRA for payment of reasonable service charges in connection with state RCRA programs. The Federal Facility Compliance Act clarified the scope of this waiver as including any "substantive or procedural requirement including, but not limited to, fees or charges in connection with permits, planning, inspections, or other nondiscriminatory charges that are assessed in connection with a federal, state, interstate, or local solid waste or hazardous waste regulatory program." These fees, under RCRA, must be used for purposes related to emergency preparedness such as maintaining roads for emergency response, emergency medical response, law enforcement, and other health and safety purposes. We are prepared to use the fees for those explicit purposes.

CSEPP funding is limited and does not cover expenses for many items covered under RCRA. CSEPP funds are also limited to current storage and the period during incineration, not post incineration, nor for other related hazardous waste needs. CSEPP will not fund emergency response programs, law enforcement and other health and safety programs needed for other hazardous waste programs. The funding burden for those services falls on the county. A burden we suspect is growing especially given the fact that the Army has requested permission through a Permit Modification Request to not install the dunnage incinerator and to significantly increase the storage of waste in J-Block. Additionally, given that the Army has not identified methods of destruction for all wastes, secondary and other hazardous waste, and has not identified the treatment and final disposition of wastes, we are even more concerned with the long term implications and our ability to deal with hazardous wastes on the depot. It appears to us that long term storage of some waste may occur well past the end of the CSEP Program funding. We must have funds and programs in place to deal with that.

When we first approached DEQ staff about adding a permit condition, they sought advice from the Attorney General's office. The A.G.'s advice was that the permit condition could be added but that enforcement of county ordinances would be up to the county, not the state. We understand and agree and would still like to request the EQC include the permit condition. By including our proposed permit condition, it will better position the county to collect fees, authorized by RCRA.

Unlike the state, which collects taxes from salaries, cities and counties do not have a method for recovering costs to mitigate impacts. When the boom cycle of incineration ends and the workers leave, CSEPP funding will stop and local government will be left to fund emergency response and health and safety programs. We need a mechanism to fund those programs.

While we at the county recognize the right thing to do is destroy the weapons, we are adamant in our insistence that we not inherit any legacy wastes. The Army must be required to leave us with a totally clean site.

With this in mind, Morrow County would like to request of you, the permitting agency, that the Army comply with certain conditions prior to the Environmental Quality Commission authorizing start-up of thermal operations. Those prerequisite conditions should require that the Army submit detailed plans regarding waste (and that those plans be approved by the Commission), that all waste streams be identified by type and amount, that treatment methods for waste be identified and approved by the commission and that final disposal of treated residue be identified. Finally, we ask you that the Army be required to agree to treatment and restoration of the site to an acceptable level and not to allow them get away with "only what is absolutely necessary" as the Deputy Assistant Secretary implied is the Army's intent. Legacy waste is simply not acceptable to the citizens of Morrow and Umatilla Counties.

Finally, I would like to thank the DEQ staff for their hard work on this project. We recognize the long hours and negative feedback they frequently endure. Also, I would like to thank you for this opportunity to share our concerns. I would be happy to answer any questions you may have.

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DEPARTMENT OF ENVIRONMENTAL QUAL
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HERMISTON OFFICE

December 10, 2001

Mr. Wayne C. Thomas, Administrator
Chemical Demilitarization Program
Department of Environmental Quality
256 E. Hurlburt
Hermiston, OR 97838

RE: Proposed Modification of the Hazardous Waste Storage and Treatment Permit for the Umatilla Chemical Agent Disposal Facility; Permit No. ORQ 000 009 431
- Approval Process for UMCDF Operation
- UMCDF-01-028-MISC(EQC)

Dear Mr. Thomas:

I'm taking this opportunity to submit comments on the above referenced, proposed Permit Modification and I anticipate these comments will become part of the Administrative Record for the Umatilla Chemical Agent Disposal Facility (UMCDF).

Along with seeking comments on the proposed language for the new condition, the State also asks: *"Whether public believes that there is a need to impose these additional requirements on the Permittees, given additional public processes have the potential to delay the start of operations."* Let me respond with a resounding ***YES***, and let me make the following points:

1. The Department and the Environmental Quality Commission (EQC) is not here to serve the needs or whims of the Permittee, but rather "to protect the public health and safety and the environment [OAR 340-120-010 (2) (c)]. Meeting schedules and ignoring details caused the Challenger accident and we don't need that type of thinking here.

2. According to the EQC Findings, the schedule slippage was occurring long before Oregon's public got involved because Public Law 99-145 (1986), set the deadline for destruction at September 30, 1994; Public Law 100-456 (1988) set it at April 30, 1997; Public Law 102-190 (1991), set it at July 31, 1999; and Public Law 102-484 (1992), set completion for destruction at December 31, 2004, with no chance of meeting that deadline either. If schedule delays are a problem maybe the Army and its technology should be blamed because the technology was not as mature as they originally told us. The necessity to protect human health and safety is the mission of the EQC, not to ensure that the Army or its contractors meet a deadline; particularly the one underlying all discussions which is to secure bonuses.

3. I also attended the December 7, 2001, EQC meeting where I heard the Army and its contractors make comments about the delay that I perceived as only serving to frighten the public and the EQC into submission. These comments used the risk of continued storage, or terrorist activities, as their weapon to subjugate the State's authority. This type of fear mongering should be rejected.

4. I'm further wary of this drumbeating in light of Army comments printed in the Tri-City Herald, December 8, 2001, (attached). Since the Army has paraded President Bush's order authorizing the Army to override state laws on construction projects ***the EQC, or the Governor, should immediately pull the Permit until the Army and the President assure Oregonians that this authority will not be exercised.*** I'm extremely concerned that the EQC will ignore the evidence and yield to such threats.

More troubling are the issues of secondary wastes:

5. I can only assume the State looked the other way when it permitted incineration given that documents "stretching back to 1989" showed that the dunnage incinerator "performed only marginally in its history" at JACADS and at the Tooele facilities (see July 5, 2001, Thomas Memorandum). I'm further outraged that the State sought a Compliance Schedule to force the Army into "identifying all secondary wastes" and "selecting, testing, and permitting treatment technologies" for its waste streams. What baffles me, besides the Army withdrawing their storage permit, is that with 15 pounds of hazardous waste generated for every pound of agent treated (figure based on Tooele experience and assuming similar results here) that Oregon's incineration legacy waste will outlive funding, interest, or drive to complete disposal. The OAR 340-120-010 (2) (c), calls for "treatment and disposal of hazardous waste and PCB," not long-term storage of wastes *until we figure out what to do later.*

6. If the Compliance Schedule required that the waste streams be identified and a treatment technology permitted then I assert that the EQC's criteria to evaluate alternative technologies were bogus. The best available technology (BAT) criteria, or the information to support analysis, should already have been included in the *"[t]ypes, quantities and toxicity of discharges to the environment by operation of the proposed facility compared to the alternative technologies;"* and if these waste streams are now reveled as unknown, and if we now need a compliance schedule to figure it out what to do with our pending legacy then there is no basis to continue to assume that incineration meets the BAT determination.

7. The Army has demonstrated no intention to install the dunnage given that it ignored recommendations from a 1994 Army "DUN Retrofit" report and that it failed to make modifications to the Munitions Demilitarization Building to allow alternative treatment technology installation. The Resource Conservation and Recovery Act (RCRA) is a cradle-to-grave hazardous waste management law, which has not been fulfilled in Oregon's permitting of the UMCDF because of the failure to account for secondary waste disposal. ***The EQC should immediately pull the permit and notify the EPA until these issues are laid to rest.***

8. The State demanded prior to issuing the permit that the Army demonstrates its compliance history, and to *"...have an ability and willingness to operate the proposed facility in compliance with the provisions of ORS 466 and any permit conditions that may be issued by the Department or Commission."* If the items I've listed above and others are not addressed then the Army has not demonstrated "an ability and willingness" to comply with Oregon directives. The Army showed us last week just the opposite in its willingness to hide behind a Presidential Order to override State authority, to dismiss dunnage and attendant secondary waste disposal problems,

and to shift blame for their delays. As such, the State should immediately withdraw the permit based on the Army's compliance failures.

Assuming the State lacks the fortitude to pull the permit, the EQC should fulfill its duties under OAR 340-120-010 (2) (c), and approve the proposed Permit modifications with the following improvements:

1. The EQC should exercise the Permit requirements under II.E.5 by requesting that the Director attest to the effectiveness of the independent oversight program prior to granting Department approval for surrogate operations. This information should be published and submitted to the information repositories, with an attached public comment period to ensure the public trust.

2. Department approval for surrogate operations should be required for EACH furnace, not just the first one because the Army had demonstrated a propensity to hide or ignore important factors. Furthermore, the compression of systemization is a receipt for disaster that clearly highlights the necessity for the Department to "look in every corner" and to "kick the tires."

3. As in any construction project there can be huge variations between the "as built" conditions and those represented during construction. There should be no surrogate operations until every diagram, drawing, report, or evaluation is current.

4. When I bought my truck, I saw the checklist from the factory. Starting an incinerator is incredibly more problematic, but it is not that different in assuring the customer that everything works as sold. My recommendation is that the Checklist also included references to outstanding issues that the public has with a particular item, what the conflict is, and how the DEQ resolved the issues. This should include, in essence, a status summary for each requirement.

In conclusion, I believe the Permit should be pulled until the Army assures Oregonians that its shenanigans won't be an order of business (see #4) and that the secondary waste issue is resolved prior to start-up (see #7). I also believe that protecting Oregonians is the goal of the EQC and not meeting the Army or contractor schedule. In addition, the EQC and any shortcut it may contemplate can spell disaster and the Army's manipulative attempts should demonstrate their lack of willingness to share that goal. My beliefs include one that the State reached its BAT determination without accounting for the failure of dunnage incinerator and the resulting secondary waste legacy. Finally, by compressing the systemization and testing schedule, the Army has affected the ability of the Department to evaluate readiness and prepare us for hot start and this permit modification represents our last ditch effort. I urge the Commission to adopt this modification, with improvements, as this concludes my comments. If you need further clarification, I can be reached at 541.276.9782.

Sincerely,

James R. Wilkinson

James R. Wilkinson
2712 NE Riverside Ave. #13
Pendleton, OR 97801

herald.

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Depot permit focus of hearing

This story was published 12/8/2001

By Karen Zacharias
Herald Oregon bureau

PORTLAND -- Army officials claimed Friday that the public review process is delaying efforts to quickly dispose of one of the nation's largest stockpiles of chemical agents at the Umatilla Chemical Depot.

"The public process needs to commiserate with the facility schedule so as not to continue to push that schedule out," Don Barclay, project manager for the Umatilla incinerator, told the state's Environmental Quality Commission in Portland.

The Army already is 18 months behind its original schedule for burning the chemical weapon agents. The Army hopes to start test burning by May with burning of agents to begin in early 2003.

But Barclay said officials fear holding public hearings on the incineration permit could delay them further.

"My focus is to keep the facility on schedule to reduce the risk to citizens in the Mid-Columbia Basin," he said.

Friday's hearing was one of several the state is holding to consider a request from the state Department of Environmental Quality. The DEQ is asking that the Army be required to obtain written consent from the state's environmental agencies before beginning any incineration, tests or otherwise.

So far, any delays have been because of the Army's own problems, said Wayne Thomas, manager of DEQ's chemical demilitarization program.

"There have been no delays in construction of the

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incinerator as a result of permitting actions or requirements from our agency," he said.

But incinerator officials testified that continued modifications to the incinerator permit would further slow the project.

Barclay also said some of DEQ's permit requirements are unnecessary. "They are not clearly defined, and we're not sure they'll be identified early enough for us to get on schedule," he said.

Dave Nylander, manager for Washington Demilitarization Co., the contractor responsible for burning the agents, added that the Army had not envisioned a formal public hearing process on the permits but rather "more of an open forum."

Commissioner Harvey Bennett responded by chiding project officials.

"If the word 'reduce' risk could be changed to 'remove' risk, we wouldn't be having these discussions. But you say 'reduce the risk.' The fact is you can't remove the risk until the project is done," Bennett said.

The Army opposes several parts of DEQ's permit modification request. In particular, it has denied DEQ's request for unescorted access to the site.

Lt. Col. Fred Pellissier, depot commander, said he is trying obtain security clearance for Thomas. But he said it is not safe for Thomas or others to roam the site without an Army escort.

"Unfortunately, we have soldiers with weapons and bullets. They might shoot anybody walking around without an escort," Pellissier said.

Despite the security concerns, Thomas said it is important that the agency have unescorted access to the site at any time.

"We need for our inspectors to be able to inspect the facility at any time, to be able to go on the facility 24/7 to see what's happening. It can take hours if we have to wait for an Army escort," he said.

Thomas stopped short of suggesting the Army is manipulating the Sept. 11 terrorist attacks to restrict public involvement. But he did say the Army is hindering

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the state's efforts and the public review process.

"After the events of Sept. 11, the Army's mode of operation is much more sensitive to security issues, and our access to information has been impeded on several occasions," he said.

Most recently, the Army notified Thomas that President Bush signed an order giving the Army construction authority that overrides any state laws. That order states that the "armed forces, the Secretary of Defense, without regard to any other provision of law, may undertake military construction projects ... not otherwise authorized by law."

At Umatilla, Pellissier responded by declining to submit a permit application for storage of secondary wastes. That application had been due Oct. 30.

Thomas said DEQ granted the Army a 30-day extension. Now he's not sure when the Army might apply for the permit or even if it is required to.

In a letter dated Nov. 29, Pellissier said, "This need for heightened security has had a dramatic effect on all chemical depots." He said the depot's security team must make sure the application addresses security concerns.

Also, Thomas said, the Army now is classifying documents regarding the Umatilla site that previously had been made public. The most recent involved plans if there was an accidental release of agents at Umatilla. That information would be helpful for emergency crews, Thomas said.

"The 9/11 events have become a veil for the Army to cover the eyes of DEQ and this commission," said Bob Palzer, who testified before the commission for the Sierra Club. The Ashland resident charged that the Army is manipulating the events of Sept. 11 to keep information out of the public domain.

Karyn Jones of Hermiston testified on behalf of GASP, a group that opposes incineration, and the Oregon Wildlife Federation. She said GASP supports the permit modification and encouraged the commissioners to not listen to Army "fear-mongering."

Jones also encouraged commissioners to enforce a secondary waste plan. "Secondary waste legacy was a nightmare at Hanford. I hope that's not going to be the

case at Umatilla," she said.

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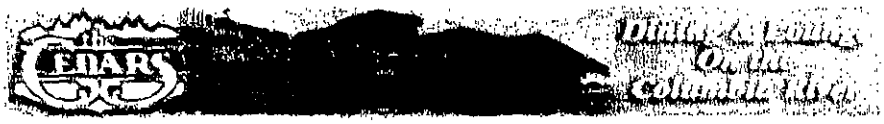

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WILSON Christine

From: MARKHAM Trisha
Sent: Monday, December 10, 2001 5:05
To: WILSON Christine
Subject: FW: comments with correction

01-1488
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Chris,
Please disregard the early comments submitted by Karyn Jones. These are submitted as the final comments.

Thanks.
-----Original Message-----
From: MARKHAM Trisha
Sent: Monday, December 10, 2001 5:04 PM
To: 'Karyn J. Jones'
Subject: RE: comments with correction

We will log this in as the official comments.

Thanks.

-----Original Message-----
From: Karyn J. Jones [mailto:karynj@oregontrail.net]
Sent: Monday, December 10, 2001 4:59 PM
To: MARKHAM Trisha
Subject: comments with correction

G.A.S.P.

P. O. Box 1693

Hermiston, OR 97838

DEQ Chemical Demilitarization Program

256 E. Hurlburt, Suite 105

Hermiston, OR 97838

December 10, 2001

Submitted electronically to: markham.trisha@deq.state.or.us hard copy with signatures is available on request.

RE: Comments on Permit Modification No. UMCDF-01-028-MISC(EQC) "Approval Process for UMCDF Operation"

The following comments are being submitted on behalf of G.A.S.P., the Oregon Wildlife Federation and signatories.

We support permit modification No. UMCDF-01-028-Misc(EQC), which is the proposed approval process for UMCDF operation.

We hope the department and EQC will not be swayed by the Permittees fear mongering tactics. We believe that the EQC clearly has the legal authority to approve the proposed modifications in order to try to protect human health and the environment. We agree that the permit modification is needed so that DEQ staff, Permittees and the public will all know what criteria is being used to evaluate facility readiness. This information is not part of the original permit.

We want to reaffirm our belief in and support of public participation, not public involvement as proposed by the Permittees. We know of no instance where public participation has slowed down chemical demilitarization. Originally in Oregon, the U.S. Army told us that the entire chemical demilitarization would be completely by 1994. Well it's 2001 and we still have the chemical weapons in Oregon. We believe that the U.S. Army and the obsolete incineration technology that they have chosen for chemical demilitarization are responsible for the schedule delays not public participation. Additionally there have been over 100 permit modifications for the facility that have all been made at the request of the permittee, which undoubtedly slowed down the process.

We understand that the Army has refused to give security clearances and passes to DEQ staff for unescorted access to the chemical demilitarization facility. We do not believe that this is being done for security reasons but rather as a means to eliminate unscheduled inspections that may identify unacceptable conditions at the facility that may lead to fines, temporary shut downs or permit revocation. We suggest that the Army implement similar security measures that are used by the Department of Energy at the Hanford, Washington site. That includes color coded picture ID tags that must be worn in plain sight at all times on the site and to further enhance security install retina eye scans at entrances to all secure areas. We are opposed to the Permittees request that DEQ employee, Wayne Thomas, sign a nondisclosure agreement. This request is unacceptable and needs to be rejected in no uncertain terms by the EQC.

We want to reiterate our position that while we support the permit modification as proposed we are still opposed to incineration as a disposal method for chemical weapons. We believe that the EQC has the legal authority and obligation to the citizens of Oregon to revoke the RCRA permit immediately. There are still so many issues that should have been resolved prior to the permit being approved. The list includes the dunnage incinerator, the brine reduction area, the metal parts furnace, and secondary waste storage.

Sincerely,

G.A.S.P.

Oregon Wildlife Federation

Karyn J. Jones

Susan L. Jones

Dr. Mark R. Jones

Merle C. Jones

Debra McCoy-Burns

David Burns

Cindy Beatty

Gail Horning

Pius Horning

Marilyn Ornelus

Melanie Beltane

Andrea Stine

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DEPARTMENT OF THE ARMY
PROGRAM MANAGER FOR CHEMICAL DEMILITARIZATION
UMATILLA CHEMICAL AGENT DISPOSAL FACILITY
78072 ORDNANCE ROAD
HERMISTON, OREGON 97838

REPLY TO ATTENTION OF:

01-1489

DEC 10 2001

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Project Manager
for Chemical Stockpile Disposal

SUBJECT: Umatilla Chemical Agent Disposal Facility Hazardous Waste Permit (ORQ 000 009 431) – Submittal of Permittee Comments to Permit Modification UMCDF-01-028-MISC(EQC)

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STATE OF OREGON
DEPARTMENT OF ENVIRONMENTAL QUALITY
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DEC 10 2001
HERMISTON OFFICE

Wayne C. Thomas, Program Administrator
Chemical Demilitarization Program
Oregon Department of Environmental Quality
256 East Hurlburt Avenue, Suite 105
Hermiston, Oregon 97838

Dear Mr. Thomas:

Reference proposed Department of Environmental Quality Permit Modification UMCDF-01-028-MISC(EQC) "Approval Process for UMCDF Operation" Fact Sheet.

Please find enclosed our comments to the referenced permit modification proposed by your office. These comments are being submitted in accordance with 40 CFR 124.11.

At the Environmental Quality Commission hearing held on December 7, 2001, in Portland, Oregon, the commissioners expressed interest in receiving copies of our testimony concerning the proposed permit modification for the Umatilla Chemical Agent Disposal Facility operations startup. Accordingly, we are providing copies of our testimony to them and Ms. Stephanie Hallock.

As requested, we will also be sending copies of the Army pre-operations survey checklist used at Tooele, Utah, under separate cover.

If you have any questions, please call our technical point of contact, Mr. Wendell Wrzesinski, (541) 564-7053.

Sincerely,

Frederick D. Pellissier
Date of Signature: 10 DEC 01
Frederick D. Pellissier
Lieutenant Colonel, USA
Commander
*CERTIFICATION STATEMENT

Don E. Barclay
Date of Signature: 10 Dec 01
Don E. Barclay
UMCDF Site
Project Manager
*CERTIFICATION STATEMENT

Date of Signature:
Loren D. Sharp
Washington Demilitarization Company
Project Manager
*CERTIFICATION STATEMENT

Enclosure

*I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION ACCORDING TO A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

PERMITTEE COMMENTS
CONCERNING
PROPOSED PERMIT MODIFICATION
UMCDF-01-028-MISC(EQC)

"Approval Process for UMCDF Operation"

Wm E Barclay 10 Dec 01
Umatilla Chemical Agent Disposal Facility
Site Project Manager
Don Barclay

Frederick D. Pellissier
Umatilla Chemical Depot Commander
Lt. Col. Frederick Pellissier

Loren Sharp
Washington Demilitarization Company
Project Manager
Loren Sharp

COMMENTS CONTENTS

I. PREFACE AND SUMMARY

These comments on proposed Permit Modification No. UMCDF-01-028-MISC(EQC) (the Proposed Modification) to Hazardous Waste Storage and Treatment Permit No. ORQ 000 009 431 for the Umatilla Chemical Agent Disposal Facility (UMCDF) (the Permit) are submitted by the U.S. Army Project Manager for Chemical Stockpile Disposal (PMCSD), the Umatilla Chemical Depot (UMCD), and Washington Demilitarization Company (WDC), collectively referred to here as the Permittees. The Permittees are committed to operating the facility in a manner that protects human health and the environment and in compliance with the Permit.

The Permittees understand the EQC and DEQ proposed permit modification authorization and startup concept. The United States, the State of Oregon, and the Permittees share a common interest in the prompt and safe destruction of the chemical weapons stored at the UMCDF and the expeditious treatment of secondary and legacy hazardous waste associated with that destruction. The proposed permit modification does not further this interest. The proposal neither increases safety for the public nor decreases environmental impacts. The proposal does not make weapons destruction more prompt. The proposal may be seriously flawed in other respects as well.

The Permittees recommend the Environmental Quality Commission (EQC) not adopt the proposal. Moreover, the permittees recommend that the EQC not adopt the separate "checklist proposal."

There is an authorization and checklist approach for startup already built into the permitting and facility startup process. If additional items need to be added, they should be incorporated into the permit with "Class 1" modification flexibility. An add-on process should not be adopted.

In addition, the EQC should direct the DEQ to ensure that any standards of operation required of the Permittees are supported by appropriately referenced permit conditions, statutes, and/or regulations to ensure clear and consistent standards are being applied. These steps will help ensure chemical weapons destruction, and treatment of secondary and legacy hazardous wastes are accomplished safely and without further unnecessary delay or impediment.

There are legal issues associated with the add-on checklist proposal that may render it vulnerable to challenge.

II. A BETTER APPROACH

The Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction requires the United States to complete its destruction of chemical weapons by April 29, 2007. This is ten years after the treaty was entered into force and more than 20 years after the United States first committed itself to destruction of these weapons. This treaty deadline is incorporated in federal law at 50 U.S.C. § 1521(b). The treaty does allow for a one-time, five-year extension, which could move the chemical weapons destruction deadline to April 12, 2012. The destruction of the chemical weapons stored at the Umatilla Chemical Depot is a significant part of the treaty commitment and the United States Code requirements.

The permitting process for the UMCDF facility and operations is at a crossroads. The Governor has indicated that we need to move ahead with this project and that leaving the weapons in place is not an option. (See Governor Kitzhaber's press release of April 13, 1996). The DEQ and the permittees have worked long, steadily, and hard to make weapons destruction happen safely and on time. Now is not the time to add unnecessary administrative processes to this project. The EQC should, of course, make sure that any questions it has concerning the permit are answered to its satisfaction. It is the responsibility of the DEQ working with the permittees to do this in the course of the current process.

We recommend that the EQC direct the DEQ to work with the permittees to establish and mutually agree upon a process that moves the UMCDF forward to ensure completion of the following milestones according to schedule:

- surrogate testing start-up,
- surrogate testing completion,
- agent destruction start-up,
- agent destruction completion, and
- secondary and legacy waste treatment.

We recommend that all parties, DEQ included, devote sufficient resources to the current operations approval process to complete this effort expeditiously and with an appropriate level of DEQ attention, particularly to items actually bearing on public safety and environmental impact reduction, so that the agency can report to the EQC that all of the necessary oversight has been accomplished.

We recommend that development of the milestone process should be accomplished by the end of January, 2002.

We also recommend that the DEQ be directed to re-evaluate whether it is requiring permittees to perform tasks that are either unnecessary for public health and safety or protection of the environment, or inconsistent with applicable laws or regulations. DEQ's requests of permittees should be supported and accompanied by clear documentation of need and supporting authority.

One element of a better approach could be to use the Army's (PMCD's) Operational Readiness Evaluation process for startup of the UMCDF in lieu of the DEQ's add-on checklist. This has been used at other sites. Using this alternative, conditions already in the permit that the DEQ wants "checked off" plus other agreed-upon checklist items, such as secondary waste treatment methodologies, would be folded into the existing readiness evaluation process. DEQ concurrence that the permit conditions and other agreed-upon checklist items have been successfully completed would be an agreed-upon prerequisite for facility surrogate or agent operations. Existing PMCD and DEQ public outreach programs could be enhanced to the degree the DEQ can document they are currently deficient in ensuring that public concerns are addressed. PMCSD currently provides the resources and would provide the opportunity for the DEQ to engage in the Army's startup process.

III. PROPOSAL ISSUES

The proposal, as drafted, is flawed in several respects:

The Proposed Permit Modification Potentially Extends the Weapons Storage Risk

The proposed process will potentially extend the time before the facility begins operation and the chemical weapons at the Umatilla Depot are destroyed. As indicated in the Office of Technology Assessment's "Disposal of Chemical Weapons" background report (OTA-BP-0-95, citing other studies), the greatest risk to the public at Umatilla is not incineration, but continued storage of the weapons. As the OTA report noted, the National Research Council recommended as far back as 1984 that the destruction of some of these weapons be expedited.

The Oregon Attorney General recently emphasized the importance of avoiding delay in his Petition for Alternative Writ of Mandamus to the Oregon Supreme Court in the *GASP III* litigation filed November 19, 2001. In his petition, the attorney general characterized the delay of weapons destruction caused by extended judicial

proceedings as affecting "a matter that involves substantial risks associated with the continued storage of extremely hazardous chemical agent." And further, in his Memorandum in Support of this petition filed the same day, the Attorney General stated that delay "in and of itself constitutes a risk to public health, safety and welfare."

The interests of public safety do not point toward additional, time-consuming processes unless these are demonstrably necessary for public safety. Public safety concerns instead point to expediting weapons destruction. Neither this proposed administrative process nor other non-safety related concerns should stand in the way.

The Prospect for Delay Is Much Larger Than It Appears on the Surface of the Proposal

The proposal indicates that the DEQ intends to include a public comment process as part of its checklist evaluation, checklist implementation, and start-up readiness decision. There is no indication, however, of how public comments would be handled. The DEQ has provided no estimate of the time required for the proposed add-on process.

We fear also that as a result of the Oregon Supreme Court opinion in *Norden v. Water Resources Department*, 329 Or. 641 (2000), the EQC and DEQ facility checklist compliance and start-up determinations could each lead to another full round of "contested case" proceedings either before the DEQ or the circuit court.

The Proposal Is Unnecessary

The bottom line of the proposal is that the DEQ and EQC would review a "Start-Up Checklist," conduct another public comment process, and conduct further field evaluations before approving operations start-up for a permitted facility. The addition of two new approval processes is, at the least, unnecessary. Moreover, as DEQ notes in the proposal, many of the draft checklist items (18 of the indicated 31) repeat requirements that are already incorporated into the hazardous waste permit. Several of the remaining items are covered by other permits. The nine draft proposed checklist items not already included in permits can be addressed more efficiently through existing review processes.

The permittees and the DEQ already have a much more extensive checklist than anything that can be implemented in the proposed "add-on" process. That list is contained in the permit and its requirements, which DEQ staff and the permittees are going through even now, in detail, to ensure that all prerequisites for facility start-up

are in place. In addition, the Army also has a start-up checklist as a part of its readiness evaluation process that must be completed.

To the extent that the readiness evaluation or permit requirements are duplicated in the checklist, the proposal adds an additional round of agency and public review that will potentially delay weapons destruction without increasing safety or reducing environmental impacts. Those checklist items with added criteria measurement requirements derived from broad interpretations of the referenced permit conditions, also have high potential for delaying weapons destruction without increasing safety or reducing environmental impacts.

To the extent that the proposed checklist items actually provide added protection to human health or the environment and are not currently included in the permit, they should be evaluated for inclusion in the permit.

The Permittees are Experienced in Working Cooperatively with States to Safely Address Chemical Weapons Incineration

The Permittees are experienced working cooperatively with state regulators and the public in the development, permitting, and operation of chemical weapons incinerators and other complex operations. Many of our UMCDF plant personnel have previous chemical weapons destruction experience from other operating chemical demilitarization facilities. Our key personnel have extensive experience in the construction and operation of large, complex facilities that are regulated by multiple state and federal regulations. We count among our key personnel:

- Don Barclay, UMCDF Site Project Manager, Project Manager for Chemical Stockpile Disposal. Mr. Barclay has 20 years experience managing munitions and agent operations. Before transferring to UMCDF, Mr. Barclay spent eight years managing agent destruction and testing operations at the Chemical Agent Munitions Disposal System near Tooele, Utah. He has been with the UMCDF project since April 2001.

- Lieutenant Colonel Frederick D. Pellissier, Commander, Umatilla Chemical Depot. Lieutenant Colonel Pellissier has served as an officer in the U.S. Army for over 16 years. His service has been closely tied to the U.S. Army Chemical Corps during this period and he has been in the U.S. Army Soldier and Biological Chemical Command since 1996. He assumed command of the Umatilla Chemical Depot in July 2001.

- Loren Sharp, Project Manger, Washington Demilitarization Company (WDC). Mr. Sharp has over 20 years of experience working in licensing, design, construction, startup and operation of nuclear facilities and chemical weapons incineration facilities. This includes three years as Plant General Manager and Acting Program Manager for the Johnston Atoll Chemical Agent Disposal Facility and the past fourteen months as Project Manager at the UMCDF.

- Phil Harness, Plant General Manager, WDC. Mr. Harness has 30 years of experience working in licensing, design, construction, startup and operation of nuclear facilities and chemical weapons incineration facilities. This includes three years as acting Plant General Manager and Engineering Manager for the Johnston Atoll Chemical Agent Disposal Facility and the past seven months as Plant General Manager at the UMCDF.

- Mike Strehlow, Operations Manager, WDC. Mr. Strehlow has 25 years of experience in engineering, construction, startup and operation of nuclear and chemical weapons incineration facilities. This includes three years as the Lead Demilitarization Engineer for the Johnston Atoll Chemical Agent Disposal Facility and the past three years as Project Engineer, and Systemization and Operations Manager at the UMCDF.

- Glenn LeVan, Engineering Manager, WDC. Mr. LeVan has over 21 years of experience in construction management associated with nuclear power plants and a chemical weapons incinerator facility. This includes four years in plant startup and maintenance activities at nuclear power plants and the last four years in the chemical demilitarization program at the UMCDF.

- Dave Nylander, Environmental Manager, WDC. Mr. Nylander has 25 years of experience in the interpretation and application of federal and state regulations associated with natural resources protection under the National Environmental Policy Act, and the construction, operation and maintenance of nuclear facilities and chemical weapons incinerators. Four of these years Mr. Nylander was a state regulatory manager for the Washington Department of Ecology's Nuclear Waste Program, three years was as a consultant to the Department of Energy on regulatory permitting and compliance, and the last four years he has been managing the permitting and compliance program at the UMCDF.

- James Snyder, Systemization Manager, WDC. Mr. Snyder has over 20 years of experience in the system engineering, startup and operation of

nuclear power plants and chemical demilitarization facilities. This includes three years as the chief systems engineer at JACADS and the past 18 months as systemization manager at the UMCDF.

The Permittees also have experience permitting this same class of chemical weapons incinerator under four different regulatory regimes: those of EPA Region IX, Alabama, Arkansas and Utah.

The Proposal Is Improperly Couched as a Permit Modification

The nature of the proposed permit modification is fundamentally to change the permit approval process, not to add measurable conditions to operations. As such, the proposal would be more properly considered as a change to DEQ regulations and should be applicable to all permits of a similar type. It is improper to single out the UMCDF for a different regulatory process under the guise of an operating permit condition.

IV. CHECKLIST ITEM ISSUES

As we noted above, to the extent that the proposed checklist items actually provide additional protection to human health or the environment and are not currently included in the permit, they should be evaluated for inclusion in the permit subject to Class I modification pursuant to 40 CFR Part 270. Vague, or open-ended checklist items, or checklist items not supported by regulatory requirements should not be imposed.

Our review of DEQ materials indicates that a number of them could cause delay and continue the public risk from weapons storage. Some need clarification and others are unsupported by applicable regulations. Still others are unnecessarily indicated as prerequisites to surrogate operations.

Individual Checklist Items

The DEQ characterizes the start-up checklist associated with this proposal as a draft provided to illustrate how the Department and the Commission propose to evaluate the UMCDF's operational readiness. The Permittees question the need for the Proposed Modification. The Permit, particularly Module VI, already contains detailed requirements that must be met prior to start-up of surrogate and agent operations. These include the requirement that all process monitoring and control instrumentation required by the Permit be installed before treating surrogate or chemical agent waste in any incinerator (Permit Condition VI.A.1.iv); the prohibition

on feeding surrogate or chemical agent waste into an incinerator until the required certification has been made to DEQ (Permit Condition VI.A.1.v); and the requirement that all requirements in Module VI shall have been met and approved by DEQ before starting normal operations under Module VII (Permit Condition VII.A.1). Appropriate Permit procedures already exist to ensure that surrogate and agent operations are conducted in an environmentally protective and compliant manner.

The Proposed Modification could cause delay because no time limits are set for the EQC and DEQ to review and approve start-up of operations. There is no discernable public safety or environmental benefit from the proposal, because 22 of the 31 items on the "Summary of Draft Start-Up Checklist Requirements" (Nos. 1-18, 26, 28, 29 and 30) merely reiterate requirements that are already part of the Permit and other permits at UMCD. DEQ does not need this modification to ensure compliance with those provisions. Likewise, of the remaining 9 checklist items, five (Nos. 19-23) are for permit applications or modifications and can be addressed through those proceedings. Three (Nos. 25-27) relate to operational issues and could be addressed by DEQ under its authority to request information under the Permit. The final one, catch-all provision No. 31, would not add any environmentally protective conditions to the operation of the incinerator under the Permit.

It is beyond the scope of these comments to deal with the individual proposed draft and illustrative checklist items in detail, but we want to note here that we object strenuously to many of them:

— Draft items 24 and 27 to the extent that the DEQ may be contemplating restrictions on shipments of waste that would unconstitutionally burden or discriminate against interstate commerce.

— Draft items 29 and 30, because if they are improperly included in the hazardous waste permit they could give rise to multiple permit violation exposures for single incidents, and in addition may exceed the limits of sovereign immunity waived by the United States;

— Draft item 31, because it fails to provide adequate notice of requirements;

— Other draft checklist items to the extent that they, or associated DEQ measurement criteria, are unsupported by the permit, including items 1, 2, 3, 21, 22, 23, 24, and 25.

Most of the draft checklist items require more consideration than has been given to them. They should be clearly measurable and should not duplicate or conflict

with existing requirements. Furthermore, they must be within the authority of the agency to impose and should include only items that are the responsibility of the permittees.

Even though the checklist and criteria are not part of this proposed permit modification, they will have a profound impact on the schedule for chemical weapons destruction. A more detailed review of each checklist item demonstrating our concerns is attached as Appendix A.

V. POTENTIAL LEGAL ISSUES

The Permittees have identified potential legal issues regarding the Proposed Modification as it is currently conceived. We continue to evaluate these issues, which include those described below.

These legal concerns could be lessened or eliminated if the EQC and the DEQ adopt the alternative approach suggested above or otherwise work with the permittees to resolve the issues previously mentioned.

The EQC and DEQ May Not Have Legal Authority to Require Approval of Surrogate Testing Start-up or Chemical Agent Operations Start-up

The EQC and DEQ may not have statutory authority to require, as a condition in the UMCDF hazardous waste permit, written approval before the Permittees may start surrogate testing and chemical agent operations. Agencies have only the powers granted to them by statute. *See Or. Newspaper Publishers Ass'n v. Or. Dep't of Corrections*, 988 P.2d 359, 363 (Or. 1999) (refusing to infer agency authority to exercise a power not granted by statute); *City of Klamath Falls v. Envtl. Quality Comm'n*, 870 P.2d 825, 833 (Or. 1994) (noting that agencies derive their authority from statutes); *see also* Or. Att'y Gen. Op. OP-6294, 1989 Ore. AG LEXIS 1 (Jan. 6, 1989) (stating that an agency may do only what the legislature authorizes). An agency's statutory power can also be circumscribed by regulations. *City of Klamath Falls*, 870 P.2d at 833. As is explained below, the relevant statutes may not give either the EQC or DEQ the operational approval authority set forth in the Proposed Modification. Indeed, the proposed operational approval may be inconsistent with federal regulations regarding hazardous waste incineration, which have been incorporated into the Oregon hazardous waste regulations. *See* Or. Admin. R. 340-100-0002(1).

The powers of the EQC over hazardous waste treatment, storage, and disposal facilities are set forth in Oregon Revised Statutes Chapters 466 (Storage, Treatment, and Disposal of Hazardous Waste and PCB) and 468 (Environmental Quality Generally). The EQC is authorized, in relevant part, to: adopt rules and orders, Or. Rev. Stat. § 466.020; limit the number and location of hazardous waste facilities and the type of waste that may be disposed of or treated, *id.* § 466.025; set standards for the type of hazardous waste to be disposed of at a facility, *id.* § 466.035; and establish policies for the operation of DEQ, *id.* § 468.015. In short, "EQC is a policy-making body with authority over the DEQ." *City of Klamath Falls*, 870 P.2d at 828 n.2. The statutes do not explicitly grant the EQC the authority to determine whether the chemical agent operations are ready for start-up, as is proposed, and such authority cannot be inferred. *Or. Newspaper Publishers*, 988 P.2d at 363.

DEQ is authorized by Chapter 466 to:

> Provide for the administration, enforcement and implementation of ORS 466.005 to 466.385 and 466.992 and may perform all functions necessary:
>
> ....
>
> (b) For the regulation of the operation and construction of hazardous waste treatment, storage and disposal sites; and
>
> (c) For the permitting of hazardous waste treatment, storage and disposal sites in consultation with the appropriate [local government].

Or. Rev. Stat. § 466.015(1)(b)-(c). In addition, DEQ is authorized to "limit, prohibit or otherwise restrict the storage, treatment or disposal of any hazardous waste if appropriate to protect public health, welfare or safety or the environment." *Id.* § 466.180(1). As explained below, these sections do not appear to give DEQ the ability to confer upon itself the power to approve the start-up of surrogate operations at UMCDF. In addition, DEQ's power to modify the Permit appears limited by 40 C.F.R. § 270.41(a) and § 270.62, which have been incorporated into the Oregon Hazardous Waste Regulations by Or. Admin. R. 340-100-0002(1).

The grant of authority in ORS 466.015(1)(b) is "for the *regulation* of [hazardous waste sites]"(emphasis added). In construing the statutory scope of an agency's authority, Oregon courts look to the plain meaning of statutory language.

See, e.g., Or. Newspaper Publishers, 988 P.2d at 363 (consulting a dictionary to determine the meaning of a word in a statutory grant of authority to an agency). "Regulation" is defined as "regulating or being regulated" or "a rule, ordinance, or law by which conduct, etc. is regulated." *Webster's New World Dictionary* (3d college ed. 1988). "Regulate" is defined as "to control, direct, or govern according to a rule, principle or system." *Id.* Consequently, "regulation," as it is used in section 466.015(1)(b), is not an unbounded grant of authority to DEQ to take whatever actions it desires in individual cases. *See* Or. Rev. Stat. § 466.015(1). Here, DEQ appears to seek to expand its power to include operations startup decision authority not through a regulation applicable to all hazardous waste treatment, storage and disposal facilities in Oregon, but through a modification of the UMCDF Hazardous Waste Permit. Therefore, it appears that section 466.015(1)(b) is inapposite to the Proposed Modification, and it should not be used by DEQ as purported justification to modify the Permit in the way it seeks.

This plain meaning interpretation of DEQ's "regulation" power under section 466.015(1)(b) is further supported by the rule of construction referred to as *noscitur a sociis*, that is, the meaning of a word or phrase can be determined by surrounding words and phrases. *See, e.g., State ex rel. Nilson v. Hayes,* 530 P.2d 1264, 1268 (Or. Ct. App. 1975) (applying *noscitur a sociis* to statutory construction). The clause immediately following 466.015(1)(b) is the grant of power in that section regarding permitting. It provides that DEQ shall "provide for the administration, enforcement and implementation of [Chapter 466] and may perform all functions necessary ... for the permitting of hazardous waste treatment, storage and disposal sites in consultation with the appropriate [local government]." Or. Rev. Stat. § 466.015(1)(c). In this context, paragraph (b) is the grant of authority to DEQ to administer, enforce and implement the hazardous waste regulations, whereas paragraph (c) does the same for permitting. Neither may be properly construed to expand the power authorized by the other. *See Or. Newspaper Publishers,* 988 P.2d at 363 (refusing to infer a statutory power of an agency).

In addition to the grant in section 466.015(1)(c) of permitting power to DEQ in consultation with local government, section 466.145 gives DEQ authority to review hazardous waste permit applications and then to determine if it will issue the permit. Neither section appears to give DEQ the authority to require, as a condition of a permit, its approval of the start-up of operations at a permitted hazardous waste facility. DEQ does not appear to have the authority to impose whatever hazardous waste permit conditions it wants. *Cf. Fisher Broad., Inc. v. Dep't of Revenue,* 898 P.2d 1333, 1341 (Or. 1995) (refusing to allow a state agency to overrule legislation through regulation contrary to statute). More specifically, DEQ does not appear to

have the statutory authority to approve start-up of surrogate operations as is set forth in the Proposed Modification, and, as with the EQC, such authority cannot be inferred. *Or. Newspaper Publishers*, 988 P.2d at 363.

Section 468.035 of Chapter 468 (Environmental Quality Generally) contains additional grants of authority to DEQ; however, none of them appear to relate to hazardous waste. In addition, the broad grant in section 468.035(1)(n) to "perform such other and further acts as may be necessary, proper or desirable" under various listed statutes notably does not include Chapter 466, the hazardous waste statute. Thus, under the rule of construction *inclusio unius est exclusio alterius* (including one excludes the other), DEQ does not appear to have the power to do whatever it determines is "necessary, proper or desirable" when implementing Chapter 466, the hazardous waste statute. *See, e.g., Fisher Broad.,* 898 P.2d at 1340-41 (applying this rule of construction to an agency's attempt to issue a regulation inconsistent with statute).

EQC and DEQ Approval of Surrogate and Agent Operations Start-up Appears to Be Inconsistent with Hazardous Waste Regulations.

The Proposed Modification appears to conflict with the regulations governing permitting of hazardous waste incineration facilities, 40 C.F.R. § 270.62, which are incorporated by Or. Admin. R. 340-100-0002(1). Because a state agency's power can be limited by its own regulations, *City of Klamath Falls*, 870 P.2d at 833, the EQC and DEQ do not appear to have the power to require their approval prior to the start-up of surrogate and chemical agent operations at the UMCDF.

The detailed hazardous waste incinerator permitting requirements in 40 C.F.R. § 270.62 govern operational readiness, § 270.62(a); trial burn standards, § 270.62(b), (d); and standards for operation of the incinerator in the post-trial burn period, § 270.62(c). Although the regulations provide for agency approval of the permittee's trial burn plan, § 270.62(b)(5), they do not provide for agency approval of the start-up of the trial burn or final operations. The Proposed Modification appears to be directly contrary to two of the requirements in § 270.62.

First, § 270.62 (a) provides in relevant part that, "[f]or the purpose of determining operational readiness following the completion of physical construction, the Director must establish permit conditions, including but not limited to allowable waste feeds and operating conditions, in the permit to a new hazardous waste incinerator." Thus, operational readiness should be determined by appropriate permit conditions, not the apparently inappropriate start-up approval conditions included in the Proposed Modification. Those operational readiness conditions are already in

Modules II and VI of the Permit, including the certification requirement prior to start-up of surrogate and agent operations in Permit Condition VI.A.1.v.

Second, 40 C.F.R. §§ 270.62(b)(11) and (c) recognize that, following the trial burn, the operating requirements in the permit may have to be modified. *See, e.g., Greenpeace, Inc. v. EPA*, 43 F.3d 701, 705 (D.C. Cir. 1995) (noting that § 270.62 "anticipate[s] that the permit itself will govern post-trial burn operations and that the incinerator need only comply with permit conditions in order to proceed from trial burn to post-trial burn operations"). Section 270.62(b)(11) provides that such modification "shall proceed according to [section] 270.42," which is the section governing permit modifications at the request of the permittee, not section 270.41, the section governing permit modifications initiated by DEQ. *Greenpeace*, 43 F.3d at 705 (stating that the permitting agency is required "to follow the notice-and-comment procedures of 270.42 before setting the *final* permit conditions for the incinerator's operations"). Quite simply, if changes to the operating requirements are necessary following the trial burn, section 270.62(b)(11) appears to require that the way to accomplish that is through a permit request submitted by the Permittees under section 270.42, not by EQC and DEQ approval of start-up operations as is proposed by DEQ.

DEQ has the power to modify the permit in the circumstances set forth in subsection 270.41(a). However, we do not believe it can rely on its general statutory permitting authority, such as that contained in Or. Rev. Stat. § 466.180(1), to modify a permit when such modification is inconsistent with § 270.41. *Cf. Service v. Dulles,* 354 U.S. 363, 382-87 (1957) (holding that an agency was bound by regulations that were more limited than its statutory authority); *Gen. Motors Corp.,* 1992 EPA App. LEXIS 34, at *40-41 (Env. Appeals Bd. Nov. 6, 1992) (holding that EPA could not rely on its authority in 42 U.S.C. § 6925(c)(3) to impose a permit condition inconsistent with § 270.41). Similarly, DEQ does not appear to have the power to impose permit conditions that are inconsistent with applicable statutes or regulations. *See, e.g., Beazer East, Inc.,* 1993 EPA App. LEXIS 12, at *28 (Env. Appeals Bd. Mar. 18, 1993) (holding that a permit condition that purported to limit appeals of permit modifications under § 270.41 was inconsistent with the regulations, and ordering the condition to be removed from permit); *Gen. Motors Corp.*, 1992 EPA App. LEXIS 34, at *32-33 (ordering the removal of a permit condition that was inconsistent with the regulation); *cf. Or. Newspaper Publishers*, 988 P.2d at 363 (holding that an agency does not have the power to promulgate a regulation that is inconsistent with its implementing statute). The EPA's Environmental Appeals Board has noted, "It is axiomatic that the Agency must follow its own regulations." *Gen. Motors Corp.*, 1992 EPA App. LEXIS 34, at *41 (citing *Service v. Dulles*, 354 U.S. at 372) (holding that

properly promulgated regulations are binding on an agency). Consequently, the Proposed Modification should not be approved, because it appears to be inconsistent with 40 C.F.R. § 270.62, which has been duly incorporated by reference in the Oregon Hazardous Waste Regulations by Or. Admin. R. 340-100-002(1).

The United States Has Not Completely Waived Its Sovereign Immunity

The waiver of sovereign immunity in section 6001(a) of the Resource Conservation and Recovery Act (RCRA), as amended, is limited to "Federal, State, interstate and local requirements." 42 U.S.C. § 6961(a). The term "requirements" is not defined in RCRA, but it has been interpreted in other cases involving environmental statutes to mean uniformly applied pre-established standards and the procedural requirements to implement them. *See, e.g.*, *United States v. New Mexico*, 32 F.3d 494, 497-98 (10th Cir. 1994). The scope of a waiver of sovereign immunity is strictly construed in favor of the United States. *Dep't of the Army v. Blue Fox, Inc.*, 525 U.S. 255, 261 (1999); *United States v. Kentucky*, 252 F.3d 816, 825 (6th Cir. 2001).

The Proposed Modification, if approved, does not appear to be a "requirement" for which the United States has waived its sovereign immunity for two reasons. First, as is explained above, not only does there appear to be no legal authority for EQC and DEQ to approve start-up of surrogate and chemical agent operations at the UMCDF incinerator, but the attempt to require such approval appears contrary to the regulations governing the permitting of hazardous waste incinerators. A proposed permit condition that is contrary to law is not a requirement for which the United States has waived its sovereign immunity. Second, the Proposed Modification is unique to the UMCDF incinerator, and, to the knowledge of Permittees, similar conditions have not been applied to any other hazardous waste facility in Oregon. Therefore, it does not appear to be a pre-established standard subject to uniform application or a procedure to implement such a standard. For this reason, too, the Proposed Modification does not appear to be a requirement for which the United States has waived its sovereign immunity.

The Proposed Modification Could Be Preempted If It Interferes with Treaty Compliance

In the absence of an extension, the "Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction" (commonly referred to as the "Chemical Weapons Convention" or "CWC") requires the United States to complete its destruction of chemical weapons

by April 29, 2007. CWC, art. IV, para. 6. The UMCDF will destroy the chemical agents stored at Umatilla as part of the United States' obligation to meet this treaty requirement.

One problem with the Proposed Modification is that it does not appear to impose any time limits by which DEQ and EQC must approve the start-up of surrogate and chemical agent operations at the UMCDF incinerator. Consequently, the Proposed Modification, if approved, could jeopardize compliance with destruction deadlines under the CWC. To the extent that the proposed permit modification processes stand as an obstacle to meeting the chemical weapons destruction deadlines of the Chemical Weapons Convention or federal law, the proposal could be preempted. *See Silkwood v. Kerr-McGee Corp.*, 464 U.S. 238 (1984); *United States v. Pink*, 315 U.S. 203 (1942).

Checklist Items 29 and 30 Appear to Be Inconsistent with Applicable Regulations

Items 29 and 30 in the "Summary of Draft Start-Up Checklist Requirements" (the Checklist), which is included as Attachment B to the fact sheet for the Proposed Modification, appear to be inconsistent with 40 C.F.R. § 270.41. These checklist items purport to require compliance with air permits and regulations (Checklist item 29) and water regulations (Checklist item 30) as conditions for DEQ and EQC approval of start-up operations. Permittees are fully committed to complying with those requirements. Those Checklist items probably cannot, however, be required as conditions to start-up because the permit can be opened for modification only for the reasons listed in 40 CFR 270.41.

In particular, § 270.41(b)(1) allows a permit to be modified when "cause exists for termination under section 270.43." Section 270.43(a)(1) provides that noncompliance with any condition of that permit can be grounds to terminate the permit. It does not appear to authorize termination of the permit if the permittee violates conditions in other permits, such as air or water permits, or regulations generally. Consequently, Checklist items 29 and 30 probably cannot be used to modify the Permit, or used in a way that is tantamount to modifying the Permit by adding start-up conditions, because such a modification would be beyond the authorized scope for modifications allowed by section 270.41. *See, e.g., Beazer East*, 1993 EPA App. LEXIS 12, at *28 (holding that a permit condition inconsistent with § 270.41 is invalid); *Gen. Motors Corp.*, 1992 EPA App. LEXIS 34, at *32-33 (same). Checklist items 29 and 30 should be stricken if the Permit Modification is approved.

Vague Checklist Items May Violate Due Process

Checklist item 31 proposes, as a condition to start-up of surrogate and agent operations by the UMCDF incinerator, that "UMCD/UMCDF [must be] in compliance with all remaining requirements determined by DEQ to be necessary for facility start-up, and not otherwise addressed in this list." DEQ does not appear to have the authority to impose this condition for the reasons explained above. In addition, it appears to be unconstitutionally vague. The standard, "all remaining requirements determined by DEQ to be necessary," is no standard at all because it does not give Permittees fair notice of what is required. The Due Process Clause, which applies to states under the 14th Amendment, requires an agency to give fair notice of standards it intends to apply to the regulated community. *See, e.g., Gen. Elec. Co. v. United States*, 53 F.3d 1324, 1328-30 (D.C. Cir. 1995). Item 31 is similar to an unconstitutionally vague Alabama hazardous waste siting statute, about which the court stated, "[T]he statute does not provide the faintest clue as to what an applicant should do or refrain from doing in order to secure legislative approval.... [T]he discretion of the Legislature is standardless and boundless." *Browning-Ferris Indus. of Ala., Inc. v. Pegues*, 710 F. Supp. 313, 315 (M.D. Ala. 1987). Item 31 is particularly pernicious, because its open-ended nature is more prone to cause needless delay than a precise standard, and delay could trigger preemption concerns. For these reasons, Item 31, and similar provisions in Attachment C to the Proposed Modification, should not be part of any start-up checklist if the Permit Modification is approved.

Page 4 of the DEQ fact sheet for the Proposed Modification explains, "The Checklist is subject to further revision." This has the same defects as Item 31: it appears to be contrary to DEQ's statutory and regulatory authority; its total absence of standards probably makes it unconstitutionally vague; and it is likely to cause needless delay. It, too, should be stricken if the Permit Modification is approved.

COMMENTS ON CHECKLIST ITEMS

Comment Number	Reference	Comment
1	Proposed DRAFT Checklist Item 1	1. For each trial burn plan, DEQ states all page changes must be issued to all copy holders. Issuance of page changes prior to initiating activities in the approved permit modification request does not appear to be a regulatory requirement. Please provide the citation of the applicable regulation(s) that makes this a valid criterion. If a regulatory citation cannot be provided to support this criterion, the item should be removed from the checklist. 2. DEQ implies two separate LIC surrogate trial burn plans will be submitted. The Permittees have submitted one trial burn plan for both LICs. It is not a regulatory requirement to submit separate plans for each LIC. Please provide the applicable regulatory citation(s) the DEQ used to determine this was an appropriate course of action. If a regulatory citation cannot be provided to support this criterion, the item should be removed from the checklist. 3. Approval to start LIC 1 shakedown operations should not be tied to the approval of the DFS and MPF plans. Submittal of each trial burn plan should be based on when the specific test is expected to occur, not before the first test occurs. Permit Condition VI.A.5 requires approval of the surrogate trial burn plan for a furnace prior to commencing surrogate shakedown of that furnace. The Permittees have submitted the revised trial burn plans based on our current schedule. Implementation of this specific criteria will have a negative effect to the project schedule and prolongs the risk of chemical munitions storage. Please clarify why this technical approach cannot be used to more efficiently achieve start-up of the facility.

Comment Number	Reference	Comment
2	Proposed DRAFT Checklist Item 2	1. For each permit modification request that updates operating parameters based on the surrogate trial burns, DEQ states all page changes must be issued to all copy holders. Issuance of page changes prior to initiating activities in the approved permit modification request is not a regulatory requirement. Please provide the citation of the applicable regulation(s) that makes this a valid criterion. If a regulatory citation cannot be provided to support this criterion, the item should be removed from the checklist. 2. It appears the DEQ is requiring all surrogate trial burn reports and permit modifications updating operating parameters be submitted and approved prior to commencing any agent trial burns. Neither LIC 2 nor the MPF surrogate trial burn reports and operational parameter permit modification request should be required prior to the start of agent operations since only LIC 1 and the DFS are needed for GB rockets (LIC 2 and the MPF are not required to start processing GB rockets). Submittal of the individual trial burn reports and permit modifications to update operating parameters is based on project schedule requirements. In other words, submittal of the reports and permit modification requests for LIC 2 and the MPF will be submitted to support the commencement of agent shakedown for these incinerators. Implementation of this specific criteria will have a negative effect on the Pemittees ability to start-up and effectively process GB rockets per the project schedule; thus, prolonging the risk of storage. In addition, please clarify why this technical approach cannot be used to more efficiently achieve start-up of the facility.
3	Proposed DRAFT Checklist Item 3	1. For each trial burn plan, DEQ states all page changes must be issued to all copy holders. Issuance of page changes prior to initiating activities in the approved permit modification request is not a regulatory requirement. Please provide the citation of the applicable regulation(s) that makes this a valid criterion. If a regulatory citation cannot be provided to support this criterion, the item should be removed from the checklist. 2. DEQ implies two separate LIC surrogate trial burn plans will be submitted. The Permittees have submitted one trial burn plan for both LICs. It is not a regulatory requirement to submit separate plans for each LIC. Please provide the applicable regulatory citation(s) the DEQ used to determine this was an appropriate course of action. If a regulatory citation cannot be provided to support this criterion, the item should be removed from the checklist. 3. Approval to start LIC 1 and DFS shakedown operations should not be tied to the approval of the MPF agent trial burn plans. Submittal of each trial burn plan should be based on when the specific test is expected to occur, not before the first test occurs. The Permittees have begun submitting the revised trial burn plans based on our current schedule. Implementation of these specific criteria will have a negative effect to the project schedule. Please clarify why this technical approach cannot be used to more efficiently achieve start-up of the facility.

Comment Number	Reference	Comment
4	Proposed DRAFT Checklist Item 4	This would occur regardless of whether the new permit conditions are added. Compliance with all permit conditions and applicable regulations is without question. Further, it is the DEQ's responsibility to verify this through routine compliance audits.
5	Proposed DRAFT Checklist Item 5	1. DEQ states that all page changes must be issued to all copy holders. Issuance of page changes prior to initiating activities in the approved permit modification request is not a regulatory requirement. The Permittees should not be delayed so that an administrative activity can be accomplished. Implementation of this specific criteria will have a negative effect on the project schedule with the potential to unnecessarily delay start-up of the facility. Please provide the citation of the applicable regulation(s) that DEQ believes make this a valid criterion. If a regulatory citation cannot be provided to support this criterion, the item should be removed from the checklist. 2. Only a very small portion of the BB/CC modification concerns surrogate feed. The Permittees had previously suggested separating agent and surrogate operations and including the BB/CC requirements in the individual surrogate trial burn plans. If the outstanding permit modification is not approved in time, is the DEQ willing to acknowledge the need of separating the permit modification based on surrogate feed and agent operations? This would expedite the start-up of the facility. Please clarify why this technical approach cannot be used to more efficiently achieve start-up of the facility.
6	Proposed DRAFT Checklist Item 6	Compliance with this specific permit condition would occur regardless of whether the new permit conditions are added. Compliance with all permit conditions and applicable regulations is without question. It is the DEQ's responsibility to verify this through routine compliance audits.
7	Proposed DRAFT Checklist Item 7	Compliance with this specific permit condition would occur regardless of whether the new permit conditions are added. Compliance with all permit conditions and applicable regulations is without question. It is the DEQ's responsibility to verify this through routine compliance audits. Please clarify the value of selecting items for this checklist that have been completed.
8	Proposed DRAFT Checklist Item 8	Criteria 8a, 8b, and 8c are supported by Permit and compliance would occur regardless of whether the new permit conditions were added. To be consistent, 8d should also have the statement "agent or surrogate, depending on use." The referenced Permit Condition explicitly states the certifications must be submitted prior to use. The Permittees request DEQ explain the value of added of using criteria that expand the scope of items that are well defined by regulatory requirements.
9	Proposed DRAFT Checklist Item 9	Compliance with this specific permit condition would occur regardless of whether the new permit conditions are added. Compliance with all permit conditions and applicable regulations is without question. It is the DEQ's responsibility to verify this through routine compliance audits. Please clarify the value of selecting items for this checklist that have been completed. The Permitees do not believe there is added value to the project by adding checklist items that are already requirements.

Comment Number	Reference	Comment
10	Proposed DRAFT Checklist Item 10	Compliance with this specific permit condition would occur regardless of whether the new permit conditions are added. Compliance with all permit conditions and applicable regulations is without question. It is the DEQ's responsibility to verify this through routine compliance audits. The referenced Permit Condition explicitly states the certifications must be submitted prior to use.
11	Proposed DRAFT Checklist Item 11	Compliance with this specific permit condition would occur regardless of whether the new permit conditions are added. The referenced permit conditions do not require the "CMP baseline dataset" to be submitted prior to the start of surrogate operations. Please provide the technical basis why this information is needed prior to facility start-up. Also, please provide the regulatory citation(s) that DEQ believes make these valid criteria. If a regulatory citation cannot be provided to support this criterion, the item should be removed from the checklist. Furthermore, not all quarterly sampling data will be submitted to the DEQ prior to start of the first surrogate trial burns. This is because it requires 90 days after a sampling event to generate the data and present it in a report to the DEQ. For example, surrogate operations are scheduled to commence 25 May 02. The Spring 2002 "background" sampling event will occur in April 02. The Spring 02 data is due to be reported formally to the DEQ 90 days after the completion of the sampling event, approximately 15 Jul 02. Then this data must be used to statistically calculate baseline levels, followed by a formal report to document these levels. It is estimated that it will require until late September to complete the report (approximately 4 months after the start of surrogate operations). If this checklist item is implemented as written, it will have a negative impact on the Permittees ability to begin processing GB filled rockets in accordance with our current schedule. Furthermore, the risk of continued munitions storage will not be reduced.
12	Proposed DRAFT Checklist Item 12	Only a single access point is required by Permit condition I.N.1.v.c. Please clarify how multiple remote monitoring stations for the DEQ's use are needed for surrogate trial burns. In addition, please provide the technical and regulatory basis requiring multiple remote UMCDF monitoring stations for DEQ use. If a regulatory citation cannot be provided to support this criterion, the item should be removed from the checklist.
13	Proposed DRAFT Checklist Item 13	Compliance with this specific permit condition would occur regardless of whether the new permit conditions are added. Compliance with all permit conditions and applicable regulations is without question. It is the DEQ's responsibility to verify this through routine compliance audits. Please clarify the value of selecting items for this checklist that have been completed. Permitees do not believe there is added value to the project by adding checklist items that are already requirements.

Comment Number	Reference	Comment
14	Proposed DRAFT Checklist Item 14	This item is supported by the Permit; however, the test plan must be submitted 90 days before the test, not surrogate trial burns (reference criteria 14a). Submittal of the test plan should be based on when the test is expected to occur. If the criteria are applied and require submittal of the plan prior to the first surrogate trial burns, please provide the technical and regulatory basis. If a regulatory citation cannot be provided to support this criterion, the item should be removed from the checklist.
15	Proposed DRAFT Checklist Item 15	Compliance with this specific permit condition would occur regardless of whether the new permit conditions are added. Compliance with all permit conditions and applicable regulations is without question. It is the DEQ's responsibility to verify this through routine compliance audits.
16	Proposed DRAFT Checklist Item 16	The permit only requires systems have FCC approval prior to their use. Thus, systems such as the MPF and the demilitarization equipment should not require FCC until well after the start of surrogate operations. Implementation of this checklist item as written will result in a negative impact on the Permittees ability to start processing GB rockets per the project schedule. Please clarify why this technical approach cannot be used to more efficiently achieve start-up of the facility.
17	Proposed DRAFT Checklist Item 17	This is a DEQ action and our ability to safely start surrogate trial burns is not related to this activity. The Permittees should not be held to milestones they cannot control. Please cite the applicable regulations stating the Permittees cannot start surrogate trial burns until the DEQ has performed this activity. If a regulatory citation cannot be provided to support this criterion, the item should be removed from the checklist.
18	Proposed DRAFT Checklist Item 18	The test plan is only required to be submitted 180 days prior to the BRA Performance Test, which is scheduled to start after the commencement of agent operations. If the criteria are applied and require submittal of the plan prior to the first surrogate trial burns, please provide the technical and regulatory basis. If a regulatory citation cannot be provided to support this criterion, the item should be removed from the checklist.
19	Proposed DRAFT Checklist Item 19	Application of these waste codes will not occur until commencement of agent operations. The checklist item criteria indicate the task must be accomplished by start of surrogate trial burns. In addition, compliance with OARs 340-101 and 340-102 are required regardless of whether the proposed permit language is added. Please provide the technical and regulatory basis why this checklist item must be completed prior to surrogate trial burns and not agent trial burns. If a regulatory citation cannot be provided to support this criterion, the item should be removed from the checklist.
20	Proposed DRAFT Checklist Item 20	Implementation of this design modification would occur regardless of whether the proposed permit language is added.

Comment Number	Reference	Comment
21	Proposed DRAFT Checklist Item 21	The UMCD storage permit is not part of the UMCDF Hazardous Waste Permit. Issuance of UMCD storage permit is not required for surrogate trial burns. The UMCD storage permit only covers storage of chemical warfare munitions (surrogate trial burns will not use these weapons). Further, the Permittees do not plan to store waste generated from surrogate trial burns in the UMCD munitions storage area. Note that the UMCD is allowed to operate under interim status provisions; these provisions will ensure continued safe storage. As with all regulations, it is DEQ's responsibility to verify compliance through routine audits. Implementation of this checklist item will result in a negative impact on the Permittees ability complete start processing GB filled rockets in accordance with our current schedule. Please provide the regulatory citation(s) DEQ believes makes this a valid criterion. If a citation cannot be provided to support this criterion, the item should be removed from the checklist.
22	Proposed DRAFT Checklist Item 22	1. Permitted storage is not required by regulation or Permit for surrogate trial burns. Permitted J. Block storage is required for agent operations. 2. DEQ states all page changes must be issued to all copy holders. Issuance of page changes prior to initiating activities in the approved permit modification request is not a regulatory requirement. Implementation of this checklist item as proposed could result in a negative impact on the Permittees ability to complete start processing GB filled rockets in accordance with our current schedule. Please provide the citation of the applicable regulation(s) the DEQ believe make this a valid criterion. If a regulatory citation cannot be provided to support this criterion, the item should be removed from the checklist.

Comment Number	Reference	Comment
23	Proposed DRAFT Checklist Item 23	1. With the exception noted below, this is supported by the regulations and applicable permit conditions and compliance would occur regardless of whether the proposed permit condition is added. However, the criteria is written such that DEQ could revise their determinations without a valid basis. Please clarify if the DEQ plans to revise this determination, and if so, provide the technical basis the DEQ would use if they revised this determination. 2. Item 23c is an administrative item that is not required by the permit or regulations. Please provide the citation of the applicable regulation(s) the DEQ believe make this a valid criterion. If a citation cannot be provided to support this criterion, the item should be removed from the checklist. 3. Item 23 f states the DEQ may add criteria as necessary to support this checklist item. Please provide the technical description of this criterion and the regulation that establishes the standards for meeting this item. If a regulatory citation cannot be provided to support this criterion, the item should be removed from the checklist. 4. Implementation of this checklist item as proposed could result in a negative impact on the Permittees ability complete start processing GB filled rockets in accordance with our current schedule.

Comment Number	Reference	Comment
24	Proposed DRAFT Checklist Item 24	1. In general this is supported by the regulations. However, the imposed schedule is not. The secondary waste in question will only be generated once agent operations begin. As an interim measure, the Permittees have applied to store the secondary waste until the alternative treatment options are implemented. As written, implementation of this checklist item and criteria would have a negative impact on the Permittees' ability to complete start-up of the facility and effectively process GB filled rockets in accordance with our current schedule. 2. Item 24f requires a technical decision to be issued on the treatment method for agent-contaminated carbon prior to surrogate operations. Agent-contaminated carbon will not be generated until agent operations. Treatment will not occur until after agent destruction is complete. Implementation of this checklist item as written may result in a negative impact on the Permittees' ability to start processing GB rockets per the project schedule. A decision on the treatment method for agent-contaminated charcoal should be made prior to generation of the agent-contaminated charcoal. Please provide the technical basis why the decision on the treatment method for agent-contaminated charcoal needs to be made before surrogate operations. 3. Items 24h and 24i basically state the DEQ may add criteria as necessary to support the checklist item. This criteria item has a strong potential to have a negative impact on the Permittees ability to complete start-up of the facility and effectively process GB filled rockets in accordance with our current schedule. Please provide the technical description of this criterion and the regulation that establishes the standards for meeting this item. If a citation cannot be provided to support this criterion, the item should be removed from the checklist.

Comment Number	Reference	Comment
25	Proposed DRAFT Checklist Item 25	1. This checklist item is not directly supported by the regulations or Permit. It appears that Permit Conditions I.R (FCC) and II.L (procedures) indirectly support parts of this item. Compliance with these permit conditions is required regardless of whether the proposed permit language is added. 2. A declaration of readiness by PMCD is not a regulatory or Permit requirement. Please provide the technical description of this criterion and the regulation that establishes the standards for meeting this item. If a regulatory citation cannot be provided to support this criterion, the item should be removed from the checklist. 3. Item 25e states the DEQ may add criteria as necessary to support the checklist item. A "to be determined" item does not provide the Permittees with any measurable, predictable, or sensible criterion; the Permittees must know what criterion they are expected to meet. This criteria item has a strong potential to have a negative on the Permittees ability to start processing GB filled rockets in accordance with our current schedule and prolong the risk of continued storage. Please provide the technical description of this criterion and the regulation that establishes the standards for meeting this item. If a regulatory citation cannot be provided to support this criterion, the item should be removed from the checklist.
26	Proposed DRAFT Checklist Item 26	Compliance with this specific permit condition would occur regardless of whether the new permit conditions are added. Compliance with all permit conditions and applicable regulations is without question. It is the DEQ's responsibility to verify this through routine compliance audits.
27	Proposed DRAFT Checklist Item 27	Verification of contracts for waste management activities is not a regulatory requirement. A contract is not required to do business with a company. Rather it is a means to assure consistent price and service. This checklist item does not show readiness to safely process surrogate and agent. Please provide the citation of the applicable regulation(s) the DEQ believe make this a valid criterion. If a regulatory citation cannot be provided to support this criterion, the item should be removed from the checklist.
28	Proposed DRAFT Checklist Item 28	Unescorted access as defined by the Army is not a regulatory or Permit requirement. We acknowledge access by DEQ personnel to the facility is governed by the regulations and Permit; providing DEQ personnel can pass the National Agency Check. Please provide the applicable regulatory citation(s) requiring the Permittees to provide unescorted DEQ access to the UMCDF. If a regulatory citation cannot be provided to support this criterion, the item should be removed from the checklist.

Comment Number	Reference	Comment
29	Proposed DRAFT Checklist Item 29	It is not a regulatory or Permit requirement that the new ACDP be issued. The UMCDF can implement the current ACDP. Compliance with applicable requirements of the CAA, the current ACDP, and the new ACDP is required regardless of whether the new permit conditions are added. Further, it is unclear what is meant by "resolved to DEQ's satisfaction, the Permittees will certainly comply with all applicable regulatory requirements. Please provide the citation of the applicable regulation(s) the DEQ believes gives them the authority to make this a valid criterion for a Hazardous Waste Permit. If a regulatory citation cannot be provided to support this criterion, the item should be removed from the checklist.
30	Proposed DRAFT Checklist Item 30	Compliance with applicable requirements of the CWA is required regardless of whether the new permit conditions are added. Further, it is unclear what is meant by "resolved to DEQ's satisfaction." The Permittees will certainly comply with all applicable regulatory requirements. It is the DEQ's responsibility to verify this through routine compliance audits. Please clarify the value of selecting items for this checklist that have been completed. Permitees do not believe there is added value to the project by adding checklist items that are already requirements.
31	Proposed DRAFT Checklist Item 31	This item states the DEQ may add criteria as necessary to support the checklist item. Please explain what is meant by "determined by DEQ to be necessary." It is the Permittees understanding that the DEQ enforces all applicable regulations. It is also the Permittees understanding that all applicable requirements are in the Hazardous Waste Permit. This criteria item has a strong potential to have a negative impact on the Permittees' ability to start processing GB filled rockets in accordance with our current schedule and prolong the risk of munitions storage. Please provide the technical description of this criterion and the regulation that establishes the standards for meeting this item. If a regulatory citation cannot be provided to support this criterion, the item should be removed from the checklist.

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ATTACHMENT E

Public Comment Process and Timeline for Start-up Approval of
UMCDF Surrogate and Agent Operations

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PUBLIC COMMENT PROCESS AND TIMELINE FOR START-UP APPROVAL OF UMCDF SURROGATE OPERATIONS

(NOTE: ALL DATES ARE APPROXIMATE)

APPROXIMATE DATE	ACTIVITY
Mar. 15-Apr. 4, 2002:	The Department will review the HW Permit, including Attachment 6, and prepare a compliance assessment for each requirement that applies to the start of surrogate shakedown operations of the first furnace. If a requirement has not yet been fully completed, the assessment will include a Department evaluation of the likelihood of its completion prior to the scheduled start date of surrogate operations.
March 22, 2002:	A public notice will be sent to the Umatilla mailing list that describes the compliance assessment being prepared and the date it will be available. The notice will include the dates of the public comment period, the date of the public meeting and instructions on how to obtain or review a copy of the compliance assessment when it is published (on or about April 4, approximately three weeks prior to the meeting).
April 8, 2002:	A 30-day public comment period will be opened.
April 24, 2002:	A public meeting will be held in Hermiston, Oregon.
May 8, 2002:	Public comment period closes.
May 9-14, 2002:	The Department will review public comments received and re-assess any additional progress made by UMCDF on achieving compliance with permit requirements during the comment period.
May 15-22, 2002:	The Department will prepare a final compliance assessment. If there are requirements that have not been fully completed, the assessment will include a determination of the item's significance (in terms of potential for adverse effects on human health and the environment). If UMCDF readiness merits, a letter will be issued to the Permittees authorizing them to begin UMCDF surrogate operations.

PUBLIC COMMENT PROCESS AND TIMELINE FOR START-UP APPROVAL OF UMCDF AGENT OPERATIONS

(NOTE: ALL DATES ARE APPROXIMATE)

APPROXIMATE DATE	ACTIVITY
Oct. 21-31, 2002:	The Department will review the HW Permit, including Attachment 6, and prepare a preliminary compliance assessment for each requirement that applies to the start of agent shakedown operations of the first furnace. If a requirement has not yet been fully completed, the assessment will include a Department evaluation of the likelihood of its completion prior to the scheduled start date of agent operations.
October 18, 2002:	A public notice will be sent to the Umatilla mailing list that describes the compliance assessment being prepared and the date it will be available. The notice will include the dates of the public comment period, the date of the public meeting and instructions on how to obtain or review a copy of the compliance assessment when it is published (on or about November 1, approximately three weeks prior to the meeting).
Nov. 19, 2002:	A public meeting will be held in Portland, Oregon
Nov. 20, 2002:	A public meeting will be held in Kennewick, Washington.
Nov. 21, 2002:	A public meeting will be held in Hermiston, Oregon.
Dec. 2, 2002:	Public comment period closes.
Dec. 2-12, 2002:	The Department will review public comments received and re-assess any additional progress made by UMCDF on achieving compliance with permit requirements during the comment period. The Department will then prepare an agent start-up compliance assessment. If a requirement has not yet been fully completed, the assessment will include a Department evaluation of the likelihood of its completion prior to the scheduled start date of agent operations. The compliance assessment will be incorporated into a staff report (with the Department's recommendation) for presentation at the January 2003 meeting of the Commission.
Jan. 24, 2003:	The Commission will consider the Department's staff report and recommendation. The Department will also provide the Commission an update on any compliance progress made since the preparation of the staff report. If the Commission is satisfied with the compliance status of UMCDF, the Department will prepare a letter for Commission signature.

ATTACHMENT F

Memorandum from Larry H. Edelman, Assistant Attorney General to Wayne C. Thomas, DEQ Program Administrator, "Proposed UMCDF Permit Modification for Operation," January 25, 2002.

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HARDY MYERS
Attorney General

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PETER D. SHEPHERD
Deputy Attorney General

02-0137

DEPARTMENT OF JUSTICE
GENERAL COUNSEL DIVISION

MEMORANDUM

DATE: January 25, 2002

TO: Wayne C. Thomas, Program Administrator

FROM: Larry H. Edelman, Assistant Attorney General
Natural Resources Section

SUBJECT: Proposed UMCDF Permit Modification for Operation

You asked for advice concerning certain legal issues raised by the Army and its co-permittees in comments submitted on the Agency's proposed permit modification for operational start-up of the Umatilla Chemical Agent Disposal Facility (See Letter to Wayne C. Thomas from Frederick D. Pellissier, Don E. Barclay, and Loren D. Sharp dated December 10, 2001).[1]

The co-permittee legal comments can be distilled to two essential issues: (1) Questions concerning Commission/Department authority to impose a start-up approval requirement through a permit modification; (2) Legal authority for the proposed checklist items.

Discussion

Legal Authority

As you are aware the EQC/Department have broad authority generally to regulate the treatment, storage, and disposal of hazardous waste. Contrary to the suggestion by the co-permittees (Dec.10 letter pgs. 11-14), the extent of this authority would likely be interpreted liberally by Oregon courts in view of the legislative policy in ORS 466.010 to protect the public health and safety and the environment of Oregon to the *maximum extent possible* and *exercise the maximum amount of control over actions within Oregon relating to hazardous waste.*

Additionally, the EQC /Department have broad "omnibus" permitting authority pursuant to Section 3005 of RCRA, 40 CFR Part 270.32, and Oregon implementing regulations. The omnibus authority allows inclusion of permit conditions not specifically identified in the regulations where the regulatory agency finds such conditions necessary to protect public health

[1] In their letter, the co-permittees also raise a number of objections to specific proposed checklist items. Those objections are beyond the scope of this response.

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and the environment. Federal regulations at 40 CFR Part 270.32(b)(2), codify the omnibus authority in rule, and provide:

> *Each permit issued under section 3005 of this act shall contain terms and conditions as the Administrator or State Director determines necessary to protect human health and the environment.*

Oregon has incorporated this omnibus authority by reference in OAR Divisions 100 and 105, and it is part of Oregon's authorized RCRA program.

Although I am not aware of any judicial cases addressing omnibus authority, the reach of omnibus authority has been construed broadly by EPA's Environmental Appeals Board. See, e.g. *In re Morton Int'l, Inc.* 3 EAD 857 (1992) (legislative history of section 3005(c)(3) shows an intent to authorize the Administrator to impose permit conditions beyond those mandated by the applicable regulations); *In re Ash Grove Cement Company*, 7 EAD 387 (1997) (statutory provision known as RCRA omnibus authority has been interpreted and applied as authorizing permit conditions that are more stringent than those specified by a substantive regulation).

There is one significant limitation on the invocation of omnibus authority by EPA or an authorized RCRA state. The administrative record must contain a properly supported finding that an exercise of that discretionary authority is necessary to protect human health or the environment. *In re Chemical Waste Management of Indiana, Inc.* 6 EAD 144, 162 (1992); *In re Sandoz Pharm. Corp.*, 4 EAD 75, 80 (1992).

DEQ interprets the omnibus authority to apply to permit modifications as well as new permits and permit renewals. That interpretation is consistent with EPA's position (Edelman personal conversation with EPA Office of General Counsel, Dec. 2001).

Of course, as the co-permittees note (Dec. 10 letter p.15) in order for EPA or an authorized state to unilaterally modify a hazardous waste permit in the first place there must be a basis for such modification in 40 CFR 270.41. The co-permittees are correct that omnibus authority would not suffice to supplant the requirements of 40 CFR 270.41. I have previously provided advice regarding the permit modification provisions. See Memorandum From Larry Edelman To Carol A. Whipple, August 4,1999; Memorandum From Larry Edelman to Melinda Eden, May 1,2000 (memos attached).

To be upheld in the face of a legal challenge, any unilateral permit modification by the Commission would have to be supported by a Commission finding that it falls within one of the criteria for modification set out in 40 CFR 270.41. If one or more of these modification criteria is met, however, the Agency statutory and omnibus authority would support additional permit conditions deemed necessary by the Commission to protect human health or the environment.

The comments of the co-permittees raise a valid concern that the Department's proposed checklist items should be evaluated for inclusion in the modified permit (Dec. letter p.7). I agree that to the extent they are to be enforceable as requirements for operation start-up, checklist

items should be incorporated in the permit as specific permit conditions, or at minimum, incorporated by reference in the permit modification.

Sovereign Immunity

The co-permittees suggest that the proposed permit modification may be preempted under the Doctrine of Sovereign Immunity (Dec. 10 letter p.16). This concern is unfounded. The imposition of permit conditions based on omnibus authority may, of course, be permit and site specific to some degree. That is the very nature of the omnibus authority. The Army can not reasonably argue, however, that it is therefore exempt from application of omnibus. Moreover, the concept of a start-up approval "requirement" for incinerators of the type at issue here would likely be applicable to any similar operation where a multitude of changes to the permit and facility design occur after permit issuance, and the Commission finds it necessary to review project status before operation begins. Thus, the Army isn't treated differently from other regulated entities under the proposal. The RCRA waiver of sovereign immunity as to federal facilities clearly applies to permit conditions imposed by a state acting pursuant to its authorized RCRA program.[2]

Preemption

The co-permittees suggest that the proposed modification might somehow interfere with the schedule for agent destruction established in the Chemical Weapons Convention (Dec. 10 letter p.16). This argument is purely speculative at this time.and would not likely be a legal basis for precluding the proposed permit modification.

Norden v. Water Resources

While not offered under the heading of *Potential Legal Issues,* there is an additional legal issue raised by the co-permittees (Dec. 10 letter p.6) that may warrant Commission consideration, i.e. the implication of adding an additional Agency approval process to the permit in view of the circuit court's interpretation in Norden v. Water Resources Department 329 Or. 641 (2000) in the GASP case. The Commission is familiar with *Norden* and doubtless recognizes that Commission permit modification as well as start-up approval may be subject to circuit court review.

Conclusion

The EQC has adequate legal authority to modify the UMCDF permit as proposed by the Department if the Commission (1) makes the requisite findings for unilateral permit modifications pursuant to 40 CFR 270.41and (2) finds on the basis of the administrative record that the permit modification is necessary to protect human health or the environment.

Enclosures

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[2] Co-permittee Washington Demilitarization is likely precluded from raising the issue of sovereign immunity in any event.

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HARDY MYERS
Attorney General

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DAVID SCHUMAN
Deputy Attorney General

DEPARTMENT OF JUSTICE
GENERAL COUNSEL DIVISION

ADVICE BINDER

MEMORANDUM

DATE: August 4, 1999

TO: Carol A. Whipple, Chair
Environmental Quality Commission

FROM: Larry H. Edelman, Assistant Attorney General
Natural Resources Section

SUBJECT: **Authority to Modify Hazardous Waste Facility Permits**

This memorandum is to provide guidance regarding the legal bases for modification, revocation, and/or termination of a hazardous waste treatment facility permit issued pursuant to applicable federal and state regulations. The issue is addressed in the context of the Umatilla Chemical Agent Disposal Facility permit and the Environmental Quality Commission's authority to modify that permit if it were to find new evidence or changed circumstances.

This memorandum addresses only bases for unilateral permit modification, not modifications at the request of the permittee.[1]

Criteria for Permit Modifications

The criteria for unilateral modification of a hazardous waste facility permit are set forth at 40 CFR 270.41 which is incorporated in pertinent part by reference at OAR 340-100-0002, 340-105-0041 and Division 106. Causes for unilateral **modification** of a hazardous waste treatment facility permit include:

1. Material and substantial alterations or additions to the permitted facility or activity occurring after permit issuance. *See* 40 CFR 270.41(a)(1);

2. New information which was not available at the time of permit issuance and would have justified different permit conditions. *See* 40 CFR 270.41(a)(2);

3. New statutory, regulatory, or judicially mandated standards. *See* 40 CFR 270.41(a)(3);

[1] Modifications at the request of the permittee are governed by 40 CFR 270.42.

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4. "Acts of God" or uncontrollable circumstances warranting revised compliance schedules. *See* 40 CFR 270.4(a)(4).

Causes for unilateral modification, revocation **and** reissuance include:

1. Cause exists for permit termination under 40 CFR 270.43 (grounds for termination in turn include noncompliance with any permit condition, failure by the permittee to disclose all relevant facts in the application or misrepresentation of relevant facts at any time, or a determination that the permitted activity endangers human health or the environment);

2. The permit issuing authority has received notification of a proposed permit transfer.

The hazardous waste facility permit issued to the Army and Raytheon references in paragraph I.C.1 the regulatory bases for modification, revocation or termination described above. Paragraph I.C.2 of the Umatilla permit additionally references applicable state law at ORS 466.170 regarding Commission authority to revoke the permit on a finding of violation of the statute, rules, or a material condition of the permit.

Paragraph I.C.3 references ORS 466.200 which provides authority to the Department to halt operations under the permit if there is reasonable cause to believe there is a **clear and immediate danger to the public health, welfare or safety or to the environment** from continued facility operation.

Finally, paragraph I.C.4 of the permit provides for **reopening** of the permit if Congress or the President makes substantial changes in the Chemical Weapons Demilitarization Program or in CSSEP.

Initiation of Permit Modification, Revocation, Termination

Hazardous waste facility permits may be modified, revoked, reissued, or terminated either at the request of any interested person (including the permittee) or upon the initiative of the permitting body. 40 CFR 124.5. All requests must be in writing and must contain facts or reasons supporting the request. In the case of the Umatilla permit, the Commission is the permit issuing body and would, therefore, be the entity authorized to make unilateral permit modifications. Revocation or termination proceedings would most likely be conducted as contested cases governed by the Administrative Procedures Act.

If the Commission denies a request for modification, revocation, or termination it must send the requester a brief, written response giving a reason for the decision. Denials are not subject to public notice, hearing, or comment. OAR 340-106-0005. Denials by the Commission are subject to judicial review under ORS 183.480 as orders in other than a contested case. OAR 340-106-0005(1)(c).

ADVICE BINDER

Procedure for Modification

The procedure for unilateral permit modifications by the Commission is not precisely specified in the statutes or rules. Preparation of a modified draft permit is required. 40 CFR 270.41. The procedures for public notice, comment and public hearing then become applicable. 40 CFR 124.10; 124.11; 124.12. The most logical procedure would appear to be for the Commission to direct the Department to prepare a modified draft permit which would be processed similarly to a new or reissued permit, i.e. noticed for public comment and hearing. 40 CFR 124.12(a)(3) incorporated by reference in OAR 340-100-002 as modified by Division 106. As with permit issuance, the Commission would then have the option of providing for contested case review of the modified permit by the permittee and/or interested persons.

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HARDY MYERS
Attorney General

DAVID SCHUMAN
Deputy Attorney General

DEPARTMENT OF JUSTICE
GENERAL COUNSEL DIVISION

MEMORANDUM

DATE: May 1, 2000

TO: Melinda Eden, Chair
Environmental Quality Commission

FROM: Larry H. Edelman, Assistant Attorney General
Natural Resources Section

SUBJECT: Authority to Modify Hazardous Waste Facility Permits; Standard for Commission Decision

This memorandum is a follow-up to my memorandum of August 4, 1999 concerning the Commission's authority to unilaterally modify or revoke a hazardous waste facility permit. Members of the Commission have asked for guidance as to the standard applicable to a Commission decision to modify or revoke. The specific criteria for modification/revocation are set forth in my August memorandum (copy attached).

A Commission decision to modify or revoke a hazardous waste facility permit must be based upon the specific regulatory criteria. However, the manner in which the Commission weighs the evidence and the weight to be given to any particular factor or combination of factors is left to the discretion of the Commission.

The Commission's ultimate decision, of course, is subject to judicial review. The standard for judicial review is substantial evidence, i.e. whether based upon the record, the evidence would permit a reasonable person to make the determination the agency (Commission) made in a particular case.

Attachment

LHE/lan/GEN49043

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State of Oregon

Department of Environmental Quality Memorandum

Date: February 17, 2002

To: Environmental Quality Commission

From: Stephanie Hallock, Director S. Hallock

Subject: Agenda Item F, Rule Adoption: ACDP Permitting Program Fee Increase
March 8, 2002 EQC Meeting

Department Recommendation

The Department recommends the Commission: adopt the proposed increase in ACDP permit fees and related rule changes presented in Attachment A, as a revision to the State Implementation Plan (SIP); and amend the SIP to incorporate changes in General ACDP rules OAR 340-216-0060 Sections (1) through (4), which the Commission adopted in August 2001.

Need for Rulemaking

This proposed fee increase is needed to fund the Department's Air Contaminant Discharge Permitting (ACDP) Program, which permits and assures compliance for more than 1,100 stationary air pollution sources in Oregon. The Department is proposing a 30 percent overall increase in ACDP Program revenue as authorized by the 2001 Legislature. The fee increase will partially offset reductions in state General Fund, and pay for increased program costs due to salary adjustments and inflation.

The proposed rules are also needed to revise the Oregon State Implementation Plan (SIP) to include the ACDP fee increase as well as the General ACDP rules that were adopted in August 2001.

Effect of Rule

This proposed rulemaking builds on the Air Quality Division's fee structure, which was adopted in May 2001 as part of a permit streamlining effort. In that rulemaking, the number of fee categories was reduced from over 75 (based on type of industry) to 6 (based on type of permit). While the total ACDP Program revenue generated by the new fee table did not change, fees for individual permittees increased or decreased depending on the industry category and the type of permit needed. The goal of this effort was to produce a fee table that is simple to administer and is based on the cost to issue and ensure compliance for each permit type. However, a side effect of reducing the number of fee categories was that many larger businesses saw fee reductions while many smaller businesses saw fee increases.

This rulemaking is designed to generate a 30 percent increase in the ACDP fee revenue, while providing relief to small businesses. To accomplish this, the

Department is proposing to allow additional types of small businesses to qualify for permit categories that have lower fees, and to apply a lower percent increase to the fees for permit categories used by most small businesses. To generate the 30 percent increase in revenue, higher percent increases are proposed for the types of permits used mainly by larger businesses. Even so, many larger businesses will be subject to modest fee increases – or even fee reductions in some cases – when compared to the fee table in effect before May 2001.

A new, "Simple-low" fee category is proposed to reduce the current fees assessed to sources that had "Minimal ACDP" permits in the former fee system. The proposal also changes permitting criteria to allow approximately 90 sources to qualify for a lower cost permit and exempt approximately 30 small sources from permitting altogether.

The fee for General ACDPs, which are mainly used by smaller businesses, will increase by only 20 percent. The new Simple-low fee category is proposed as a $400 per year decrease from the existing Simple ACDP fee of $2000. This is offset by a proposed increase of 60 percent for Simple and Standard ACDPs. The fee for the Basic ACDP will increase by $200 per year because, with the new criteria, more complex sources will use Basic permits.

Again, the net effect of these changes will be to generate a 30 percent overall increase in revenue while providing relief for smaller businesses. The proposed fees for each fee category are provided in the table below.

The proposed rules also amend the permit issuance procedures for Standard ACDP permit issuance and modifications. This is a non-substantive change to clarify the public notice requirements for Standard ACDP permittees that increase emissions. The proposed change amends OAR 340-216-0066(4), as provided in Attachment A.

Proposed ACDP Fees

ACDP Permit Type[1]	Current Annual Fees	Proposed Fee Increase	Proposed Annual Fees
Basic ACDP	$100	$200	$300
General ACDPs			
Fee Class One	$500	$100	$600
Fee Class Two	$900	$180	$1,080
Fee Class Three	$1,300	$260	$1,560
Simple Low ACDP	Does Not Exist	($400)[2]	$1,600

Simple ACDP	$2,000	$1,200	$3,200
Standard ACDP	$4,000	$2,400	$6,400

[1] Basic ACDPs are required for small sources such as autobody repair, small rock crushers, and coffee roasters. General and Simple fee ACDPs are required for sources such as larger rock crushers, chemical manufacturing facilities, and larger boiler operations. Simple and Standard ACDPs are required for sources such as steel works, sewage treatment facilities, and large wood products sources that produce plywood, particleboard, and paper.

[2] The Simple-Low ACDP fee is a new proposed fee category. The table above shows the Simple-Low fee as a $400 decrease from the existing Simple ACDP fee of $2,000.

Commission Authority

The Commission has authority to adopt the proposed rules under ORS468.065, and amend the SIP under ORS468A.035.

Stakeholder Involvement

The basis for the increase is the fee table adopted in May 2001. During the outreach for that rulemaking, the Department discussed the need for a fee increase with permittees, source representatives, and other interested parties in six locations across the state. In Fall 2001, during the period when permittees elected their new permit categories, the Department had further discussion with permittees about their concerns with the existing fee table. The Department has also engaged in numerous exchanges with source representatives as part of the Department's overall budget deliberation process during the 2001 Legislative session.

Public Comment

The public comment period for this proposal was from November 16 through December 26, 2001. Hearings were held in Portland, Salem, Pendleton, Medford, and Coos Bay. Before each hearing, the Department offered a one-hour workshop on the fee proposal. Nine written comments and one oral comment were submitted to the Department. The comments and the Department's response are provided in Attachment E, and are summarized below under "Key Issues." Based on comments received, the Department made one substantive revision to the proposed rules. This change shortens the time required to meet one of the criteria for the Simple-Low fee ACDP [see Attachment A, OAR 340-216-0064(3)(a)(B)].

Key Issues

Most of the commentors representing relatively small sources were concerned that the fee increase was too high. This proposal, however, was designed to reduce the impact of the increase on smaller sources (see discussion in "Effect of Rule").

One commentor noted that the proposed fee increase shifts the fee burden to Standard and Simple sources. The Department disagrees. As described above, the adoption of the current fee table in May 2001 had the effect of shifting the fee burden from larger sources to smaller sources. By reducing the number of fee categories, sources that were in the highest fee categories saw fee reductions while sources that were in the lowest fee categories saw fee increases. By adjusting the criteria to allow sources to qualify for lower cost permit categories, creating a Simple-low fee category, and applying a lower percent increase to General Permits, this proposal is designed to reduce the burden on smaller sources. The Department believes that the net effect is a fairer distribution of the fee burden among all permit categories, based on permit complexity and staff resources needed to administer the permits.

One commentor recommended that the new Simple-low fee category be available to all sources with low emissions, and that the timeframe for a source to qualify for a Simple-low fee should be shortened. The Department disagrees with expanding the industry categories that may qualify for Simple-low fee permits for two reasons. First, the listed categories are made up of less complex sources that cost less to permit and inspect. Second, allowing more sources to qualify for the Simple-low fee would require an even larger fee increase for Simple-high and Standard permits. However, the Department agrees that the timeframe to qualify for a Simple-low fee should be shorter, and has revised the proposal to include this change [see Attachment A, OAR 340-216-0064(3)(a)(B)].

Next Steps

The Department will send a supplemental invoice to existing ACDP sources for the fee increase in April 2002 for the 2002 calendar year. A number of sources are expected to request permit amendments to take advantage of the proposed new criteria to qualify for Basic and Simple-low permits. The Department will use existing procedures for invoicing and for making permit category adjustments.

This proposal will be filed with the Secretary of State, and submitted to EPA as a SIP amendment as soon as possible after adoption by the Commission. The Rule Implementation Plan is available upon request for more information.

Attachments

A. Proposed Rule Revisions
B. Relationship to Federal Requirements
C. Fiscal and Economic Impact Statement
D. Presiding Officer's Report on Public Hearings
E. Public Input and Department's Response
F. Land Use Evaluation Statement
G. August 10, 2001 General ACDP Rule Amendments

Available Upon Request

1. Legal Notice of Hearing
2. Cover Memorandum from Public Notice
3. Written Comment Received
4. Rule Implementation Plan

Approved:

Section:

Division:

Report Prepared by: Scott Manzano
Phone: (503) 229-6821

Attachment A

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal
for
Air Contaminant Discharge Permit Fee Increase

DIVISION 216
AIR CONTAMINANT DISCHARGE PERMITS

340-216-0025
Types of Permits

(1) **Construction ACDP**:
  (a) A Construction ACDP may be used for approval of Type 3 changes specified in OAR 340-210-0220 at a source subject to the ACDP permit requirements in this division.
  (b) A Construction ACDP is required for Type 3 changes specified in OAR 340-210-0225 at sources subject to the Oregon Title V Operating Permit requirements.

(2) **General ACDP**. A General ACDP is for a category of sources for which individual permits are unnecessary in order to protect the environment. An owner or operator of a source may be assigned to a General ACDP if the Department has issued a General ACDP for the source category:
  (a) The source meets the qualifications specified in the General ACDP;
  (b) The Department determines that the source has not had ongoing, reoccurring, or serious compliance problems; and
  (c) The Department determines that a General ACDP would appropriately regulate the source.

(3) **Short Term Activity ACDP**. A Short Term Activity ACDP is a letter permit that authorizes the activity and includes any conditions placed upon the method or methods of operation of the activity. The Department may issue a Short Term Activity ACDP for unexpected or emergency activities, operations, or emissions.

(4) **Basic ACDP**. A Basic ACDP is a ~~letter~~ permit that authorizes the regulated source to operate in conformance with the rules contained in OAR 340 Divisions 200 to 268.
  (a) Owners and operators of sources and activities listed in Table 1, Part A of OAR 340-216-0020 must at a minimum ~~to~~ obtain a Basic ACDP.
  (b) Any owner or operator of a source required to obtain a Basic ACDP may obtain either a Simple or Standard ACDP.

(5) **Simple ACDP**. A Simple ACDP is a permit that contains:
  (a) All relevant applicable requirements for source operation, including general ACDP conditions for incorporating generally applicable requirements;
  (b) Generic PSELs for all pollutants emitted at more than the deminimis level in accordance with OAR 340 division 222;
  (c) Testing, monitoring, recordkeeping, and reporting requirements sufficient to determine compliance with the PSEL and other emission limits and standards, as necessary; and
  (d) A permit duration not to exceed 5 years.

(6) **Standard ACDP**:
  (a) A Standard ACDP is a permit that contains:
    (A) All applicable requirements, including general ACDP conditions for incorporating generally applicable requirements;

(B) Source specific PSELs or Generic PSELs, whichever are applicable, as specified in OAR 340 division 222;

(C) Testing, monitoring, recordkeeping, and reporting requirements sufficient to determine compliance with the PSEL and other emission limits and standards, as necessary; and

(D) A permit duration not to exceed 5 years.

(b) All owners and operators of sources and activities listed in Table 1, Part C of OAR 340-216-0020 must obtain a Standard ACDP.

(c) Owners or operators of sources and activities listed in Table 1, Part B of OAR 340-216-0020 which do not qualify for a General ACDP or Simple ACDP must obtain a Standard ACDP.

(d) Any owner or operator of a source not required to obtain a Standard ACDP may obtain a Standard ACDP.

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-211-0040.]

Stat. Auth.: ORS 468 & ORS 468A

Stats. Implemented: ORS 468.020 & ORS 468A.025

Hist.: DEQ 47, f. 8-31-72, ef. 9-15-72; DEQ 63, f. 12-20-73, ef. 1-11-74; DEQ 107, f. & ef. 1-6-76; Renumbered from 340-020-0033; DEQ 125, f. & ef. 12-16-76; DEQ 20-1979, f. & ef. 6-29-79; DEQ 23-1980, f. & ef. 9-26-80; DEQ 13-1981, f. 5-6-81, ef. 7-1-81; DEQ 11-1983, f. & ef. 5-31-83; DEQ 3-1986, f. & ef. 2-12-86; DEQ 12-1987, f. & ef. 6-15-87; DEQ 27-1991, f. & cert. ef. 11-29-91; DEQ 4-1993, f. & cert. ef. 3-10-93; DEQ 12-1993, f. & cert. ef. 9-24-93; Renumbered from 340-020-0155; DEQ 19-1993, f. & cert. ef. 11-4-93; DEQ 22-1994, f. & cert. ef. 10-4-94; DEQ 22-1995, f. & cert. ef. 10-6-95; DEQ 19-1996, f. & cert. ef. 9-24-96; DEQ 22-1996, f. & cert. ef. 10-22-96; DEQ14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-028-1720; DEQ 6-2001, f. 6-18-01, cert. ef. 7-1-01

340-216-0060

General Air Contaminant Discharge Permits

(1) Applicability.

(a) The Commission may issue a General ACDP under the following circumstances:

(A) There are several sources that involve the same or substantially similar types of operations;

(B) All requirements applicable to the sources can be contained in a General ACDP;

(C) The emission limitations, monitoring, recordkeeping, reporting and other enforceable conditions are the same for all sources covered by the General ACDP; and

(D) The pollutants emitted are of the same type for all covered sources.

(b) Permit content. Each General ACDP must include the following:

(A) All relevant requirements;

(B) Generic PSELs for all pollutants emitted at more than the deminimis level in accordance with OAR 340, division 222;

(C) Testing, monitoring, recordkeeping, and reporting requirements necessary to ensure compliance with the PSEL and other applicable emissions limits and standards, and;

(D) A permit duration not to exceed 10 years.

(c) Permit issuance procedures: A General ACDP requires public notice and opportunity for comment in accordance with ORS 183.325 to 183.410. All General ACDPs are on file and available for review at the Department's headquarters. ~~The Commission chair signs a General ACDP.~~

(2) Source assignment:

(a) Application requirements. Any person requesting that a source be assigned to a General ACDP must submit a written application in accordance with OAR 340-216-0040 that includes the information in OAR 340-216-0040(1), specifies the General ACDP source category, and shows that the source qualifies for the General ACDP.

(b) Fees. Applicants must pay the fees set forth in Table 2 of OAR 340-216-0020.

(c) Source assignment procedures:

(A) Assignment of a source to a General ACDP is a Category I permit action and is subject to the Category I public notice requirements in accordance with OAR 340, division 209.

(B) A person is not a permittee under the General ACDP until the Department assigns the General ACDP to the person.

(C) Assignments to General ACDPs terminate when the General ACDP expires or is modified, terminated or revoked.

(3) Commission Initiated Modification. If the Commission determines that the conditions have changed such that a General ACDP for a category needs to be modified, the Commission may issue a new General ACDP for that category and the Department may assign all existing General ACDP permit holders to the new General ACDP.

(4) Rescission. In addition to OAR 340-216-0082 (Termination or Revocation of an ACDP), the Department may rescind an individual source's assignment to a General ACDP if the source no longer meets the requirements of this rule or the conditions of the permit, including, but not limited to the source having an ongoing, reoccurring or serious compliance problem. Upon rescinding a source's assignment to a General ACDP the Department will place the source on a Simple or Standard ACDP. The Commission may also revoke a General ACDP if conditions, standards or rules have changed so the permit no longer meets the requirements of this rule.

(5) General ACDPs adopted by reference. The following General ACDPs are adopted by this reference and incorporated herein:

(a) AQGP-001, Hard chrome platers (August 10, 2001)
(b) AQGP-002, Decorative chrome platers (August 10, 2001)
(c) AQGP-003, Halogenated solvent degreasers – batch cold (August 10, 2001)
(d) AQGP-004, Halogenated solvent degreasers – batch vapor and in-line (August 10, 2001)
(e) AQGP-005, Halogenated solvent degreasers – batch cold, batch vapor, and in-line (August 10, 2001)
(f) AQGP-006, Dry cleaners (August 10, 2001)
(g) AQGP-007, Asphalt plants (August 10, 2001)
(h) AQGP-008, Rock crushers (August 10, 2001)
(i) AQGP-009, Ready-mix concrete (August 10, 2001)
(j) AQGP-010, Sawmills, planing mills, millwork, plywood manufacturing and veneer drying (August 10, 2001)
(k) AQGP-011, Boilers (August 10, 2001)
(l) AQGP-012, Crematories (August 10, 2001)
(m) AQGP-013, Grain elevators (August 10, 2001)
(n) AQGP-014, Prepared feeds, flour, and cereal (August 10, 2001)
(o) AQGP-015, Seed cleaning (August 10, 2001)
(p) AQGP-016, Coffee roasters (August 10, 2001)
(q) AQGP-017, Bulk gasoline plants (August 10, 2001)
(r) AQGP-018, Electric power generators (August 10, 2001)

[**NOTE:** Except for OAR 340-216-0060(5), this rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040.]

Stat. Auth.: ORS 468 & ORS 468A
Stats Implemented: ORS 468.020 & ORS 468A.025
Hist.: DEQ 14-1998, f. & cert. ef. 9-14-98; DEQ14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-028-1725; DEQ 6-2001, f. 6-18-01, cert. ef. 7-1-01; DEQ 10-2001, f. & cert. ef. 8-30-01

340-216-0064
Simple ACDP

(1) Applicability.

(~~A~~a) Sources and activities listed in Table 1, Part B of OAR 340-216-0020 that do not qualify for a General ACDP and are not required to obtain a Standard ACDP must, at a minimum, obtain a Simple ACDP.

(~~B~~b) Any source required to obtain a Simple ACDP may obtain a Standard ACDP.

(~~C~~c) The Department may determine that a source is ineligible for a Simple ACDP and must obtain a Standard ACDP based upon, but not limited to, the following considerations:

(A) ~~(i)~~ the nature, extent, and toxicity of the source's emissions;

(B) ~~(ii)~~ the complexity of the source and the rules applicable to that source;

(C) ~~(iii)~~ the complexity of the emission controls and potential threat to human health and the environment if the emission controls fail;

(D) ~~(iv)~~ the location of the source; and

(E) ~~(v)~~ the compliance history of the source.

(2) Application Requirements. Any person requesting a new, modified, or renewed Simple ACDP must submit an application in accordance with OAR 340-216-0040.

(3) Fees. Applicants for a new, modified, or renewed Simple ACDP must pay the fees set forth in Table 2 of 340-216-0020. Annual fees for Simple ACDPs will be assessed based on the following:

(a) Low Fee – A Source may qualify for the Low Fee if:

(A) the source is, or will be, permitted under only one of the following categories from OAR 340-216-0020 Table 1, Part B (category 25, Electric Power Generation, may be included with any category listed below):

(i) Category 6. Asphalt felt and coatings;

(ii) Category 12. Boilers and other fuel burning equipment

(iii) Category 30. Galvanizing & Pipe coating;

(iv) Category 36. Gray iron and steel foundries, malleable iron foundries, steel investment foundries, steel foundries 100 or more tons/yr. metal charged (not elsewhere identified);

(v) Category 37. Gypsum products;

(vi) Category 41. Liquid Storage Tanks subject to OAR Division 232;

(vii) Category 50. Non-Ferrous Metal Foundries 100 or more tons/yr. of metal charged;

(viii) Category 51. Organic or Inorganic Industrial Chemical Manufacturing;

(ix) Category 63. Secondary Smelting and/or Refining of Ferrous and Non-Ferrous Metals; or

(x) Category 75. All Other Sources not listed in Table 1 which would have actual emissions, if the source were to operate uncontrolled, of 5 or more tons a year of PM10 if located in a PM10 non-attainment or maintenance area, or 10 or more tons of any single criteria pollutant in any part of the state; and

(B) the actual emissions from the 12 months immediately preceding the invoice date, and future projected emissions are less than 5 tons/yr. PM_{10} in a PM_{10} nonattainment or maintenance area, and less than 10 tons/yr. for each criteria pollutant; and

(C) the source is not considered an air quality problem or nuisance source by the Department.

(b) High Fee – Any source required to have a Simple ACDP (OAR 340-216-0020 Table 1 Part B) that does not qualify for the Low Fee will be assessed the High Fee.

(c) If the Department determines that a source was invoiced for the Low Annual Fee but does not meet the Low Fee criteria outlined above, the source will be required to pay the difference between the Low and High Fees, plus applicable late fees in accordance with OAR 340-216-0020 Table 2. Late fees start upon issuance of the initial invoice. In this case, the Department will issue a new invoice specifying applicable fees.

(4) Permit Content.

(a) All relevant applicable requirements for source operation, including general ACDP conditions for incorporating generally applicable requirements;

(b) Generic PSELs for all pollutants emitted at more than the deminimis level in accordance with OAR 340 division 222;

(c) Testing, monitoring, recordkeeping, and reporting requirements sufficient to determine compliance with the PSEL and other emission limits and standards, as necessary; and

(d) A permit duration not to exceed 5 years

(5) Permit issuance procedures:

(a) Issuance of a new or renewed Simple ACDP requires public notice in accordance with OAR 340 division 209 for Category II permit actions.

(b) Issuance of a modification to a Simple ACDP requires one of the following procedures, as applicable:

(A) Non-technical and non-NSR/PSD Basic and Simple technical modifications require public notice in accordance with OAR 340, division 209 for Category I permit actions; or

(B) Issuance of non-NSR/PSD Moderate and Complex technical modifications require public notice in accordance with OAR 340 division 209 for Category II permit actions.

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A
Hist.: DEQ 6-2001, f. 6-18-01, cert. ef. 7-1-01

340-216-0066
Standard ACDPs

(1) Application requirements. Any person requesting a new, modified, or renewed Standard ACDP must submit an application in accordance with OAR 340-216-0040 and include the following additional information as applicable:
  (a) For new or modified Standard ACDPs that are not subject to NSR (OAR 340 division 224) but have emissions increases above the significant emissions rate, the application must include an analysis of the air quality and visibility (federal major sources only) impact of the source or modification, including meteorological and topographical data, specific details of models used, and other information necessary to estimate air quality impacts.
  (b) For new or modified Standard ACDPs that are subject to NSR (OAR 340 division 224), the application must include the following additional information as applicable:
    (A) A detailed description of the air pollution control equipment and emission reductions processes which are planned for the source or modification, and any other information necessary to determine that BACT or LAER technology, whichever is applicable, would be applied;
    (B) An analysis of the air quality and visibility (federal major sources only) impact of the source or modification, including meteorological and topographical data, specific details of models used, and other information necessary to estimate air quality impacts; and
    (C) An analysis of the air quality and visibility (federal major sources only) impacts, and the nature and extent of all commercial, residential, industrial, and other source emission growth, which has occurred since January 1, 1978, in the area the source or modification would affect.
(2) Fees. Applicants for a Standard ACDP must pay the fees set forth in Table 2 of 340-216-0020.
(3) Permit content. A Standard ACDP is a permit that contains:
  (a) all applicable requirements, including general ACDP conditions for incorporating generally applicable requirements;
  (b) Source specific PSELs or Generic PSELs, whichever are applicable, as specified in OAR 340, division 222;
  (c) Testing, monitoring, recordkeeping, and reporting requirements sufficient to determine compliance with the PSEL and other emission limits and standards, as necessary; and
  (d) A permit duration not to exceed 5 years.
(4) Permit issuance procedures.
  (a) Issuance of a new or renewed Standard ACDP requires public notice as follows:
    (A) For non-NSR permit actions, issuance of a new or renewed Standard ACDP requires public notice in accordance with OAR 340 division 209 for Category III permit actions for any increase in allowed emissions, or Category II permit actions if no emissions increase is allowed.
    (B) For NSR permit actions, issuance of a new Standard ACDP requires public notice in accordance with OAR 340 division 209 for Category IV permit actions.
  (b) Issuance of a modified Standard ACDP requires one of the following, as applicable:
    (A) Non-technical modifications and non-NSR Basic and Simple technical modifications require public notice in accordance with OAR 340 division 209 for Category I permit actions.
    (B) Non-NSR/PSD Moderate and Complex technical modifications require public notice in accordance with OAR 340 division 209 for Category II permit actions if no increase in allowed emissions, or Category III permit actions if an increase in emissions is allowed.
    (C) NSR/PSD modifications require public notice in accordance with OAR 340 division 209 for Category IV permit actions.

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A
Hist.: DEQ 6-2001, f. 6-18-01, cert. ef. 7-1-01

Table 1

OAR 340-216-0020

Part A: Activities and Sources

The following commercial and industrial sources must obtain a Basic ACDP under the procedures set forth in 340-216-0056 unless the source is required to obtain a different form of ACDP by Part B or C hereof: (Production and emission parameters are based on the latest consecutive12 month period, or future projected operation, whichever is higher. Emission cutoffs are based on actual emissions.)

1. ** Autobody Repair or Painting Shops painting more than 25 automobiles in a year.
2. Natural Gas and Propane Fired Boilers (with or without #2 diesel oil back-up[(a)]) of 10 or more MMBTU but less than 30 MMBTU/hr heat input constructed after June 9, 1989.
3. Bakeries, Commercial baking more than 500 tons of dough per year.
4. * Cereal Preparations and Associated Grain Elevators more than 2,000 but less than 10,000 tons per year throughput.
5. Coffee Roasters roasting more than 6 tons coffee beans in a year, but less than 30 tons/yr.

~~5.~~6. Concrete Manufacturing including Redimix and CTB more than 5,000 but less than 25,000 cubic yards per year output.

~~5.~~7. Crematory and Pathological Waste Incinerators with less than 20 tons/yr. material input.

~~6.~~8. * Flour, Blended and/or Prepared and Associated Grain Elevators more than 2,000 but less than 10,000 tons per year throughput.

~~7.~~9. * Grain Elevators used for intermediate storage more than 1,000 but less than 10,000 tons/yr. throughput.

~~7.~~10. Gray iron and steel foundries, malleable iron foundries, steel investment foundries, steel foundries more than one ton/yr. but less than 100 tons/yr. metal charged (not elsewhere identified)

~~8.~~11. Millwork (including kitchen cabinets and structural wood members) more than 5,000 but less than 25,000 bd. ft./maximum 8 hour input.

~~9.~~12. Non-Ferrous Metal Foundries more than one ton/yr. but less than 100 tons/yr. of metal charged

~~10.~~13. Pesticide Manufacturing more than 1,000 tons/yr. but less than 5,000 tons/yr.

~~11.~~14. Prepared feeds for animals and fowl and associated grain elevators more than 1,000 tons/yr. but less than 10,000 tons per year throughput.

~~12.~~15. Rock, Concrete or Asphalt Crushing both portable and stationary more ~~then~~ than 5,000 tons/yr. but less than 25,000 tons/yr. crushed.

~~13.~~16. Sawmills and/or Planing Mills more than 5,000 but less than 25,000 bd. ft./maximum 8 hour finished product.

~~14.~~17. * Seed Cleaning and Associated Grain Elevators more than 1,000 but less than 5000 tons per year throughput, if particulate emission equal or exceed ½ ton/yr. (sources in this Basic permit category that have less than ½ ton of PM emissions are not required to have an ACDP).

~~15.~~18. ~~Spray Paint Booths and surface~~ Surface coating operations whose actual or expected usage of coating materials is greater than 250 gallons per month, excluding sources that exclusively use non-VOC and non-HAP containing coatings (e.g. powder coating operations).

~~16.~~19. Wood Furniture and Fixtures more than 5,000 but less than 25,000 bd. ft./maximum 8 hour input.

Part B: Activities and Sources

The following commercial and industrial sources must obtain either:

- a General ACDP, if one is available for the source classification and the source qualifies for a General ACDP under the procedures set forth in 340-216-0060;
- a Simple ACDP under the procedures set forth in 340-216-0064; or
- a Standard ACDP under the procedures set forth in 340-216-0066 if the source fits one of the criteria of Part C hereof.

1. Aerospace or Aerospace Parts Manufacturing

2. Aluminum Production - Primary
3. Ammonia Manufacturing
4. Animal Rendering and Animal Reduction Facilities
5. Asphalt Blowing Plants
6. Asphalt Felts or Coating
7. Asphaltic Concrete Paving Plants both stationary and portable
8. Bakeries, Commercial over 10 tons of VOC emissions per year
9. Battery Separator Manufacturing
10. Battery Manufacturing and Re-manufacturing
11. Beet Sugar Manufacturing
12. Boilers and other Fuel Burning Equipment over 10 MMBTU/hr. heat input, except exclusively Natural Gas and Propane fired units (with or without #2 diesel backup) under 30 MMBTU/hr. heat input
13. Building paper and Buildingboard Mills
14. Calcium Carbide Manufacturing
15. *** Can or Drum Coating
16. Cement Manufacturing
17. * Cereal Preparations and Associated Grain Elevators 10,000 or more tons/yr. throughput
18. Charcoal Manufacturing
~~19. Chemical Manufacturing and Distribution~~
~~20.~~19. Chlorine and Alkalies Manufacturing
~~21.~~20. Chrome Plating
~~22.~~21. Coffee Roasting (roasting ~~more than 30~~ 30 or more tons per year)
~~23.~~22. Concrete Manufacturing including Redimix and CTB 25,000 or more cubic yards per year output
~~24.~~23. Crematory and Pathological Waste Incinerators 20 or more tons/yr. material input
24. Degreasers (halogenated solvents subject to a NESHAP)
25. Electrical Power Generation from combustion (excluding units used exclusively as emergency generators)
26. Ethylene Oxide Sterilization
27. *** Flatwood Coating regulated by Division 232
28. *** Flexographic or Rotogravure Printing subject to RACT
29. * Flour, Blended and/or Prepared and Associated Grain Elevators 10,000 or more tons/yr. throughput
30. Galvanizing and Pipe Coating (except galvanizing operations that use less than 100 tons of zinc/yr.)
31. *** Gasoline Plants and Bulk Terminals subject to OAR 232
32. Gasoline Terminals
33. Glass and Glass Container Manufacturing
34. * Grain Elevators used for intermediate storage 10,000 or more tons/yr. throughput
35. Grain terminal elevators
36. Gray iron and steel foundries, malleable iron foundries, steel investment foundries, steel foundries 100 or more tons/yr. metal charged (not elsewhere identified)
37. Gypsum Products Manufacturing
38. Hardboard Manufacturing (including fiberboard)
39. Incinerators with two or more ton per day capacity
40. Lime Manufacturing
41. *** Liquid Storage Tanks subject to OAR Division 232
42. Magnetic Tape Manufacturing
43. Manufactured and Mobile Home Manufacturing
44. Marine Vessel Petroleum Loading and Unloading
45. Millwork (including kitchen cabinets and structural wood members) 25,000 or more bd. ft./maximum 8 hr. input
46. Molded Container
47. Motor Coach Manufacturing
48. Natural Gas and Oil Production and Processing and associated fuel burning equipment

49. Nitric Acid Manufacturing
50. Non-Ferrous Metal Foundries 100 or more tons/yr. of metal charged
51. Organic or Inorganic ~~Industrial~~ Chemical Manufacturing and Distribution with ½ or more tons per year emissions of any one criteria pollutant (sources in this category with less than ½ ton/yr. of each criteria pollutant are not required to have an ACDP)
52. *** Paper or other Substrate Coating
53. Particleboard Manufacturing (including strandboard, flakeboard, and waferboard)
54. Perchloroethylene dry cleaners that do not submit a complete Dry Cleaner Annual Hazardous Waste and Air Compliance Report by June 1 of any given year
55. Pesticide Manufacturing ~~greater than~~ 5,000 or more tons/yr. annual production
56. Petroleum Refining and Re-refining of Lubricating Oils and Greases including Asphalt Production by Distillation and the reprocessing of oils and/or solvents for fuels
57. Plywood Manufacturing and/or Veneer Drying
58. Prepared feeds for animals and fowl and associated grain elevators 10,000 or more tons per year throughput
59. Primary Smelting and/or Refining of Ferrous and Non-Ferrous Metals
60. Pulp, Paper and Paperboard Mills
61. Rock, Concrete or Asphalt Crushing both portable and stationary 25,000 or more tons/yr. crushed
62. Sawmills and/or Planing Mills 25,000 or more bd. ft./maximum 8 hr. finished product
63. Secondary Smelting and/or Refining of Ferrous and Non-Ferrous Metals
64. * Seed Cleaning and Associated Grain Elevators 5,000 or more tons/yr. throughput
65. Sewage Treatment Facilities employing internal combustion for digester gasses
66. Soil Remediation Facilities stationary or portable
67. Steel Works, Rolling and Finishing Mills
68. *** Surface Coating in Manufacturing subject to RACT
69. Surface Coating Operations with actual emissions of VOCs before add on controls of 10 or more tons/yr.
70. Synthetic Resin Manufacturing
71. Tire Manufacturing
72. Wood Furniture and Fixtures 25,000 or more bd. ft./maximum 8 hr. input
73. Wood Preserving (excluding waterborne)
74. All Other Sources not listed herein that the Department determines an air quality concern exists or one which would emit significant malodorous emissions
75. All Other Sources not listed herein which would have actual emissions, if the source were to operate uncontrolled, of 5 or more tons a year of PM10 if located in a PM10 non-attainment or maintenance area, or 10 or more tons of any single criteria pollutant in any part of the state

Part C: Activities and Sources

The following sources must obtain a Standard ACDP under the procedures set forth in 340-216-0066:

1. Incinerators for PCBs and / or other hazardous wastes
2. All Sources that the Department determines have emissions that constitute a nuisance
3. All Sources electing to maintain the source's baseline emission rate, or netting basis
4. All Sources subject to a RACT, BACT, LAER, NESHAP, NSPS, State MACT, or other significant Air Quality regulation(s), except:
   (a) Source categories for which a General ACDP has been issued, and
   (b) Sources with less than 10 tons/yr. actual emissions that are subject to RACT, NSPS or a NESHAP which qualify for a Simple ACDP
5. All Sources having the Potential to Emit more than 100 tons of any regulated air contaminant in a year
6. All Sources having the Potential to Emit more than 10 tons of a single hazardous air pollutant in a year
7. All Sources having the Potential to Emit more than 25 tons of all hazardous air pollutants combined in a year

Notes:

* Applies only to Special Control Areas

** Portland AQMA only
*** Portland AQMA, Medford-Ashland AQMA or Salem SKATS only
(a) "back-up" means less than 10,000 gallons of fuel per year

Table 2
OAR 340-216-0020

Part 1. Initial Permitting Application Fees: (in addition to first annual fee)

a.	Short Term Activity ACDP	$ 250.00
b.	Basic ACDP	$ 100.00
c.	Assignment to General ACDP	$ 1,000.00
d.	Simple ACDP	$ 5,000.00
e.	Construction ACDP	$ 8,000.00
f.	Standard ACDP	$ 10,000.00
g.	Standard ACDP (PSD/NSR)	$ 35,000.00

Part 2. Annual Fees: (due 12/1 for 1/1 to 12/31 of the following year)

a.	Short Term Activity ACDP	$ NA
b.	Basic ACDP	~~$100.00~~300.00
c.	General ACDP	
(A)	Fee Class One	~~$500.00~~600.00
(B)	Fee Class Two	~~$900.00~~1,080.00
(C)	Fee Class Three	~~$1,300.00~~1,560.00
d.	Simple ACDP	~~$2000.00~~
(A)	Low Fee	$1,600.00
(B)	High Fee	$3,200.00
e.	Standard ACDP	~~$4,000.00~~6,400.00

Part 3. Specific Activity Fees:

a.	Non-Technical Permit Modification (1)	$ 300.00
b.	Non-PSD/NSR Basic Technical Permit Modification (2)	$ 300.00
c.	Non-PSD/NSR Simple Technical Permit Modification(3)	$ 1,000.00
d.	Non-PSD/NSR Moderate Technical Permit Modification (4)	$ 5,000.00
e.	Non-PSD/NSR Complex Technical Permit Modification (5)	$ 10,000.00
f.	PSD/NSR Modification	$ 35,000.00
g.	Modeling Review (outside PSD/NSR)	$ 5,000.00
h.	Public Hearing at Source's Request	$ 2,000.00
i.	State MACT Determination	$ 5,000.00
j.	Compliance Order Monitoring (6)	$100.00/mo.

Part 4. Late Fees:

a. 8-30 days late	5% of annual fee
b. 31-60 days late	10% of annual fee
c. 61 or more days late	20% of annual fee

(1) Non-Technical modifications include, but are not limited to name changes, change of ownership and similar administrative changes.

(2) Basic Technical Modifications include, but are not limited to corrections of emission factors in compliance methods, changing source test dates for extenuating circumstances, and similar changes.

(3) Simple Technical Modifications include, but are not limited to , incorporating a PSEL compliance method from a review report into an ACDP, modifying a compliance method to use different emission factors or process parameter, changing source test dates for extenuating circumstances, changing reporting frequency, incorporating NSPS and NESHAP requirements that do not require judgement, and similar changes.

(4) Moderate Technical Modifications include, but are not limited to incorporating a relatively simple new compliance method into a permit, adding a relatively simple compliance method or monitoring for an emission point or control device not previously addressed in a permit, revising monitoring and reporting requirements other than dates and frequency, adding a new applicable requirement into a permit due to a change in process or change in rules and that does not require judgment by the Department, incorporating NSPS and NESHAP requirements that do not require judgment, and similar changes.
(5) Complex Technical Modifications include, but are not limited to incorporating a relatively complex new compliance method into a permit, adding a relatively complex compliance method or monitoring for an emission point or control devise not previously addressed in a permit, adding a relatively complex new applicable requirement into a permit due to a change in process or change in rules and that requires judgement by the Department, and similar changes.
(6) This is a one time fee payable when a Compliance Order is established in a Permit or a Department Order containing a compliance schedule becomes a Final Order of the Department and is based on the number of months the Department will have to oversee the Order.

DIVISION 200

GENERAL AIR POLLUTION PROCEDURES AND DEFINITIONS

340-200-0040
State of Oregon Clean Air Act Implementation Plan
(1) This implementation plan, consisting of Volumes 2 and 3 of the State of Oregon Air Quality Control Program, contains control strategies, rules and standards prepared by the Department of Environmental Quality and is adopted as the state implementation plan (SIP) of the State of Oregon pursuant to the federal **Clean Air Act**, Public Law 88-206 as last amended by Public Law 101-549.
(2) Except as provided in section (3), revisions to the SIP will be made pursuant to the Commission's rulemaking procedures in Division 11 of this Chapter and any other requirements contained in the SIP and will be submitted to the United States Environmental Protection Agency for approval.
(3) Notwithstanding any other requirement contained in the SIP, the Department may:
(a) Submit to the Environmental Protection Agency any permit condition implementing a rule that is part of the federally-approved SIP as a source-specific SIP revision after the Department has complied with the public hearings provisions of **40 CFR 51.102 (July 1, 1992)**; and
(b) Approve the standards submitted by a regional authority if the regional authority adopts verbatim any standard that the Commission has adopted, and submit the standards to EPA for approval as a SIP revision.
[NOTE: Revisions to the State of Oregon Clean Air Act Implementation Plan become federally enforceable upon approval by the United States Environmental Protection Agency. If any provision of the federally approved Implementation Plan conflicts with any provision adopted by the Commission, the Department shall enforce the more stringent provision.]
[Publications: The publication(s) referred to or incorporated by reference in this rule are available from the agency.]

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.035
Hist.: DEQ 35, f. 2-3-72, ef. 2-15-72; DEQ 54, f. 6-21-73, ef. 7-1-73; DEQ 19-1979, f. & ef. 6-25-79; DEQ 21-1979, f. & ef. 7-2-79; DEQ 22-1980, f. & ef. 9-26-80; DEQ 11-1981, f. & ef. 3-26-81; DEQ 14-1982, f. & ef. 7-21-82; DEQ 21-1982, f. & ef. 10-27-82; DEQ 1-1983, f. & ef. 1-21-83; DEQ 6-1983, f. & ef. 4-18-83; DEQ 18-1984, f. & ef. 10-16-84; DEQ 25-1984, f. & ef. 11-27-84; DEQ 3-1985, f. & ef. 2-1-85; DEQ 12-1985, f. & ef. 9-30-85; DEQ 5-1986, f. & ef. 2-21-86; DEQ 10-1986, f. & ef. 5-9-86; DEQ 20-1986, f. & ef. 11-7-86; DEQ 21-

1986, f. & ef. 11-7-86; DEQ 4-1987, f. & ef. 3-2-87; DEQ 5-1987, f. & ef. 3-2-87; DEQ 8-1987, f. & ef. 4-23-87; DEQ 21-1987, f. & ef. 12-16-87; DEQ 31-1988, f. 12-20-88, cert. ef. 12-23-88; DEQ 2-1991, f. & cert. ef. 2-14-91; DEQ 19-1991, f. & cert. ef. 11-13-91; DEQ 20-1991, f. & cert. ef. 11-13-91; DEQ 21-1991, f. & cert. ef. 11-13-91; DEQ 22-1991, f. & cert. ef. 11-13-91; DEQ 23-1991, f. & cert. ef. 11-13-91; DEQ 24-1991, f. & cert. ef. 11-13-91; DEQ 25-1991, f. & cert. ef. 11-13-91; DEQ 1-1992, f. & cert. ef. 2-4-92; DEQ 3-1992, f. & cert. ef. 2-4-92; DEQ 7-1992, f. & cert. ef. 3-30-92; DEQ 19-1992, f. & cert. ef. 8-11-92; DEQ 20-1992, f. & cert. ef. 8-11-92; DEQ 25-1992, f. 10-30-92, cert. ef. 11-1-92; DEQ 26-1992, f. & cert. ef. 11-2-92; DEQ 27-1992, f. &cert. ef. 11-12-92; DEQ 4-1993, f. & cert. ef. 3-10-93; DEQ 8-1993, f. & cert. ef. 5-11-93; DEQ 12-1993, f. & cert. ef. 9-24-93; DEQ 15-1993, f. & cert. ef. 11-4-93; DEQ 16-1993, f. & cert. ef. 11-4-93; DEQ 17-1993, f. & cert. ef. 11-4-93; DEQ 19-1993, f. & cert. ef. 11-4-93; DEQ 1-1994, f. & cert. ef. 1-3-94; DEQ 5-1994, f. & cert. ef. 3-21-94; DEQ 14-1994, f. & cert. ef. 5-31-94; DEQ 15-1994, f. 6-8-94, cert. ef. 7-1-94; DEQ 25-1994, f. & cert. ef. 11-2-94; DEQ 9-1995, f. & cert. ef. 5-1-95; DEQ 10-1995, f. & cert. ef. 5-1-95; DEQ 14-1995, f. & cert. ef. 5-25-95; DEQ 17-1995, f. & cert. ef. 7-12-95; DEQ 19-1995, f. & cert. ef. 9-1-95; DEQ 20-1995 (Temp), f. & cert. ef. 9-14-95; DEQ 8-1996(Temp), f. & cert. ef. 6-3-96; DEQ 15-1996, f. & cert. ef. 8-14-96; DEQ 19-1996, f. & cert. ef. 9-24-96; DEQ 22-1996, f. & cert. ef. 10-22-96; DEQ 23-1996, f. & cert. ef. 11-4-96; DEQ 24-1996, f. & cert. ef. 11-26-96; DEQ 10-1998, f. & cert. ef. 6-22-98; DEQ 15-1998, f. & cert. ef. 9-23-98; DEQ 16-1998, f. & cert. ef. 9-23-98; DEQ 17-1998, f. & cert. ef. 9-23-98; DEQ 20-1998, f. & cert. ef. 10-12-98; DEQ 21-1998, f. & cert. ef. 10-12-98; DEQ 1-1999, f. & cert. ef. 1-25-99; DEQ 5-1999, f. & cert. ef. 3-25-99; DEQ 6-1999, f. & cert. ef. 5-21-99; DEQ 10-1999, f. & cert. ef. 7-1-99; DEQ14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-020-0047

Attachment B

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal
for
Air Contaminant Discharge Permit Fee Increase

Questions to be Answered to Reveal Potential Justification for Differing from Federal Requirements.

1. Are there federal requirements that are applicable to this situation? If so, exactly what are they?

The Air Contaminant Discharge Permit (OAR Chapter 340, Division 216) program is part of Oregon's State Implementation Plan (SIP) approved by the U.S. Environmental Protection Agency (EPA) to meet federal air quality protection requirements. EPA rules (40 CFR Part 51) specify requirements for establishing and amending the SIP, and include resource requirements to implement the SIP.

2. Are the applicable federal requirements performance based, technology based, or both with the most stringent controlling?

Performance-based

3. Do the applicable federal requirements specifically address the issues that are of concern in Oregon? Was data or information that would reasonably reflect Oregon's concern and situation considered in the federal process that established the federal requirements?

Yes

4. Will the proposed requirement improve the ability of the regulated community to comply in a more cost effective way by clarifying confusing or potentially conflicting requirements (within or cross-media), increasing certainty, or preventing or reducing the need for costly retrofit to meet more stringent requirements later?

Not applicable

5. Is there a timing issue which might justify changing the time frame for implementation of federal requirements?

Not applicable.

6. Will the proposed requirement assist in establishing and maintaining a reasonable margin for accommodation of uncertainty and future growth?

Not Applicable.

7. Does the proposed requirement establish or maintain reasonable equity in the requirements for various sources? (level the playing field)

Not applicable.

8. Would others face increased costs if a more stringent rule is not enacted?

Not Applicable.

9. Does the proposed requirement include procedural requirements, reporting or monitoring requirements that are different from applicable federal requirements? If so, Why? What is the "compelling reason" for different procedural, reporting or monitoring requirements?

Not applicable.

10. Is demonstrated technology available to comply with the proposed requirement?

Not Applicable.

11. Will the proposed requirement contribute to the prevention of pollution or address a potential problem and represent a more cost effective environmental gain?

Not Applicable.

Attachment C

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal
for
Air Contaminant Discharge Permit Fee Increase

Fiscal and Economic Impact Statement

Introduction

The proposed rulemaking increases Annual Fees for air quality Air Contaminant Discharge Permits (ACDPs) by 30 percent overall. The proposed fee increase is needed to fund existing Air Quality permitting staff due to inflation and reductions in state General Fund.

The Department proposed a 48 percent overall increase in ACDP fee revenue as part of the 2001-2003 budget request to the Oregon Legislature. The Legislature authorized an overall increase in fee revenue of 30 percent, and made up some of the difference with General Fund. As a result, the total authorized increase did not provide sufficient revenue to maintain the current staffing level, and the ACDP program lost 3.5 existing positions.

2001 Legislative Authorization

The total projected revenue from all permit types before fee increase, as submitted to the 2001 Legislature	$3,946,568
30 percent increase authorized by 2001 Legislature	$1,183,970
Total Authorized Fees with 30 Percent Increase	**$5,130,538**

Proposed ACDP Fees

ACDP Permit Type	Current Annual Fees	Proposed Fee Increase	Proposed Annual Fees
Basic ACDP	$100	$200	$300
General ACDPs			
Fee Class One	$500	$100	$600
Fee Class Two	$900	$180	$1,080
Fee Class Three	$1,300	$260	$1,560
Simple Low ACDP	Does Not Exist	*($400)	$1,600
Simple ACDP	$2,000	$1,200	$3,200
Standard ACDP	$4,000	$2,400	$6,400

Total Projected Revenue After Proposed Fee Increase: $5,111,780 ⇔ 29.5 Percent Increase

* The Simple-Low ACDP fee is a new proposed fee category. The table above shows the Simple-Low fee as a $400 decrease from the existing Simple ACDP fee of $2,000.

The Department is not proposing to increase Initial Permitting Application and Specific Activity Fees from their current level, and Late Fees will increase because they are based on a percentage of Annual Fees.

General Public

The fiscal and economic impact on the general public is the possibility of increased costs for products or service from the facilities subject to the proposed fee increase. These potential cost increases are likely to be very modest, however, because the proposed fee increases are estimated to have a minor effect on the yearly operating costs or gross revenue of the majority of permitted facilities.

Small Business

The Department expects most small businesses to pay Basic, General, and Simple-Low ACDP fees. Depending on the type of permit a source had before the May 2001 streamlining rules, the proposed fees may represent an increase or decrease from average fees in previous years.

For most sources moving to a Basic Permit, the $300 Basic Permit fee will be comparable to the average fees paid in the past. Small businesses that have General ACDPs will be affected by a relatively small fee increase, and avoid permit modification fees because General ACDPs are not modified for individual sources. Small businesses subject to Simple-Low fees will pay slightly more than the General ACDP Fee Class Three. The Simple-Low category is new, and will reduce the fee for small businesses that would otherwise pay for a Simple ACDP. Small Business that have a Standard ACDP will be affected by the fee increase the same as a large business. In addition, approximately 30 very small existing permittees will be exempted from permits altogether by the proposed rules.

Large Business

Most large businesses will have Standard ACDPs; a smaller number will have Simple ACDPs.. The proposed fee increase is greater for Simple and Standard ACDPs than the General Permit category because they require more resources for both processing the permits and administering the permits through inspections and compliance-related activities. Depending on the type of permit a source had before the May 2001 streamlining rules, the proposed fees may represent an increase or decrease from average fees paid in previous years.

Local Governments

This rulemaking will increase fees for local government agencies that have ACDPs. Local governments that may be affected include schools and jails that have boilers; counties that operate rock crushers, asphalt and concrete plants, and crematory incinerators. Most of these sources will have Basic, General, or Simple-low ACDPs, and will experience impacts similar to small businesses.

The proposed increase is estimated to have a minor effect on local government operating budgets.

State Agencies

Department of Environmental Quality: The proposed fee increase will result in increased revenue of approximately $1.2 million per biennium. However, the increase will not fully cover funding shortfalls and will result in a decrease in ACDP program staff. Even with the proposed increase, 3.5 existing FTEs will not be funded in the 2001-2003 biennium. Although this shortfall will likely provide challenges in the short term, the Department does expect resource savings in future years (i.e., after a complete five year permitting cycle) as a result of other permit streamlining efforts.

Other Affected Agencies: Oregon Department of Corrections and other state facilities that have ACDPs will be subject to the proposed increase, including hospitals and the School for the Deaf that operate boilers; universities that operate boilers and crematories; and the Oregon Department of Transportation that operates rock crushers. In most cases, the impacts will be similar to those of small businesses.

The proposed increase is estimated to have an insignificant effect on state agency operating budgets.

Assumptions

This proposed increase is based on the permit election process completed in September 2001. That process provided data on the number of sources in each permit category. Using that information as a basis, the Department evaluated expected shifts that are anticipated from proposed low-end cutoffs and exemptions.. This analysis determined the expected final number of sources in each fee category for this proposal.

The Department anticipates that ACDP fee revenue for the 2001-2003 biennium will increase 30 percent overall based on expected fees generated by the projected number of permits of each type, provided below. These revenue figures could change based on the number of permitted sources, and the number of new, modified, and cancelled permits.

2001-2003 Projected Revenue			
ACDP Permit Type	Estimated Sources	Proposed Annual Fee	Proposed Fee Totals
Basic	170	$300	$51,000
General Fee Class One	164	$600	$98,400
General Fee Class Two	306	$1,080	$330,480
General Fee Class Three	151	$1,560	$235,560
Simple Low	29	$1,600	$46,400
Simple-High	115	$3,200	$368,000
Standard ACDP	182	$6,400	$1,164,800
Total ACDP Sources	1117	Total Annual Fees	$2,294,640
		Annual Activity Fees	$261,250
		Total Annual Fees	$2,555,890
		Total Biennium Fees	**$5,111,780**

Housing Cost Impact Statement

The Department has determined that this proposed rulemaking will have no effect on the development cost of a 6,000 square foot parcel and the construction cost of a 1,200 square foot detached single family dwelling on that parcel.

Attachment D

State of Oregon
Department of Environmental Quality Memorandum

Date: January 2, 2002

To: Environmental Quality Commission

From: Scott Manzano

Subject: Presiding Officer's Report for Rulemaking Hearing
Hearing Date and Time: see below
Hearing Locations: see below
Title of Proposal: Air Contaminant Discharge Permits Fee Increase

The public hearings for this proposed rulemaking were held at 3:00 PM in six locations as follows:

Portland on 12/19/01 Department of Environmental Quality 811 SW 6th Avenue	Salem on 12/20/01 DEQ Regional Office 750 Front Street
Coos Bay on 12/20/01 Newmark Center - Room 228 2110 Newmark Avenue	Medford on 12/19/01 City of Medford 411 W. 8th Street
Bend on 12/20/01 Central Oregon Environmental Center 16 NW Kansas	Pendleton on 12/20/01 Pendleton City Hall Community Room 501 Emigrant

Department staff acted as presiding officers at each of the hearings. Prior to receiving comments, Department presiding officers briefly explained the procedures to be followed during the hearing. Oral testimony was provided by one individual at the public hearing in Bend. No other testimony was given at any other location.

The testimony provided at the Bend public hearing was from Mr. Manny Milby, representing a rockcrushing operation, Hap Taylor and Sons. Hap Taylor and Sons are in favor of the proposed rules as long as the condition remains that concrete plants with less than 25,000 cubic yards throughput qualify for the Basic ACDP.

The Department also received a total of nine written comments on the proposed rules. The comments and the Department's response is provided in Attachment E.

Attachment E
Department Response to Public Comment

Comment Type	Commentor	Comment	Department Response
Fee Increase Not Demonstrated	Fremont Saw Mill	DEQ has failed to adequately demonstrate why it needs an increase beyond normal inflationary pressures, and why it requires such a large increase.	**Response 1.** The 30 percent proposed increase is not just to pay for costs due to inflation. The fee increase was requested by the Department to ***replace*** approximately $1.6 million in General Fund that was no longer available to fund the ACDP program. The rulemaking proposal memorandum states "...the Department requested a 48 percent overall increase in ACDP fee revenue due to cost increases and reductions in state General Fund." The memo further explains that the Legislature responded by authorizing an overall increase of 30 percent, which was not sufficient to maintain the current staff level. The 30 percent increase will only fund approximately 90% of program costs after inflation, and result in a cut of 3.5 ACDP employees.
Pass Through Costs for Business	Fremont Saw Mill,	Disagree with the Fiscal and Economic Impact Statement saying the impact on the general public is the "possibility" of increased costs for products or services, and that these potential cost increases are likely to be very modest. "If the increases are passed they will add to costs, it will not be a possibility".	**Response 2.** ACDP permit fees are a relatively small cost considering a business's yearly operating cost. Some businesses may pass the cost of increased permitting fees on to consumers, some may not. The Department believes the use of the word "possibility" is correct as intended in the Fiscal and Economic Impact Statement attachment.
	Wallowa County Public Works	"In Attachment A, the Housing Cost Impact is incorrect. When DEQ increases fees for all permit holders involved in building a house, they will have to pass on the increase"	**Response 3.** The commentor is referring to the statement "...this proposed rulemaking will have no effect on the development cost of a 6,000 square foot parcel and the construction of a 1,200 square foot detached single family dwelling on that parcel" that is in Attachment A of the public comment package. The Department is not aware of any ACDP permittee that builds single family dwellings, and does not anticipate that this rulemaking will affect those costs. Further, the Department does not believe that the fee increase will materially effect prices for permittees that supply materials or services to the home construction industry. For example, for ready-mix plants that produce over 25,000 cubic yards per year, the fee increase amounts to 0.4 cents per yard or less. However, smaller ready-mix plants that qualify for a Basic permit will see a fee decrease of 0.8 cents per yard or more.
Fee Increase Too High	Fremont Saw Mill	Our annual permitting costs have risen from $3,200 to $4,000 over the last year, and DEQ is now proposing to increase fees to $6,400 per year.	**Response 4.** Fremont Saw Mill paid $4,874.40/year as a 10-year average before the permit streamlining rules were adopted in May 2001. This amount is the sum of the annual compliance fee ($4,134) and a $740.40 annual cost of the permit renewal fee ($3702 every 5 years). The rules adopted in May changed the fee structure so that there is now only one fee paid every year. The

Comment Type	Commentor	Comment	Department Response
			proposed annual fee is $6,400/year. Therefore, the effect of the proposed rules for Freemont will be an increase from $4,874.40 to $6,400 per year, or approximately 31 percent.
	Mr. Gordon Sawser	The Department already received a 30 percent increase in the 2001 Legislative session, and is now asking for more (referring to an additional 48 percent increase).	**Response 5.** As noted in Response 1, the Department requested a 48 percent increase from the 2001 Legislature and received authority to increase ACDP fees 30 percent overall due to cost increases and reductions in state General Fund no longer available to the ACDP program. This proposed increase is intended to codify the 30 percent increase authorized by the 2001 Legislature, and not add to the authorized increase.
	Box B Ent., Inc.	The fee is excessive for one year. We are a small business, and our production varies each year. "This year was our yard's best year for most yards sold and that just meets the 45,000 ton limit."	**Response 6.** The commentor may be referring to the cutoff between a Basic ACDP and a General ACDP for rock crushers, which is 25,000 tons per year and not 45,000 tons per year. The cutoff was established in the May rules at a level that would distinguish between plants that are used infrequently in support of other activities and those that are used on a more constant basis as a viable business. The Basic ACDP is available for plants that crush less than 25,000 tons of rock per year and a General ACDP is available for plants that crush 25,000 or more tons per year. To reduce the impact on small businesses, the Department is only proposing to increase fees 20 percent for General ACDPs. The Department has determined that because General ACDPs require less work overall, the increase should be less than the 30 percent authorized by the 2001 Legislature. Also see Response 12.
	National Automotive Trade Association (NATA)	The fee increases are difficult to support considering the economic situation in Oregon along with the Governor's request for agencies to reduce expenses by 8%.	**Response 7.** The Legislature authorized the fee increase to offset cost increases and a reduction in state General Fund that is no longer available to support the program. The proposed fee increase will, however, result in a cut of 3.5 employees because the 30 percent increase is not sufficient to fund the program at the same level as in the past. The Governor and the Legislature are now considering further cuts in General Fund, not fees, due to a state-wide budget shortfall.
	National Automotive Trade Association (NATA)	The proposed fee increase of $200 per year for the Basic ACDP may not seem substantial but is staggering when combined with the list of other government fees and taxes.	**Response 8.** The proposed rules expand the scope of the Basic permit to include a number of sources that were formerly required to obtain Simple or General ACDPs. Because the General permits will now include more complex sources, a higher fee is needed to cover costs. This does result in a $200 per year increase for some sources, but others will see a significantly lower fee as compared to Simple or General permit fees. The Department does understand that the total fees and taxes paid by businesses are substantial.
	National Automotive	Rather than increase the fee for Basic	**Response 9.** The Department recently completed a major streamlining of the

Comment Type	Commentor	Comment	Department Response
	Trade Association (NATA)	ACDPs, the DEQ should further streamline the permitting program.	permitting program. The creation of the Basic permit was one part of that rulemaking, which also included greater use of General permits and simplified permitting procedures. The Department will continue to evaluate ways to streamline the program and reduce costs.
ACDP Fees Should Not Increase	TriQuint Semiconductor	The proposed fee increase does not improve environmental protection, there is no gain for our operation or our permit monitoring program, and economic conditions in Oregon have deteriorated.	**Response 10.** The proposed fee increase is needed to retain approximately seven existing ACDP staff. Without those staff, Oregon's environment would suffer because of reduced compliance assurance work, and Oregon's economy would further erode because of facility construction and modification delays. The Department acknowledges that the state of the current economy in Oregon is challenging for many businesses.
	-Mr. Gordon Sawser, -Fremont Saw Mill	The memo says that without the fee increase the Department would be forced to eliminate approximately 1/3 of ACDP program staff – why? The Department should stop asking for more money and decrease staff to stay within budget.	**Response 11.** Due to a significant reduction in General Fund combined with cost increases, the Department has no funding for approximately one third of existing ACDP staff. The Department requested a 48 percent increase to retain these existing staff. Because the Legislature authorized only the 30 percent increase, 3.5 ACDP program employees, or approximately 10 percent of program staff, have been cut.
	Oregon Concrete & Aggregate Producers Association, Inc. (OCAPA)	"OCAPA is strongly opposed to this additional fee increase on all Ready Mix Concrete ACDPs because the industry has already felt the May 2001 compliance fee increase jump from $641 for a five year permit to $500 for a one year permit. This proposal adds an additional $100 on top of this fee! These compliance fee increases will cause a financial hardship for most operators."	**Response 12.** When developing this proposal, the Department recognized that an additional fee on small ready-mix concrete plants may be a financial hardship. Therefore, the Department is proposing the creation of a low-end throughput cutoff so that smaller ready-mix plants can qualify for the lower fee Basic ACDP in lieu of being assigned to the more expensive General ACDP. For those that qualify for the Basic ACDP (i.e., produce from 5,000 to 25,000 cubic yards of concrete per year), the fees will be reduced from the existing General ACDP fee of $500 per year to the proposed Basic ACDP fee of $300 per year. For the larger ready-mix concrete plants, the proposed fees will increase from $500 to $600 per year, which is a 20 percent increase rather than the 30 percent increase authorized by the Legislature. It is anticipated that nearly 50 percent of the existing ready-mix concrete plants will qualify for the Basic ACDP. In addition, plants producing less than 5,000 cubic yards per year would not be required to obtain a permit altogether. Also see Response 3. ***Note:*** The current fee structure is based on the type of permit issued to the source, as compared to the former fee system, which was based on source categories. The old system was inequitable because two different sources with the same type of permit were paying drastically different fees. For example, the former fee system allowed most ready-mix concrete plants to be permitted on "Minimal" permits. Their fees before the May 2001 fee revisions were $178

Comment Type	Commentor	Comment	Department Response
			per year, based on a 10-year average while some wood products facilities were paying over $1,000 per year for the same type of Minimal permit. The disparity in fees indicates that some sources were subsidizing other sources. The new fee structure was designed to eliminate these inequities and base fees on the service (e.g., permit type), or work provided by the DEQ.
	Wallowa County Public Works	DEQ wants to expand its network. The 2001 Legislature authorized a 30 percent increase in DEQ funding, and they should not be asking for more.	**Response 13**. The proposed fee increase is designed to generate $1,165,212, which is slightly less that the 30 percent increase in revenue as authorized by the Legislature. Also see Response 7.
	Wallowa County Public Works	In May 2001, DEQ estimated 10 sources would convert to a Basic ACDP, and they now expect approximately 170 sources will obtain a Basic ACDP. DEQ needs to show some credibility and make sound judgements.	**Response 14**. The Department is proposing changes that will allow more sources to qualify for the Basic ACDP as a way of reducing the cost for small businesses. This accounts for the expected increase in the number of sources that will obtain a Basic ACDP.
	Harvey Rock and Paving Company	The only way we can survive is to find ways to cut cost and become more efficient. Government, on the other hand seems to growing like a cancer.	**Response 15.** See Response 1.
Fee Increase Affects Different Source Categories Unequally	AOI	The proposal is going to shift the burden of the fee increase onto Simple and Standard permit holders. Why is this proposal different than the original fee proposal (proposed in July 2001)?	**Response 16**. The Department evaluated comments pertaining to the July 2001 proposal and the permit election process in Fall 2001. Based on those comments, the Department compared the annual permit cost for all source types under the old fee system and the current fee system adopted in May 2001. The results showed that under the current fee system, the average annual fees for former Regular and Synthetic Minor ACDP sources decreased 18 and 32 percent; respectively, while former Minimal and General ACDP sources increased 93 and 80 percent; respectively. Merely increasing fees by an equal percentage for each type of permit, as proposed in July 2001, would make the impact on small businesses even worse. Therefore, the Department re-proposed the fee increase to address the impact on small businesses (those that typically had Minimal ACDPs) while still obtaining the overall increase approved by the Legislature.
Fee Increase Appears to be Greater Than 30 Percent	AOI	We are puzzled regarding the mathematics of the proposal. The proposal states that the fees will increase by $1,165,212 over the biennium. When we do the calculation	**Response 17**. The difference in this calculation results from a change in the estimated number of sources in each permit type. Based on the numbers available at the time, the revenue from the fee table adopted in May 2001 was overestimated. Based on the best current information, the proposed fee table

Comment Type	Commentor	Comment	Department Response
		we derive an increase of $1,381,880.	will generate an increase of $1,165,212 over the base ACDP fee limitation for the biennium. The numbers used for the proposed fees, while still estimates, are based on much better information obtained from the permit election process in Fall 2001 and the proposed changes to the rules that will allow some sources to move from one permit type to another. Although a number of factors will cause the total number of ACDP sources and their permit types to fluctuate from year to year, the Department believes that it is appropriate to use the most current information to set the fees to generate the approved revenue.
More Sources Should Be Able to Shift to a Lower Fee Category	AOI	Any source category that has maintained its emissions below the threshold stated in the proposal should be allowed to take advantage of the Simple-Low ACDP fee.	**Response 18.** The Simple-low fee is proposed specifically to reduce fees for former "Minimal" ACDP sources that could only move to a Simple ACDP because there is no General ACDP available. Most of the sources that had Minimal ACDPs were able to take advantage of a General ACDP, but some could not because a General ACDP was not developed for their source category. However, the amount of work required for regulating these sources is not much different than for those that can be assigned to a General ACDP. Therefore, the Department has proposed a Simple-low fee category specifically for these sources. Expanding the scope of the Simple-low fee category to other, more complex sources that require more work would not be equitable. In addition, expanding the scope of the Simple-low fee category would require the Department to increase the Simple-low fee and likely all other permit fees to provide the revenue needed to maintain the ACDP program.
	AOI	Provide an incentive to allow a source to move to a lower fee category based on a reduction of potential emissions, not solely based on the source's previous 2-year actual emissions.	**Response 19.** The Department agrees that incentives to permanently reduce emissions should not be impeded. The Department has modified the proposal to allow sources to move to the lower fee category sooner, based on either their prior one-year actual emissions or their future projected emissions.
Supports Proposed Rule	Hap Taylor and Sons	Support the proposed rules as long as the condition remains that concrete plants with less than 25,000 cubic yards throughput qualify for the Basic ACDP.	**Response 20.** The Department appreciates the support for the proposed rules and recommends that the Commission adopt the rules with the 25,000 cubic yard cutoff, as proposed.

Attachment F

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal
for
Air Contaminant Discharge Permit Fee Increase

Land Use Evaluation Statement

1. **Explain the purpose of the proposed rules.**

The proposed rulemaking increases Annual Fees for air quality Air Contaminant Discharge Permits (ACDPs) by 30 percent overall. The proposed fee increase is needed to fund existing Air Quality permitting staff due to inflation and reductions in state General Fund.

2. **Do the proposed rules affect existing rules, programs or activities that are considered land use programs in the DEQ State Agency Coordination (SAC) Program?**

Yes X **No** ____

a. If yes, identify existing program/rule/activity:

Oregon's Air Contaminant Discharge Permit Program (OAR 340, Division 216), which regulates air emissions from non-major industrial sources.

b. If yes, do the existing statewide goal compliance and local plan compatibility procedures adequately cover the proposed rules?

Yes X **No** ____ **(if no, explain):**

The proposed rules would be implemented through the Department's existing stationary source ACDP permitting program. An approved land use compatibility statement is required from local government before an air permit is issued.

3. **If the proposed rules have been determined a land use program under 2. above, but are not subject to existing land use compliance and compatibility procedures, explain the new procedures the Department will use to ensure compliance and compatibility.**

Not applicable.

Mitch O'Meara
Intergovernmental Coordinator
for Roberta Young

11/14/01
Date

Attachment G

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal
for
Air Contaminant Discharge Permit Fee Increase

Proposed General ACDP Rules - Adopted August 10, 2001
(Re-noticed here as a State Implementation Plan Revision)

DIVISION 216

AIR CONTAMINANT DISCHARGE PERMITS

340-216-0060
General Air Contaminant Discharge Permits

(1) Applicability.

(a) The Commission may issue a General ACDP under the following circumstances:

(A) There are several sources that involve the same or substantially similar types of operations;

(B) All requirements applicable to the sources can be contained in a General ACDP;

(C) The emission limitations, monitoring, recordkeeping, reporting and other enforceable conditions are the same for all sources covered by the General ACDP; and

(D) The pollutants emitted are of the same type for all covered sources.

(b) Permit content. Each General ACDP must include the following:

(A) All relevant requirements;

(B) Generic PSELs for all pollutants emitted at more than the deminimis level in accordance with OAR 340, division 222;

(C) Testing, monitoring, recordkeeping, and reporting requirements necessary to ensure compliance with the PSEL and other applicable emissions limits and standards, and;

(D) A permit duration not to exceed 10 years.

(c) Permit issuance procedures: A General ACDP requires public notice and opportunity for comment in accordance with ORS 183.325 to 183.410. All General ACDPs are on file and available for review at the Department's headquarters. The Commission chair signs a General ACDP.

(2) Source assignment:

(a) Application requirements. Any person requesting that a source be assigned to a General ACDP must submit a written application in accordance with OAR 340-216-0040 that includes the information in OAR 340-216-0040(1), specifies the General ACDP source category, and shows that the source qualifies for the General ACDP.

(b) Fees. Applicants must pay the fees set forth in Table 2 of OAR 340-216-0020.

(c) Source assignment procedures:

(A) Assignment of a source to a General ACDP is a Category I permit action and is subject to the Category I public notice requirements in accordance with OAR 340, division 209 ~~for Category I permit actions~~.

(B) A person is not a permittee under the General ACDP until the Department assigns the General ACDP to the person.

(~~B~~C) Assignments to General ACDPs terminate when the General ACDP expires or is modified, terminated or revoked.

(3) Commission Initiated Modification. If the Commission determines that the conditions have changed such that a General ACDP for a category needs to be modified, the Commission may issue a new General ACDP for that category and the Department may assign all existing General ACDP permit holders to the new General ACDP.

(4) Rescission. In addition to OAR 340-216-0082 (Termination or Revocation of an ACDP), the Department may rescind an individual source's assignment to a General ACDP if the source no longer meets the requirements of this rule or the conditions of the permit, including, but not limited to the source having an ongoing, reoccurring or serious compliance problem. Upon rescinding a source's assignment to a General ACDP the Department will place the source on a Simple or Standard ACDP. The Commission may also revoke a General ACDP if conditions, standards or rules have changed so the permit no longer meets the requirements of this rule.

(5) General ACDPs adopted by reference. The following General ACDPs are adopted by this reference and incorporated herein:

(a) AQGP-001, Hard chrome platers (August 10, 2001)

(b) AQGP-002, Decorative chrome platers (August 10, 2001)

(c) AQGP-003, Halogenated solvent degreasers – batch cold (August 10, 2001)

(d) AQGP-004, Halogenated solvent degreasers – batch vapor and in-line (August 10, 2001)

(e) AQGP-005, Halogenated solvent degreasers – batch cold, batch vapor, and in-line (August 10, 2001)

(f) AQGP-006, Dry cleaners (August 10, 2001)

(g) AQGP-007, Asphalt plants (August 10, 2001)

(h) AQGP-008, Rock crushers (August 10, 2001)

(i) AQGP-009, Ready-mix concrete (August 10, 2001)

(j) AQGP-010, Sawmills, planing mills, millwork, plywood manufacturing and veneer drying (August 10, 2001)

(k) AQGP-011, Boilers (August 10, 2001)

(l) AQGP-012, Crematories (August 10, 2001)

(m) AQGP-013, Grain elevators (August 10, 2001)

(n) AQGP-014, Prepared feeds, flour, and cereal (August 10, 2001)

(o) AQGP-015, Seed cleaning (August 10, 2001)

(p) AQGP-016, Coffee roasters (August 10, 2001)

(q) AQGP-017, Bulk gasoline plants (August 10, 2001)

(r) AQGP-018, Electric power generators (August 10, 2001)

[**NOTE:** Except for OAR 340-216-0060(5), ~~T~~this rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040.]

Stat. Auth.: ORS 468 & ORS 468A

Stats Implemented: ORS 468.020 & ORS 468A.025

Hist.: DEQ 14-1998, f. & cert. ef. 9-14-98; DEQ14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-028-1725

State of Oregon

Department of Environmental Quality Memorandum

Date: February 14, 2002

To: Environmental Quality Commission

From: Stephanie Hallock, Director

Subject: Agenda Item G, Informational Item: Improvements for DEQ's Rulemaking Process
March 8, 2002, EQC Meeting

Purpose of Item Present proposed rulemaking process improvements for discussion with the Commission.

The goals of DEQ's rulemaking process are to produce quality rules and guide the effective use of resources. We are currently evaluating rulemaking improvements designed to strengthen coordination among agency programs, ensure effective implementation of new rules, enable better planning of staff resources and workloads, and gain efficiencies overall.

The rulemaking process improvements we are considering are described in the flow charts in Attachment A. Key changes include the following (page numbers in parenthesis refer to Attachment A):

- Develop an agency-wide rulemaking agenda and tracking system (p. 1)
- Involve the Executive Management Team (EMT) earlier in the process (p. 2)
- Adopt a team approach with clear responsibilities and accountability (p. 2)
- Prepare a project plan for each rulemaking (scaled to the complexity of the rulemaking) (p. 2)
- Provide clearer guidance and formats to staff
- Provide ongoing training for the rulemaking process and rule writing
- Provide ongoing evaluation and improvement of rulemaking process

Next Steps

In March:

- An EMT subgroup plans to recommend final process improvements to the EMT, including an implementation strategy.
- The EMT plans to approve process improvements.

In April:

- The Rules Coordinator Team will develop guidelines and templates to implement the new rulemaking process.
- The EMT will lead roll-out of the new process.

- The Rules Coordinator Team will provide core training on the rulemaking process to key managers and staff.

May through December:

- The Rules Coordinator Team will lead ongoing evaluation of the rulemaking process and recommend improvements to the EMT.

EQC Involvement

We would like your input on these process improvements and specifically:

- What questions do you have about the proposed changes?
- What value do you see in the changes?
- What concerns do you have? How might they be addressed?
- What additional opportunities to be involved in the rulemaking process do you recommend?
- What other ideas do you have for improving the rulemaking process?

Attachments

Attachment A: Rulemaking Process Flow Charts

Approved:

Office:

Report Prepared By: Loretta Pickerell

Phone: 503-229-5445

DEVELOP AGENCY RULEMAKING AGENDA

FLOW CHART SYMBOLS

process

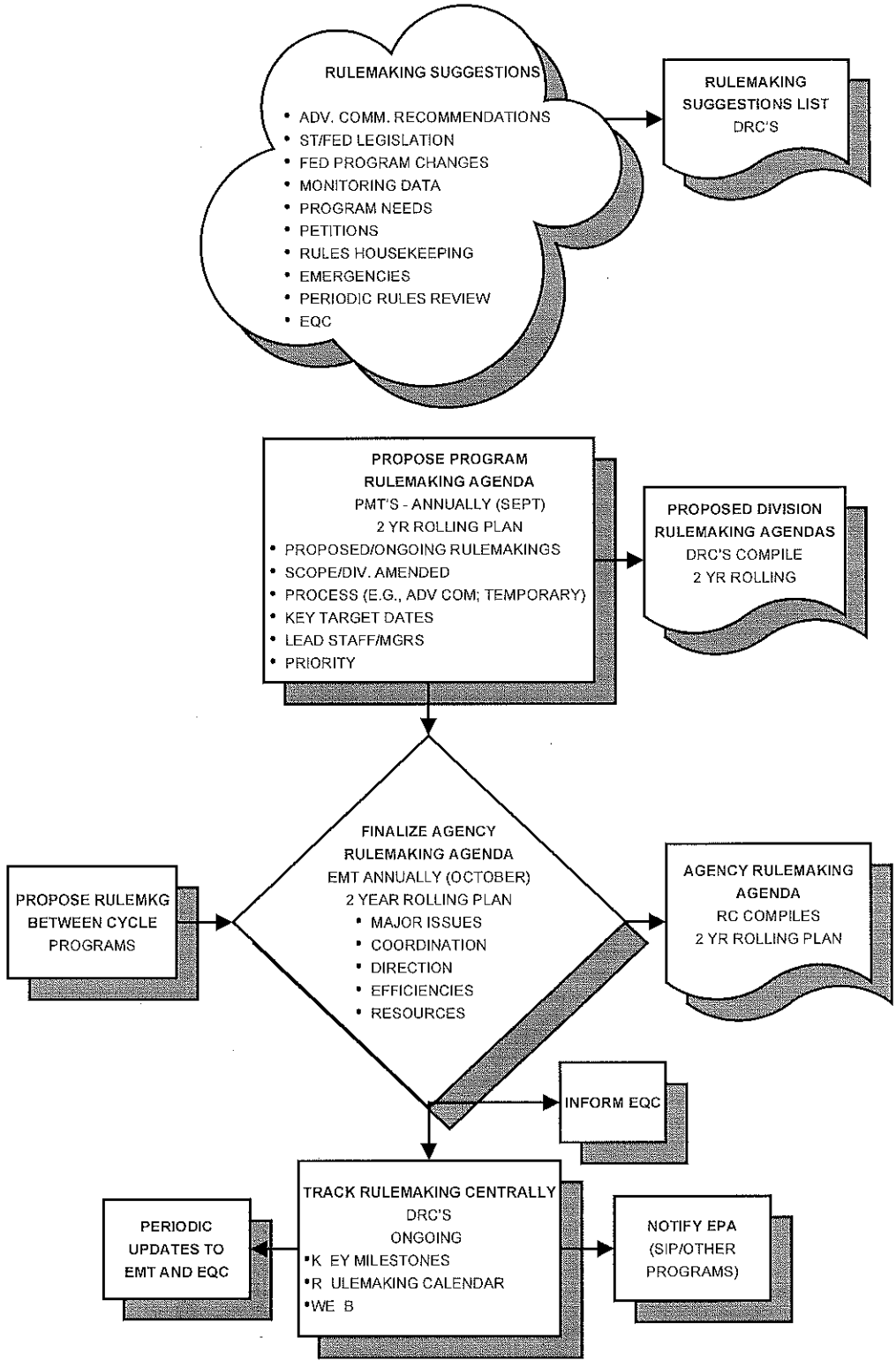
decision

document

suggestion

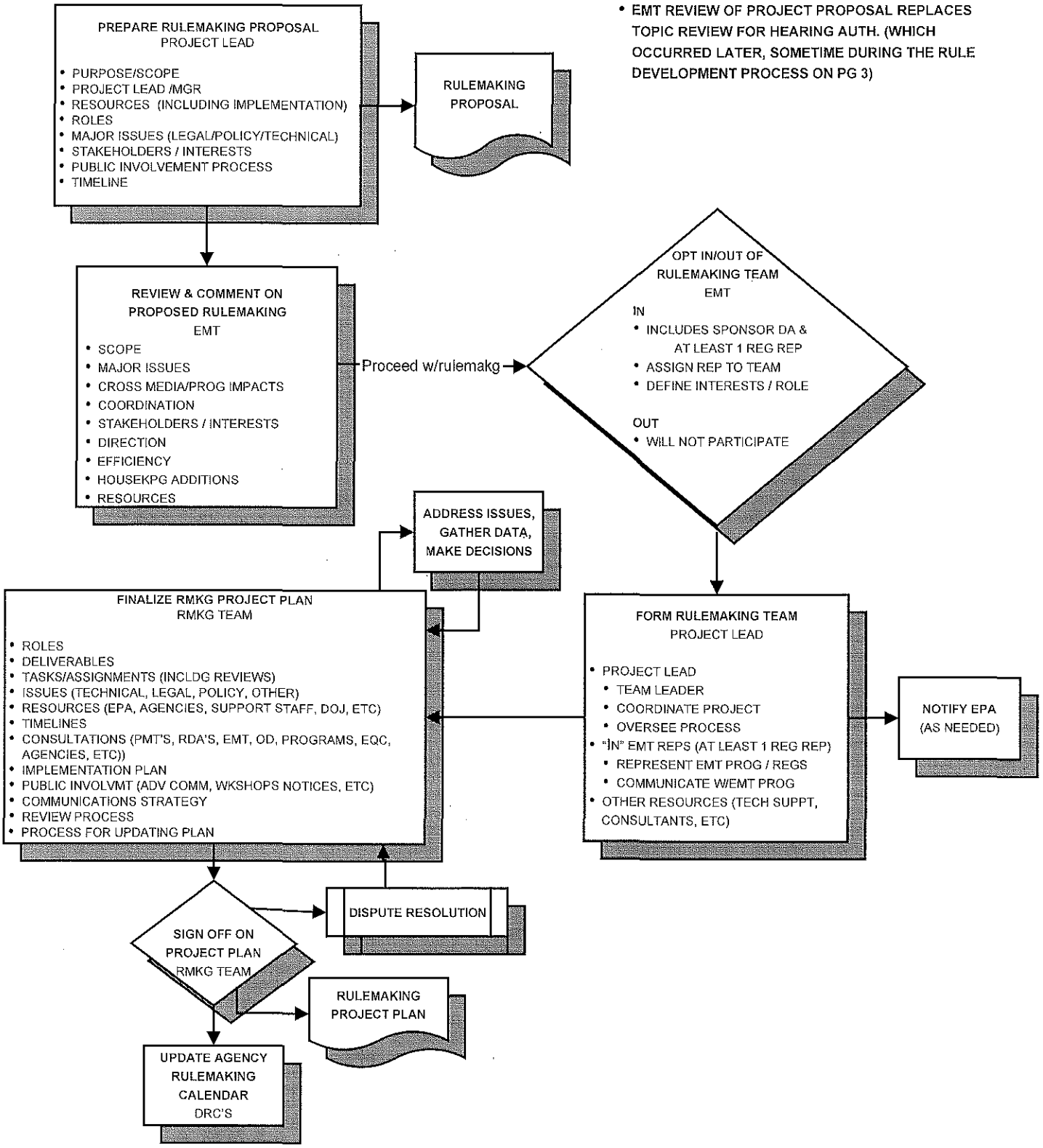
predefined process

shadowed box = new step

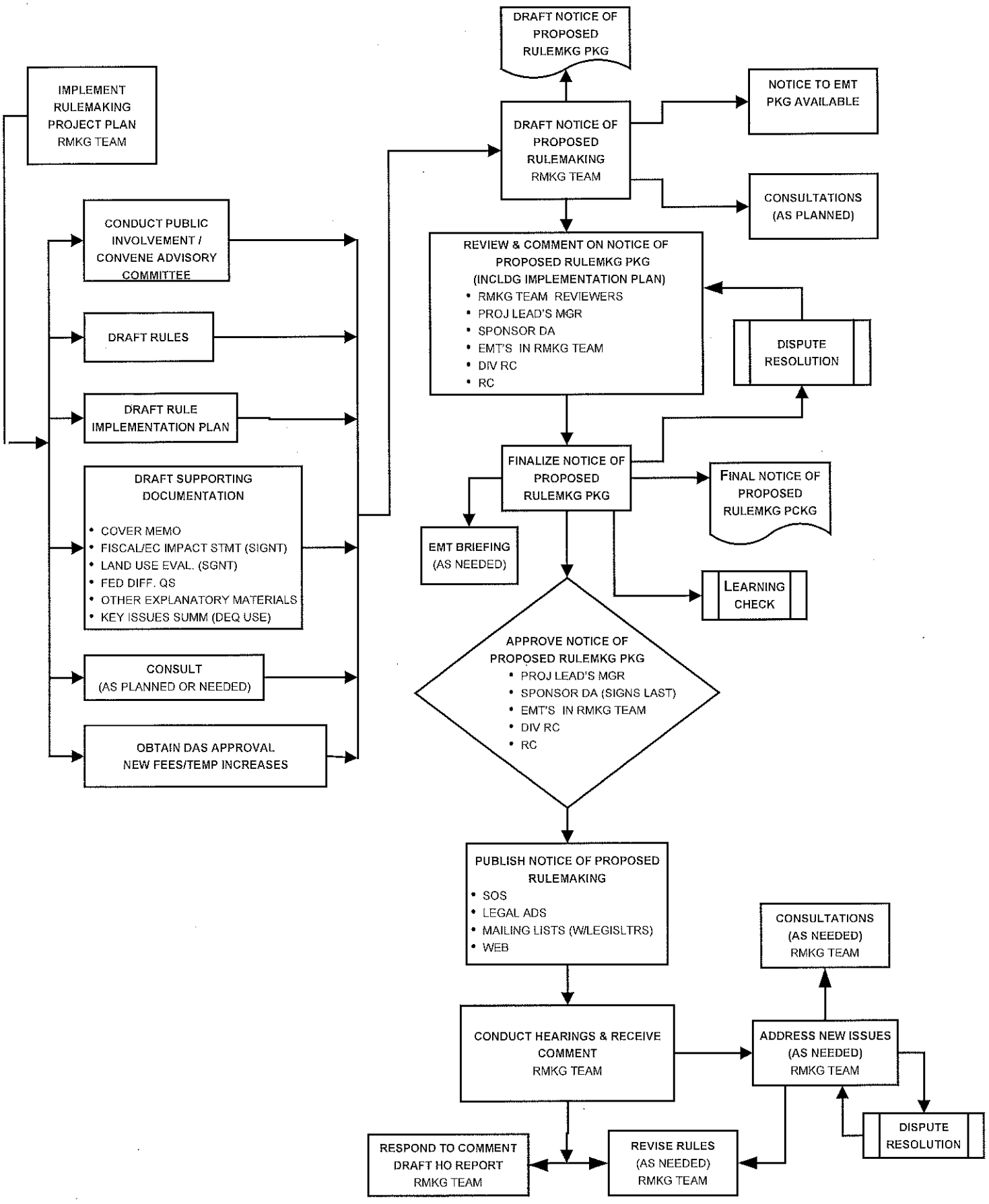


PLAN RULEMAKING

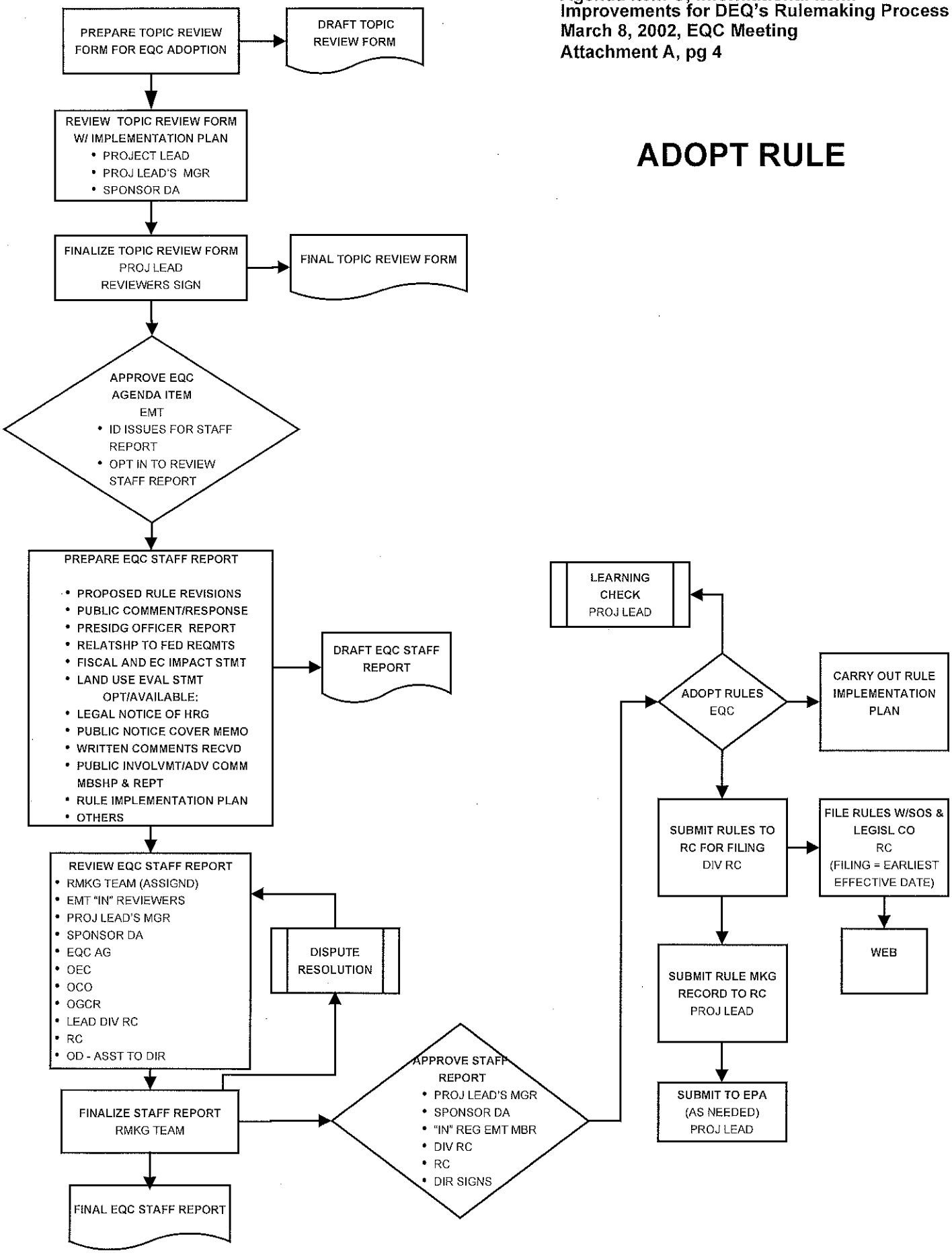
NOTE:
- NEW "RULEMAKING PROPOSAL" REPLACES CURRENT HEARING AUTH. TOPIC REVIEW FORM
- EMT REVIEW OF PROJECT PROPOSAL REPLACES TOPIC REVIEW FOR HEARING AUTH. (WHICH OCCURRED LATER, SOMETIME DURING THE RULE DEVELOPMENT PROCESS ON PG 3)



DEVELOP PROPOSED RULEMAKING PACKAGE



ADOPT RULE


PREPARE TOPIC REVIEW FORM FOR EQC ADOPTION
DRAFT TOPIC REVIEW FORM
REVIEW TOPIC REVIEW FORM W/ IMPLEMENTATION PLAN
• PROJECT LEAD
• PROJ LEAD'S MGR
• SPONSOR DA
FINALIZE TOPIC REVIEW FORM
PROJ LEAD
REVIEWERS SIGN
FINAL TOPIC REVIEW FORM
APPROVE EQC AGENDA ITEM
EMT
• ID ISSUES FOR STAFF REPORT
• OPT IN TO REVIEW STAFF REPORT
PREPARE EQC STAFF REPORT
• PROPOSED RULE REVISIONS
• PUBLIC COMMENT/RESPONSE
• PRESIDG OFFICER REPORT
• RELATSHP TO FED REQMTS
• FISCAL AND EC IMPACT STMT
• LAND USE EVAL STMT
OPT/AVAILABLE:
• LEGAL NOTICE OF HRG
• PUBLIC NOTICE COVER MEMO
• WRITTEN COMMENTS RECVD
• PUBLIC INVOLVMT/ADV COMM MBSHP & REPT
• RULE IMPLEMENTATION PLAN
• OTHERS
DRAFT EQC STAFF REPORT
REVIEW EQC STAFF REPORT
• RMKG TEAM (ASSIGND)
• EMT "IN" REVIEWERS
• PROJ LEAD'S MGR
• SPONSOR DA
• EQC AG
• OEC
• OCO
• OGCR
• LEAD DIV RC
• RC
• OD - ASST TO DIR
DISPUTE RESOLUTION
FINALIZE STAFF REPORT
RMKG TEAM
APPROVE STAFF REPORT
• PROJ LEAD'S MGR
• SPONSOR DA
• "IN" REG EMT MBR
• DIV RC
• RC
• DIR SIGNS
FINAL EQC STAFF REPORT
LEARNING CHECK
PROJ LEAD
ADOPT RULES
EQC
CARRY OUT RULE IMPLEMENTATION PLAN
SUBMIT RULES TO RC FOR FILING
DIV RC
FILE RULES W/SOS & LEGISL CO
RC
(FILING = EARLIEST EFFECTIVE DATE)
WEB
SUBMIT RULE MKG RECORD TO RC
PROJ LEAD
SUBMIT TO EPA
(AS NEEDED)
PROJ LEAD

State of Oregon
Department of Environmental Quality Memorandum

To: Environmental Quality Commission **Date:** February 14, 2002

From: Mikell O'Mealy, Assistant to the Commission

Subject: Item H: Discussion Item: Schedule for Evaluating Performance of DEQ Director

In January, the Commission approved a formal plan for evaluating the performance of the DEQ Director at least once each biennium. The plan (attached) includes an appraisal process, performance criteria and an evaluation form. Below is a potential schedule for evaluating the Director's performance in late 2002, approximately two years after hiring the Director. I present this schedule for your consideration and discussion.

July 25-26 EQC meeting – *Prepare for Performance Evaluation*
- Review, and if necessary, revise and adopt criteria for the evaluation.
- Appoint a subcommittee of the Commission to prepare for the evaluation.
- Ask the Director to prepare a written self-evaluation of performance, to be provided to the Commission before the September meeting.

September 16-17 EQC meeting – *Begin Performance Evaluation*
- Review the Director's self-evaluation in an Executive Session, absent the Director.
- Follow review of the Director's self-evaluation with an Executive Session with the Director.

Late September
- Solicit and compile input from appropriate sources concerning the Director's performance.

October
- Review and provide due consideration to input received within the overall performance appraisal process.
- Commissioners complete individual evaluations of the Director using the adopted criteria.
- Commissioners submit individual evaluations to the Chair for compilation.

December 12-13 EQC meeting – *Complete Performance Evaluation*
- Hold an Executive Session with the Director to review results.
- Following this meeting, prepare a public release of the performance evaluation in summary form. The Chair reviews with the Director before release.

Alternatives:
If you would like to complete the performance evaluation sooner, you could schedule an Executive Session meeting in November to review results with the Director. You could also review evaluation criteria and appoint a subcommittee in early September, outside of a regularly scheduled EQC meeting, especially if you do not anticipate a need to revise the evaluation criteria at that time.

Environmental Quality Commission

Performance Evaluation
Director, Department of Environmental Quality

Approved January 25, 2002

I. Purpose

The Environmental Quality Commission (Commission) is responsible under ORS 468.045 for directing the performance of the Director of the Department of Environmental Quality (DEQ). The Commission exercises part of its responsibility by performing a performance evaluation of the Director. Such evaluation is intended to increase and improve communications both within the Department and the broad spectrum of outside agencies, governments, and private parties with whom the Director interacts. The evaluation further allows the Commission to review goals, establish criteria, provide commendations, and broadly recognize the work of the Director.

II. Process

1. The Commission shall evaluate the performance of the DEQ Director on at least a biennial basis. Normally, the process will require an eight-week period.
2. The Commission may solicit and review information concerning the performance of the Director from any source.
3. Immediately before an evaluation, the Commission shall:
   a. Appoint a subcommittee of the Commission to prepare for and schedule the evaluation.
   b. Review and adopt criteria for the evaluation.
4. In keeping with the Commission-adopted criteria, the Director shall provide the Commission with a written self-evaluation.
5. The Commission shall review the Director's self-evaluation in Executive Session, absent the Director.
6. The Commission shall follow the review of the Director's self-evaluation with an Executive Session with the Director.
7. The Commission shall accept and compile all input from appropriate sources and provide due consideration within the overall performance review process.
8. The Commissioners shall then complete their own individual evaluations of the Director using adopted criteria.
9. The Commissioners' evaluations shall be submitted to the Commission Chair for compilation. Evaluations and compilations shall be kept confidential to the extent allowed under Oregon law.
10. Based upon all input and the individual evaluations and their compilations, an executive session will be held with the Director to review results.
11. The evaluation will become a basis for all aspects of employment.
12. The Commission will prepare a public release of the performance evaluation in summary form. Before such release, the Commission Chair will review such document with the Director.

III. Performance Measures and Evaluation Form

Commissioner Name_____

Performance Period: _____

Mid-Rating Period: _____

Performance Measures	Performance Ratings (Circle one number)
1. POLICY AND DIRECTIVES Director will give clear direction to staff to ensure implementation of Commission policy in a timely manner. Include evidence from DEQ activities, processes and actions underway or completed during the past review period. Director ensures, through subordinates, that staff field decisions are based on existing statutes, goals, executive orders, Commission rules and Department policies. COMMENTS	Outstanding 5 Exceeds expectations 4 Fully meets expectations 3 Needs improvement 2 Unsatisfactory 1 Not Rated N Weight[1] _____%
2. SERVICES AND RELATIONS Director ensures effective services to and relations with the Commission. Upon confirmation, all new Commissioners receive up-to-date Department goals and applicable enabling, operational and regulatory statutes and rules; a handbook including Commission and staff names, mailing, fax and email addresses, telephone numbers; and business cards. Per diem/mileage forms will be provided at each meeting to be submitted together for payment. Any required tax information will be provided on a timely basis. Commission/staff disagreements will be openly discussed with resolution/outcome reflected in meeting minutes. Meeting materials will be provided to all Commission members for review in a timely manner. Any written communication to the Commission from work groups and/or advisory committees will be included in agenda packets. Clerical and other necessary support services will be available. COMMENTS	Outstanding 5 Exceeds expectations 4 Fully meets expectations 3 Needs improvement 2 Unsatisfactory 1 Not Rated N Weight _____%

[1] Assign a weight between 0 and 100 percent to each of the ten Performance Measures so that the combined total of all ten weights is 100 percent.

3. COMMUNICATION Clearly and effectively communicate issues, ideas, resources and/or information in a timely manner. Emphasis will be placed on collaborative processes and high-quality, informative materials including applicable analyses, documents, surveys and reports to facilitate a range of policy implications for discussion. The Commission will be kept informed so as not to be surprised by significant issues. COMMENTS	Outstanding 5 Exceeds expectations 4 Fully meets expectations 3 Needs improvement 2 Unsatisfactory 1 Not Rated N Weight _____%
4. INTER/INTRA GOVERMENTAL RELATIONSHIPS Effectively represents the agency and the State within the state, federal and local government organizational structures. COMMENTS	Outstanding 5 Exceeds expectations 4 Fully meets expectations 3 Needs improvement 2 Unsatisfactory 1 Not Rated N Weight _____%
5. IMPLEMENTATION OF STRATEGIC PLAN Progress toward accomplishing priorities, objectives and strategies as approved by Commission. COMMENTS	Outstanding 5 Exceeds expectations 4 Fully meets expectations 3 Needs improvement 2 Unsatisfactory 1 Not Rated N Weight _____%
6. PROBLEM SOLVING Identifies challenges, opportunities and problems clearly and aids DEQ in the analysis of possible actions or responses as necessary. COMMENTS	Outstanding 5 Exceeds expectations 4 Fully meets expectations 3 Needs improvement 2 Unsatisfactory 1 Not Rated N Weight _____%

7. RECRUITMENT/RETENTION/DIVERSITY Appoint(s), re-appoints, assigns and reassigns as necessary all subordinate offices and employees of the department, clearly prescribes their duties and fixes their compensation, subject to State Personnel Relations Law ORS 179.090. Department personnel are to be highly qualified and responsive to DEQ's entire customer base, including EQC. COMMENTS	Outstanding 5 Exceeds expectations 4 Fully meets expectations 3 Needs improvement 2 Unsatisfactory 1 Not Rated N Weight _____%
8. DECISION-MAKING Director's decisions and actions reflect a high level of understanding of Oregon state government and the political environment in which the agency must function. COMMENTS	Outstanding 5 Exceeds expectations 4 Fully meets expectations 3 Needs improvement 2 Unsatisfactory 1 Not Rated N Weight _____%
9. COMMISSION EFFECTIVENESS In order to assist the Commission in being as effective as possible, the Director will provide information monthly that is relevant to DEQ issues. Such information may include explanation of the State's interest when amending and adopting goals, rules, policies and/or guidelines. The Director also will communicate opportunities within State government for training and educational experiences to enhance high-quality board service. COMMENTS	Outstanding 5 Exceeds expectations 4 Fully meets expectations 3 Needs improvement 2 Unsatisfactory 1 Not Rated N Weight _____%
10. RESULTS Responses and actions are productive; results are appropriate and positive, timely, consistent, and of high quality. COMMENTS	Outstanding 5 Exceeds expectations 4 Fully meets expectations 3 Needs improvement 2 Unsatisfactory 1 Not Rated N Weight _____%

11. OVERALL PERFORMANCE

Multiply the number circled in each section by the weight given[2] and add the totals from each of the 10 measures to find the overall rating.

COMMENTS

Date of Approval: _____

Melinda S. Eden, Chair
Environmental Quality Commission

Overall Rating _____

Outstanding	5
Exceeds expectations	4
Fully meets expectations	3
Needs improvement	2
Unsatisfactory	1

[2] Example: If "Fully meets expectations" was given a 20% rating for one performance measure, multiply 3 by 0.20 to get a 0.80 rating for that measure. Add ratings from each of the 10 measure to get the overall rating.

Definitions

Performance Ratings:

Outstanding	Performance at this level far surpasses expected performance and is among the top 10% of state agency managers
Exceeds Expectation	Performance at this level meets expectations and in some cases exceeds expectations
Fully Meets Expectations	Performance at this level meets expectations
Improvement Needed	Performance at this level is partially met but requires some improvement
Unsatisfactory	Performance at this level is unacceptable and requires a development plan

Skills Listing:

Leadership
- Establishes a high-performance climate by using techniques of coaching, leadership and mentoring.
- Increases a group's energy and creative potential.
- Maintains group cohesiveness and cooperation.
- Demonstrates working knowledge of staffing, compensation, performance management and employee relations processes.
- Demonstrates high ethical standards and fiscal accountability in managing public resources.

Strategic Thinking
- Recognizes the environmental context in which the organization operates.
- Understands current and future problems and challenges faced by the organization.
- Demonstrates ability to apply strategic objectives to departmental operations.

Communications
- Speaks clearly and expresses self well in groups and in conversations with individuals.
- Demonstrates strong listening and writing skills, including grammar, organization and structure.
- Shares appropriate information on a timely basis.

Teamwork
- Works cooperatively.
- Contributes to the team by supporting and encouraging team members.
- Supports consensus decision-making by the team.

Customer or Constituent Service/Focus
- Identifies customers.
- Anticipates and understands customer needs.
- Acts to meet customer needs.
- Continues to search for ways to increase customer satisfaction.

Personal Responsibility/Accountability
- Inspires self and others to set and maintain high standards of excellence.
- Works with high energy, focus and persistence.

Definitions

(Groupings by performance/goal results and supporting skills/behavioral traits.)

1. Outstanding

Performance/Goal Results

- Significantly exceeds goals.
- Always produces more than required.
- Project plans and actions serve as a model for effective staff and resource activities.
- Provides exceptional presentations that inform and educate.
- Resolves controversial and complex decisions.
- Implements creative solutions to long-standing or especially troublesome problems.

Supporting Skills

- Serves as a model for working productively.
- Always performs special assignments and projects or unanticipated activities and completes them ahead of deadlines.
- Works with an unusually high degree of energy, focus and persistence.
- Produces work at the highest level of accuracy.
- Works independently with broad direction and little, or no, follow-up.
- Develops highest quality products or services.
- Gives life to the agency.
- Motivates employees to exceed departmental goals while focusing on organization wide issues.
- Frequently helps others within DEQ, even when it is "not in the job description."
- Can always be relied upon to serve as the source of accurate information.
- Serves as a leader in team discussions, yet does not monopolize team discussions.
- Contributes constructive ideas and suggestions that have major impact.
- Significantly improves work area by leading collaboration and cooperation.
- Always assists coworkers in completing assignments, with the only goal of improving organization effectiveness.
- Displays exceptional skill at organizing and responding to complex project issues.
- Serves as a model for outstanding customer service.
- Is highly respected by peers and colleagues

2. Exceeds Expectations

Performance/Goal Results

- Often exceeds goals.
- Frequently produces more than required
- Handles controversial or complex decisions.

Supporting Skills

- Self-motivated and sets high productivity levels.
- Anticipates developments or delays and makes adjustments.
- Goes the extra mile to ensure that goals and objectives are met.
- Serves as a facilitator in ensuring clear and effective communication among involved parties.
- Meets targets, timetables and deadlines, and is often prepared ahead of schedule.
- Frequently handles difficult pressure situations and distractions.
- Motivates employees to exceed departmental goals and objectives.
- Can always be counted on to add something new or innovative to each project.
- Exhibits excellent oral and written communication to all levels of staff.
- Frequently performs special assignments and projects or unanticipated activities and appears to be positively challenged by them.
- Puts success of team above own interests.
- Takes great initiative to ensure that customer needs are exceeded.
- Serves as the ideal standard for collaboration and cooperation.
- Consistently analyzes all problems and crafts workable, creative solutions.
- Views problems as an opportunity to use new technology or implement better methods.

3. Fully Meets Expectations

Performance/Goal Results

- ❑ Meets all goals.
- ❑ Completes all regularly assigned duties.
- ❑ Performs all assignments regardless of distractions or pressure situations.
- ❑ Completes work with acceptable level of accuracy and professionalism.
- ❑ Is prompt and prepared for meetings and other scheduled events.
- ❑ Responds quickly and appropriately to unanticipated delays or developments.

Supporting Skills

- ❑ Recognizes and analyzes complex problems and takes action or recommends effective, creative solutions.
- ❑ Adjusts priorities as needed.
- ❑ Provides follow-up directives and continually communicates a shared vision.
- ❑ Recognizes, responds, and supports employees with changing conditions.
- ❑ Assists other management in communicating difficult issues.
- ❑ Develops project plans that are creative and innovative and makes good use of staff and organization resources.
- ❑ Actively participates in group discussions.
- ❑ Contributes constructive activities and suggestions that are implemented.
- ❑ Frequently helps others achieve their goals through support and/or assistance.
- ❑ Recognizes and analyzes problems and takes appropriate action.
- ❑ Researches and efficiently prepares products and activities at acceptable standards.
- ❑ Handles routine pressure situations and distractions of the job while maintaining normal workload.
- ❑ Demonstrates reliable and predictable attendance and/or punctuality.
- ❑ Rarely is gone due to unscheduled absences.
- ❑ Meets targets, timetables and deadlines.
- ❑ Works quickly and strives to increase productivity.
- ❑ Is prompt and prepared for meetings and other scheduled events.
- ❑ Responds to routine developments appropriately.
- ❑ Motivates employees to meet departmental goals and objectives.
- ❑ Provides direction to employees by clearly communicating a shared vision.
- ❑ Is flexible when dealing with changing conditions.
- ❑ Helps the team accomplish its goals.
- ❑ Assesses individuals' strengths and weaknesses and suggests methods for improvement.
- ❑ Proactively changes and communicates progress to all.
- ❑ Successfully manages project team activities.
- ❑ Follows policies, procedures and regulations.
- ❑ Ensures customer satisfaction through consistent or special effort in response to customer need.
- ❑ Provides requested assistance and information to others in a prompt and courteous manner.
- ❑ Works to enable understanding and obtains clarification when needed.

(continued)

- ❑ Responds appropriately to questions.
- ❑ Demonstrates good presentation skills.
- ❑ Participates in team discussions.
- ❑ Performs special assignments and projects or unanticipated activities.
- ❑ Contributes ideas and suggestions.
- ❑ Volunteers to serve for special projects
- ❑ Takes initiative to understand new or more complex equipment, software or changes in operational procedures.
- ❑ Exhibits positive attitudes, especially during times of change and disruption.
- ❑ Recognizes and provides support and/or assistance to coworkers.
- ❑ Works actively to resolve conflicts.
- ❑ Demonstrates strong problem solving skills to ensure smooth operations.
- ❑ Consistently analyzes problems and applies logical solutions.
- ❑ Makes effective decisions on a timely basis.

4. Improvement Needed

Performance/Goal Results

- Assignments occasionally are not completed on time.

Supporting Skills

- Does not understand some basic functions or activities of the unit.
- Inconsistently organizes activities and information.
- Occasionally fails to make proficient use of technology.
- Inconsistently uses correct practices or procedures
- Is inconsistent in meeting targets, timetables or deadlines.
- Is inconsistent in promptness or preparation for meetings or other scheduled events.
- Some routine assignments and duties require supervisory guidance.
- Is inconsistent in completing assigned work.
- Recognizes problems, but requires some assistance to develop workable solutions.
- Occasionally unable to meet an acceptable standard of quality
- Is inconsistent in organization or maintaining operations.
- Occasionally communicates in an inappropriate manner.
- Occasionally and reluctantly performs special assignments and projects or unanticipated activities.
- Is inconsistent in making decisions on a timely basis.
- Is inconsistent in analysis of problems or application of logical solutions.
- Marginally courteous; may provide requested assistance and information to others in a less than prompt or courteous manner.

5. Unsatisfactory

Performance/Goal Results

- ❑ Assignments often not completed on time.

Supporting Skills

- ❑ Rarely performs special assignments and projects or unanticipated activities.
- ❑ Is often not at work due to unscheduled absences.
- ❑ Attendance and/or punctuality habits cause hardship for colleagues.
- ❑ Frequent errors.
- ❑ Low tolerance to pressure situations or distractions.
- ❑ Rarely motivates employees.
- ❑ Rarely available to staff.
- ❑ Rarely manages changing conditions.
- ❑ Project activities often need to be redone.
- ❑ Budget and staff time are not used in an effective manner.
- ❑ Rarely communicates.
- ❑ Rarely participates in team discussion.
- ❑ Rarely contributes ideas and suggestions.
- ❑ Reluctantly cooperates with others to achieve agency goals.
- ❑ Reluctantly accepts direction from supervisor.
- ❑ Minimally supports team leader.
- ❑ Rarely develops and maintains cooperative relationships with team or with others outside the work unit.
- ❑ Often the source of negative conflict.
- ❑ Unit and individual productivity is significantly disrupted by unreliable attendance and/or punctuality.
- ❑ Often does not meet requirements.
- ❑ Frequently does not meet targets, timetables or deadlines.
- ❑ Frequently lacks promptness or preparation for meeting or other scheduled events.
- ❑ Routine developments require supervision.
- ❑ Rarely recognizes problems or unable to recommend effective solutions.
- ❑ Frequent errors that have negative impact.
- ❑ Must be reminded about customer service standards.
- ❑ Rarely able to work under pressure situations or handle distractions.
- ❑ Rarely effective in organizing or maintain operations.
- ❑ Occasionally does not provide assistance and information to others in a prompt or courteous manner.

Attachment

Director's Suggestion for Performance Appraisal

Evaluation Process

- Minimum of once per biennium; could be annual
- If deficiencies noted in any area, establish expectations for improvement and evaluate in six months
- Director provides EQC one- to two-page written summary of key accomplishments and deficiencies
- EQC makes contacts outlined below; envisioned as brief telephone conversations with or without prepared questions
- Executive session meeting with Director
- Optional: Written evaluation to the Governor with compensation and/or performance improvement recommendations if appropriate

Contacts

- Responsiveness to Governor's Office needs. Contact: Louise Solliday, Governor's Natural Resource Policy Advisor (503) 378-6206; Robin McArthur-Phillips, Governor's Community Development Office (503)378-6892 ext. 33; Mike Greenfield, Director, Department of Administrative Services (503) 373-0957

- Effectiveness with stakeholders. Contacts: John Ledger, Associated Oregon Industries (503) 588-0050; Janet Gillaspie, Assoc. of Clean Water Agencies (503) 236-6722; Jeff Allen, Oregon Environmental Council (503) 222-1963; Maureen Kirk, OSPIRG (503) 231-4181; Kathryn Van Natta, NW Pulp & Paper (503) 393-0007; Dave Barrows (503)227-5591; Nina Bell, NW Environmental Advocates (503)295-0490; Paulette Pyle, Agriculture lobbyist (503) 370-8092

- Effectiveness with other government agencies. Contacts: Dan Opalski, EPA (503) 326-3250; Willie Tiffany, League of Oregon Cities (503) 588-6550; Cheryl Koshuta, Port of Portland (503) 944-7236; Jim Brown, State Forester (503) 945-7211; Lindsay Ball, Director, ODFW (503)872-5272; Ann Hanus, Director, Division of State Lands (503) 378-3805 ext. 224; Ken Rocco, Legislative Fiscal Office (503) 986-1844

- Effectiveness in management of agency. Contacts: Any member of DEQ Executive Management Team and Union Officials Doug Drake (503) 229-5350 and Leslie Kochan (503) 229-5529

- Effectiveness in supporting Environmental Quality Commission: Commissioners

Criteria for Evaluation

Effectiveness in Management of the Agency

- Chair or EQC designee meets with Executive Management Team for confidential discussion of Director performance
- Chair or EQC designee meets with agency union representatives for confidential discussion of Director performance
- Brief write up of results

Effectiveness with stakeholders

- Each EQC member contacts his or her legislative representatives and/or key legislators (i.e., chairs or members of legislative committees with which the Department regularly interacts)
- Each EQC member contacts one of the stakeholders from the contact list (or others)
- Brief write-ups of results

Effectiveness with other government agencies

- Each EQC member contacts one agency rep from the contact list
- Brief write-ups of results

Effectiveness in Supporting Environmental Quality Commission

- Review and discuss Director's self-evaluation
- Review and discuss write-ups from various contacts
- Review and discuss quality of materials and presentations to EQC by DEQ
- Discuss quality and timeliness of EQC involvement in key policy issues
- Identify expectations and areas of importance for upcoming evaluation

Responsiveness to Governor's Office

- Chair contacts Governor's Office representatives and the Director, Department of Administrative Services
- Brief write-up of results

Oregon DEQ
EQC Meeting Minutes

Approved ____
Approved with Corrections X

Minutes are not final until approved by the EQC

Environmental Quality Commission

Minutes of the Three Hundredth and First Meeting

March 7-8, 2002

Regular Meeting[1]

The following Environmental Quality Commission (EQC) members were present for the regular meeting, held at the Heathman Hotel, 1001 SW Broadway at Salmon, Portland, Oregon.

Melinda Eden[2], Chair
Tony Van Vliet, Vice Chair
Deirdre Malarkey, Member
Mark Reeve, Member

Also present were Larry Knudsen, Oregon Department of Justice (DOJ), Stephanie Hallock, Department of Environmental Quality (DEQ) Director, and DEQ staff.

Thursday, March 7, 2002

Vice Chair Van Vliet called the meeting to order at approximately 11:00 a.m., to begin a day-long strategy session with DEQ's Executive Management Team (EMT). Commissioners and EMT members spent the day discussing major programs initiatives, policy decisions and agency plans, building on work from the first EQC/DEQ Summit held in November 2000.

Setting the Stage

To set the context for discussion, Commissioners, Director Hallock and EMT members reviewed results of the 2000 EQC/DEQ Summit and considered accomplishments to date. The group then discussed desired outcomes for this meeting.

Initiatives in Communications and Outreach

Nina DeConcini, Office of Communications and Outreach Manager, described current and upcoming DEQ activities designed to engage Oregonians in environmental problem solving. Commissioners discussed a number of specific initiatives with Ms. DeConcini and gave suggestions for education and outreach efforts.

Air Quality Program Overview

Andy Ginsburg, Air Quality Division Administrator, presented major programs and initiatives in DEQ's Air Quality Division and reviewed the state and federal regulations that direct the Department's work. Commissioners discussed upcoming challenges and opportunities for protecting Oregon's air quality with Mr. Ginsburg and EMT members.

Water Quality Program Overview

Mike Llewelyn, Water Quality Division Administrator, gave an overview and visual presentation of DEQ's major water quality programs. Commissioners discussed current projects, upcoming initiatives, program funding and various other issues with Mr. Llewelyn and EMT members.

Agenda for the 2003 Legislative Session

Director Hallock introduced this topic by discussing her vision and agenda for DEQ, building on the Department's *Strategic Directions* for the next four years. Lauri Aunan, Government Relations Manager, presented potential concepts DEQ is considering for the 2003 Legislative Session to implement agency programs and priorities. Commissioners shared legislative ideas and gave feedback to Ms. Aunan, Director Hallock and EMT members.

Review and Next Steps

Commissioners and EMT members concluded the strategy session with suggestions for next steps, including future program overviews by the Land Quality and Management Services Divisions.

Vice Chair Van Vliet adjourned the meeting for the day at approximately 3:45 p.m.

Friday, March 8, 2002

The Commission held an executive session at 8:00 a.m. on Friday, March 8, to consult with counsel concerning legal rights and duties with regard to current and potential litigation involving the Department. Executive session was held pursuant to ORS 192.660(1)(h).

At approximately 8:30 a.m., Chair Eden called the regular meeting to order and agenda items were taken in the following order.

A. Approval of Minutes

Commissioner Reeve amended draft minutes of the January 24-25, 2002, meeting on page 2, Item B, by changing "process improvements plans" to "process improvement plans." Director Hallock amended draft minutes on page 3, item J, by changing "Commissioners Bennett" to "Commissioner Bennett." Commissioner Van Vliet moved the Commission approve draft minutes with corrections. Commissioner Malarkey seconded the motion and it passed with four "yes" votes.

I. Commissioners' Reports

Commissioner Van Vliet reported the results of a briefing to the Oregon Economic and Community Development Commission (OECDC) on February 14, 2002. Commissioner Van Vliet and Director Hallock discussed the function and priorities of both the EQC

and DEQ with OECDC, and initiated a dialogue on common agency issues, including growth, nonpoint source pollution, regulatory compliance, and education and outreach. Commissioners discussed potential topics for a joint meeting with OECDC in late 2002.

Chair Eden reported on the development of a wind energy farm near Walla Walla, Washington, and described significant land use changes in the surrounding as a result of the development.

Commissioner Reeve reported on his participation in a DEQ EMT meeting on February 19, 2002, to assist the Department's rule development process. At that meeting, Commissioner Reeve and EMT members discussed a number of DEQ rulemakings ready to be released for public comment. The Department invited Commissioner Reeve's involvement in the meeting to assist in-progress improvements for DEQ's internal rulemaking process. Commissioner Reeve stated his intentions to continue working with the Department in this way.

C. Director's Dialogue

Commissioners and Director Hallock discussed current events and issues involving the Department and state. In addition, Commissioners discussed environmental issues in Southeastern Oregon with Harney County Judge Steve Grasty, in preparation for the April 23-25, 2002, EQC meeting in Hines.

D. Action Item: Request from U.S. Army Corps of Engineers and U.S. Fish and Wildlife Service for a Waiver to the Total Dissolved Gas Water Quality Standard on the Columbia River

Mike Llewelyn, Water Quality Division Administrator, presented requests from the U.S. Army Corps of Engineers (USACE) and U.S. Fish and Wildlife Service (USFWS) for variances to Oregon's total dissolved gas water quality standard to enable water to be spilled at the four Lower Columbia River dams: McNary, John Day, The Dalles and Bonneville. Russell Harding, Water Quality specialist, explained that the variances would assist outmigration of threatened and endangered salmon smolts by allowing spill between April 1, 2002, and August 31, 2002, as requested by USACE, and for a ten-day period in March 2002, as requested by USFWS for Spring Creek National Fish Hatchery. Dr. Harding introduced Dave Ponganis of the USACE, David Wills and Fred Olney of the USFWS, and Dr. Mark Schneider of the National Marine Fisheries Service to explain the requests and review results of variances granted by the Commission in past years.

The Commission considered monitoring results from previous spills and discussed the costs, benefits and alternatives of the proposed spills. Commissioner Reeve moved the Commission adopt findings as presented in the Department's staff report, and grant variances to Oregon's total dissolved gas water quality standard as requested by USACE and USFWS. Commissioner Van Vliet seconded the motion and it passed with four "yes" votes. The Commission directed the Department to prepare orders granting the waivers, for signature by the Director on behalf of the Commission. Commissioners also discussed the potential for a multi-year variance to address multiple spill seasons in future years, building on a draft Total Maximum Daily Load for total dissolved gas for the Lower Columbia River. The Commission asked Dr. Harding to report back on a potential multi-year variance later in 2002.

E. Action Item: Permit Modification for Umatilla Chemical Agent Disposal Facility

Wayne Thomas, Administrator of the Chemical Demilitarization Program, presented a

proposed modification to the Umatilla Chemical Agent Disposal Facility (UMCDF) hazardous waste permit to specify the approval process for starting disposal of chemical weapons at the facility. In September 2001, the Commission asked for the development of this permit modification to require Department approval for starting surrogate testing (scheduled for May 2002) and Commission approval for starting chemical agent operations (scheduled for February 2003). The Department considered comments from the U.S. Army (the permittees), interested stakeholders and citizens on the approval process. Mr. Thomas introduced Sue Oliver, Hazardous Waste policy specialist, and Thomas Beam, Hazardous Waste permit specialist, to explain the proposed permit modification in detail. Chair Eden asked U.S. Army representatives Bob Nelson, Don Barclay, Loren Sharp and Dave Nylander, to discuss the status of the UMCDF and proposed approval process with Commissioners.

After thorough discussion, the Commission concluded that it possessed the authority to unilaterally modify the permit, and that there was sufficient and compelling justification for the proposed modification to ensure protection of human health and the environment. Commissioner Reeve moved the Commission modify the UMCDF permit to add Permit Condition II.A.5 and Attachment 6 to the permit as recommended by the Department, with the exception of moving requirement C-3 to section D of the proposed additional conditions, and including a deadline of September 1, 2002, for requirement C.3. Commissioner Malarkey seconded the motion and Director Hallock called for votes: Commissioner Van Vliet voted "yes," Chair Eden voted "yes," Commissioner Reeve voted "yes" and Commissioner Malarkey voted "yes." The motion passed with four "yes" votes. The Commission directed the Department and counsel to prepare an order modifying the permit for Chair Eden's signature to put the Commission's action into effect.

Public Forum

At approximately 11:30 a.m., Chair Eden asked whether anyone wished to provide public comment. No public comment was provided. Jeff Allen, Executive Director of the Oregon Environmental Council, had requested the opportunity to provide public comment earlier, but was not present in the meeting at the time when comment was invited.

B. Action Item: Pollution Control Facility Tax Credit Requests

Director Hallock introduced Holly Schroeder, Acting Management Services Division Administrator, to present Pollution Control Facility Tax Credit requests. Ms. Schroeder and Maggie Vandehey, Tax Credit coordinator, presented tax credit applications from citizens, businesses and industry members for investments in technologies or processes that prevent, control or reduce significant amounts of pollution. Commissioners discussed the applications, and Commissioner Van Vliet stated his conflict of interest regarding Reclaimed Plastic Tax Credit application number 5955. Commissioner Van Vliet abstained from discussion of this application.

Commissioner Van Vliet moved the Commission approve all Pollution Control Facility Tax Credit applications as recommended by the Department. Commissioner Reeve seconded the motion and it passed with four "yes" votes. Commissioner Reeve moved the Commission approve all Reclaimed Plastic Tax Credit applications as recommended by the Department, with the exception of application number 5955. Commissioner Malarkey seconded the motion and it passed with four "yes" votes. Commissioner Reeve moved the Commission approve Reclaimed Plastic Tax Credit application number 5955 as recommended by the Department. Commissioner Malarkey seconded the motion and it passed with three "yes" votes. Commissioner Van Vliet abstained from this vote.

F. Rule Adoption: Air Contaminant Discharge Permit (ACDP) Fee Increase

Andy Ginsburg, Air Quality Division Administrator, introduced proposed rules for a thirty percent, across-the-board increase to Air Contaminant Discharge Permit (ACDP) fees as approved by the 2001 Legislature. Mr. Ginsburg explained the need for the increase to replace General Funds that are no longer available to support the permit program. Mr. Ginsburg introduced Scott Manzano, Air Quality program specialist, who explained that the proposed rules also adjust ACDP fees to more accurately reflect the amount of work associated with issuing different types of permits. Small businesses and other low-complexity sources would experience a smaller percent increase than larger, more complex sources as a result of the rules.

Commissioners discussed the proposed fee increase with Mr. Ginsburg and Mr. Manzano and commended Department staff for working with the regulated community to develop the rule. Commissioner Reeve moved the Commission adopt the proposed rules as recommended by the Department. Commissioner Van Vliet seconded the motion and it passed with four "yes" votes.

G. Information Item: Improvements for DEQ's Rulemaking Process

Loretta Pickerell, Rules Coordinator, gave an overview of process improvements the Department had developed over the past year to strengthen the internal rulemaking process. Ms. Pickerell explained that the improvements were designed to build greater coordination between agency programs, ensure smooth implementation of new rules on the ground, enable better planning of staff resources and workloads, and gain efficiencies overall. Ms. Pickerell noted that another goal was to provide more opportunity for Commissioners to be involved in the rulemaking process early. Commissioners discussed potential benefits of the rulemaking improvements, gave feedback and thanked Ms. Pickerell for her presentation.

H. Discussion Item: Schedule for Evaluating Director's Performance

In January 2002, the Commission approved a formal process for evaluating the DEQ Director's performance, including measures, criteria and an evaluation procedure. At this meeting, Commissioners discussed and decided a schedule for reviewing the Director's performance in late 2002.

Chair Eden adjourned the meeting at approximately 3:15 p.m.

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[1] Staff reports and written material submitted at the meeting are made part of the record and available from DEQ, Office of the Director, 811 SW Sixth Avenue, Portland, Oregon 97204; phone: (503)229-5990.

[2] Chair Eden was absent on March 7 due to inclement weather, but was present on March 8.

US Army Corps
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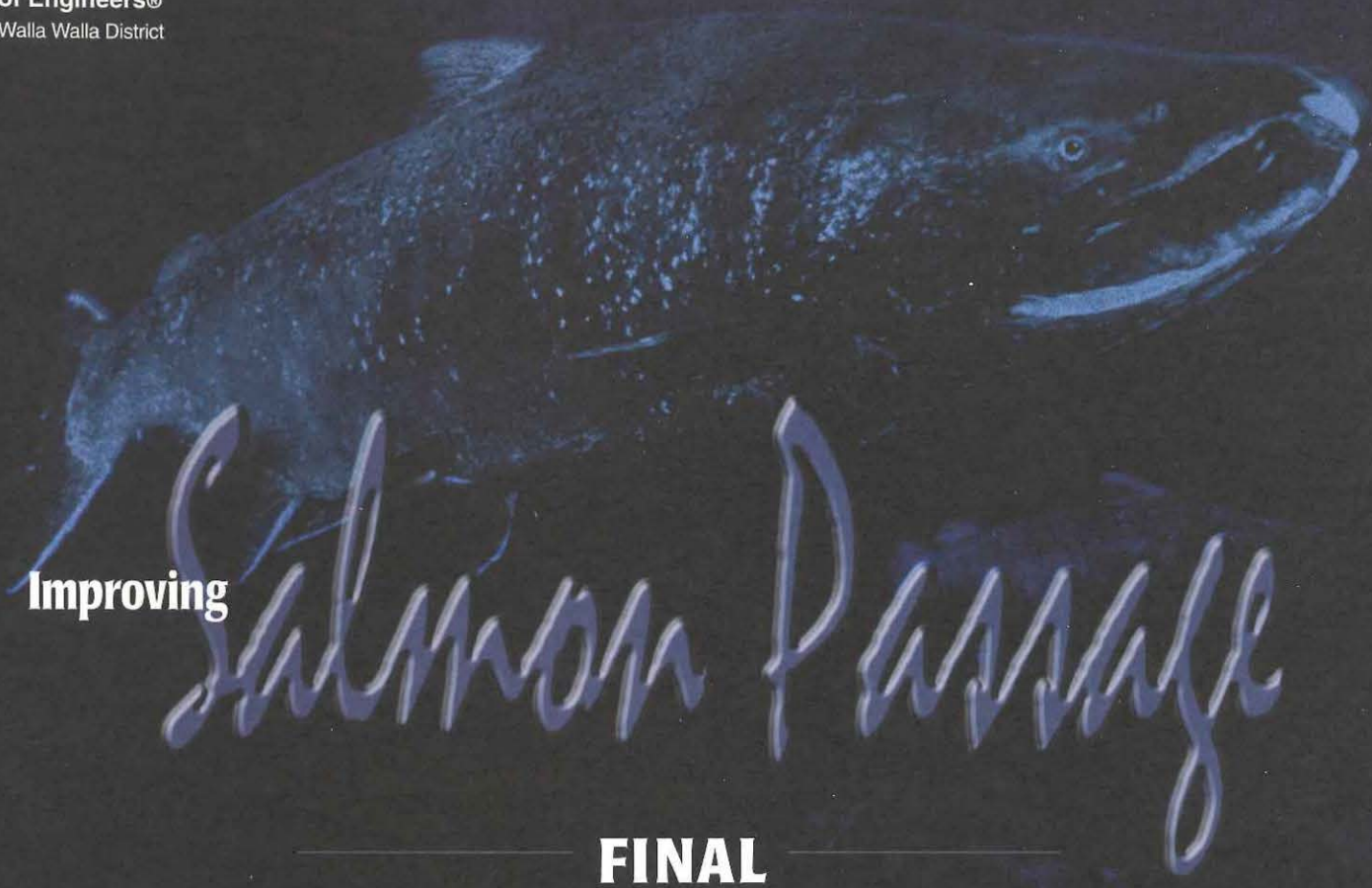
Walla Walla District

SUMMARY



Improving Salmon Passage

FINAL

Lower Snake River Juvenile Salmon Migration Feasibility Report/ Environmental Impact Statement

February
2002

SUMMARY

Improving Salmon Passage

FINAL FR/EIS

January 2002

Contents

Printed on recycled paper

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Walla Walla District

FINAL LOWER SNAKE RIVER JUVENILE SALMON MIGRATION FEASIBILITY REPORT/ENVIRONMENTAL IMPACT STATEMENT (FR/EIS)

REQUEST CARD

The Final FR/EIS is available on-line at ***http://www.nww.usace.army.mil***. If you would like these documents on CD, please complete this card and return it using the appropriate postage.

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Dear Concerned Citizen,

The U.S. Army Corps of Engineers (Corps), Walla Walla District's Final Lower Snake River Juvenile Salmon Migration Feasibility Report/Environmental Impact Statement (FR/EIS) represents more than 6 years of work by scientists, engineers, and technical staff. The Bonneville Power Administration, the U.S. Bureau of Reclamation, and the U.S. Environmental Protection Agency were cooperating agencies in the development of this report. Other Federal agencies, including the U.S. Fish and Wildlife Service and the National Marine Fisheries Service, provided essential input. Regional scientists, economists, and stakeholders also provided input.

The Corps operates four dams within a 140-mile stretch of the lower Snake River: Ice Harbor, Lower Monumental, Little Goose, and Lower Granite. The Final FR/EIS explores four alternatives for improving salmon migration through those dams: continue the existing conditions at the dams, maximize transportation of juvenile salmon, make major system improvements (adaptive migration approach), and breach the dams. Based on a thorough evaluation of all the alternatives, the Corps' recommended plan (preferred alternative) is a modified version of major system improvements (adaptive migration) that combines a series of structural and operational measures intended to improve fish passage through the lower Snake River.

This summary document presents an overview of the technical, environmental, and economic effects of the four alternatives. Salmon recovery has economic and environmental implications for the Pacific Northwest. Salmon are a national resource that must be protected and the dams are national investments. As stewards of both resources, we must ensure concerns are recognized and addressed. The decisions we make as a result of this study will have wide-ranging effects. Input from affected agencies, regional entities, tribes, and the public was vital to the development of this study. This active input from the region not only contributed to this study, but also contributed to regional processes that are taking other significant actions toward salmon recovery. These broad regional efforts are directed at reducing impacts associated with habitat, harvest, hatcheries, and hydropower. The Corps' recommended plan will complement these regional actions by assisting in increased salmon survival and aiding in overall salmon recovery.

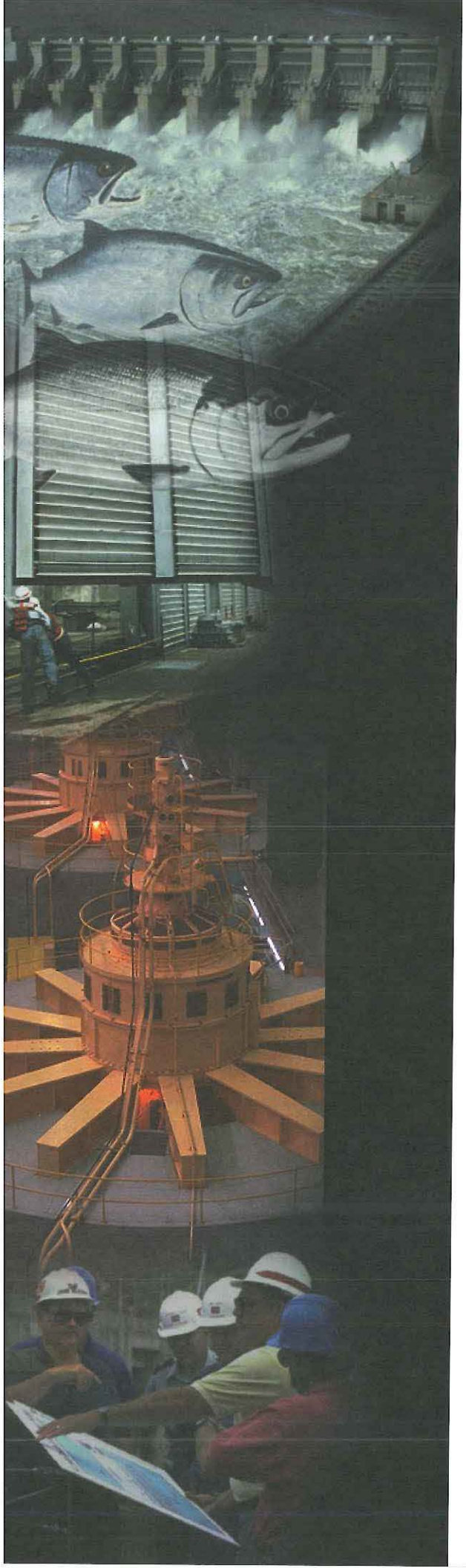
We encourage you to take time to consider the data, analyses, and rationale found in our report that led to the selection of the recommended plan. Even with the uncertainties, this report and its associated documents contain the best information available to date. The information gained in this extraordinary study is sufficient to support the selection of Alternative 3—Major System Improvements (Adaptive Migration) as the recommended plan. The Corps considers this recommendation to be of critical importance.

For more information about available documents and other sources of information, please refer to the inside back cover of this summary.

In the spirit of the Corps, we say ESSAYONS, "Let Us Try."

Sincerely,

Richard P. Wagenaar
Lieutenant Colonel, Corps of Engineers



Introduction

This summary provides an overview of the analysis conducted during the Lower Snake River Juvenile Salmon Migration Feasibility Study (Feasibility Study). The results of this comprehensive analysis are documented in the Final Feasibility Report/Environmental Impact Statement (FR/EIS) and its 21 appendices. The Feasibility Study focused on the relationship between the four dams on the lower Snake River (collectively called the Lower Snake River Project) and their effects on juvenile fish traveling toward the ocean. However, as the past 6 years have shown, the technical considerations, potential implications, and interest in the Feasibility Study reach far beyond the immediate lower Snake River area. Local, regional, and national public interest in the study has been extremely high.

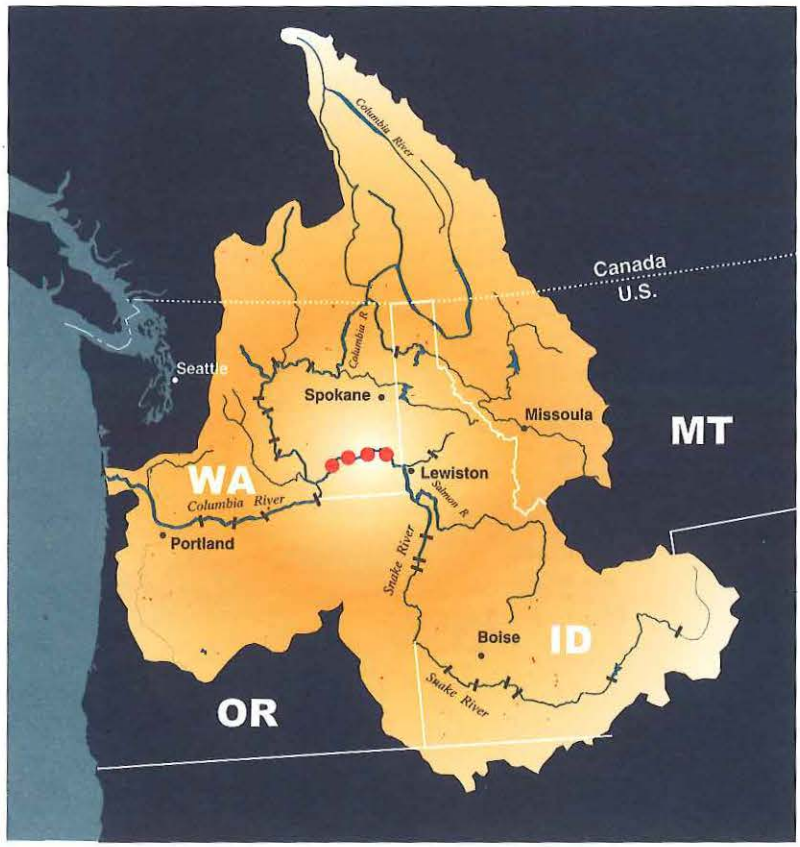
The genesis of this Feasibility Study was the National Marine Fisheries Service (NMFS) *1995 Biological Opinion for the Reinitiation of Consultation on 1994-1998 Operation of the Federal Columbia River Power System and Juvenile Transportation Program in 1995 and Future Years* (1995 Biological Opinion). In 1998, NMFS issued a supplement to the 1995 Biological Opinion, and in 2000, it issued an updated Biological Opinion on Federal Columbia River Power System operations. The Corps' Feasibility Study, and the resulting Final FR/EIS, respond to the reasonable and prudent alternative in these documents. Improvements in juvenile passage survival through the Lower Snake River Project, implemented as a result of this Feasibility Study, would be a step towards NMFS' regional survival and recovery goals for the salmon and steelhead species listed under the Endangered Species Act.

Many of the region's scientists, engineers, and economists have contributed to the Feasibility Study and other related regional processes. The Final FR/EIS includes the best available information on the biological effectiveness, engineering components, costs, economic effects, and other environmental effects associated with four alternatives. It also reflects the extensive agency, peer, and public review process undertaken for the Draft FR/EIS. In the Final FR/EIS, the Corps identifies Major System Improvements (Adaptive Migration) as the recommended plan (preferred alternative) and explains the process for selecting that alternative.

Defining the Problem

The decline of salmon and steelhead in Pacific Northwest rivers is a complex problem. It is not possible to point to one specific cause. The situation currently facing the salmon has been years in the making. The problem stems from a variety of interrelated sources that regional scientists are working hard to evaluate and understand. Historically, the runs have been affected by overfishing, poor ocean conditions, reduced spawning grounds, dams and reservoirs (Federal and non-Federal), and general habitat degradation. Several of these conditions continue today, along with predation, estuary destruction, and competition from hatchery fish and non-native fish.

Although many of these causes are known and the region has worked to correct some of them, the outstanding causes and their collective effect has resulted in the continued decline of some Columbia-Snake River Basin salmon and steelhead populations. Under the Endangered Species Act, NMFS listed the Snake River sockeye salmon as endangered in 1991. In 1992, Snake River spring/summer chinook and Snake River fall chinook salmon were listed as threatened. In 1997, lower Snake River steelhead were listed as threatened. By 1999, NMFS had placed another nine anadromous fish species throughout the Columbia River Basin on the Endangered Species List. Although this study focuses on the relationship between the Lower Snake River Project and the four listed lower Snake River stocks, defining the problem (and finding potential solutions) necessarily involves looking at the overall regional salmon decline and at causes above and beyond the four lower Snake River dams.

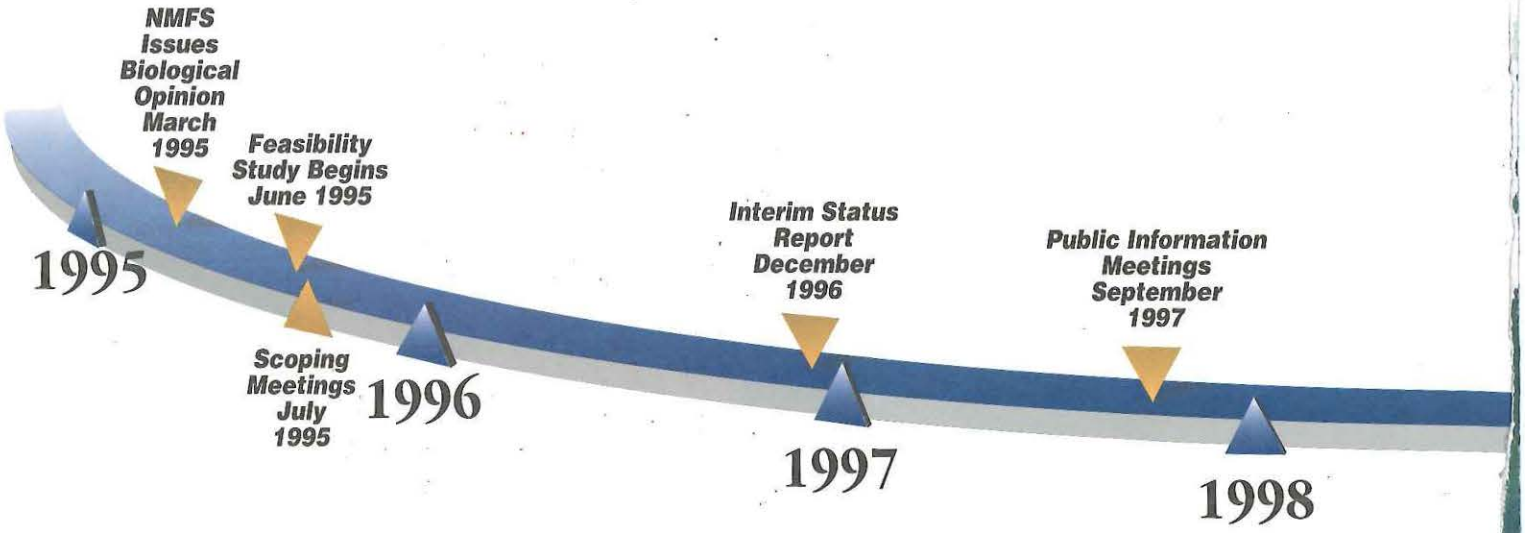


The Feasibility Study–In the Beginning

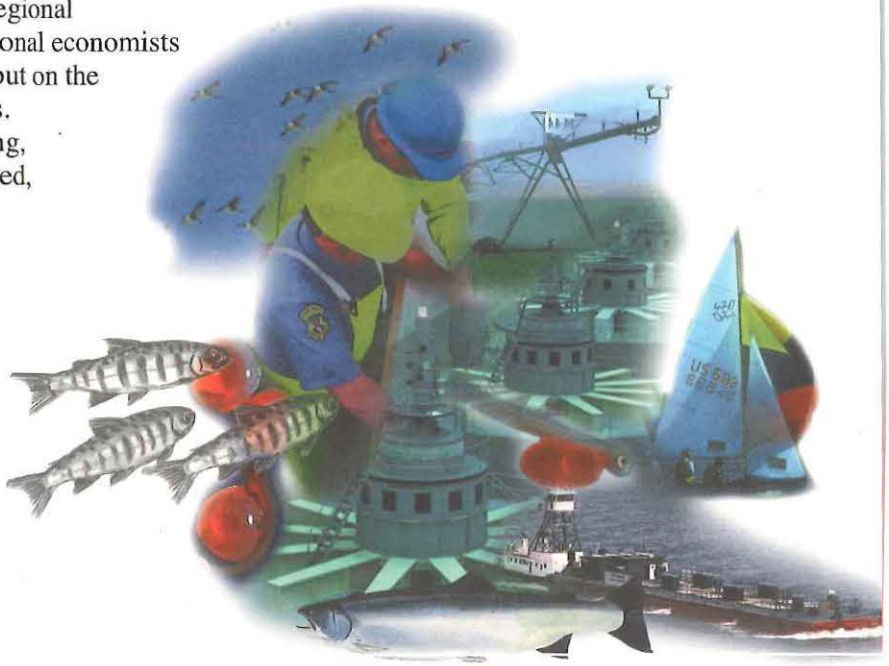
On March 2, 1995, NMFS issued its *Biological Opinion for the Reinitiation of Consultation on 1994 to 1998 Operation of the Federal Columbia River Power System and Juvenile Transportation Program in 1995 and Future Years*. The 1995 Biological Opinion established measures necessary for the survival and recovery of Snake River salmon stocks listed under the Endangered Species Act. This Feasibility Study evolved as a result of the NMFS 1995 Biological Opinion.

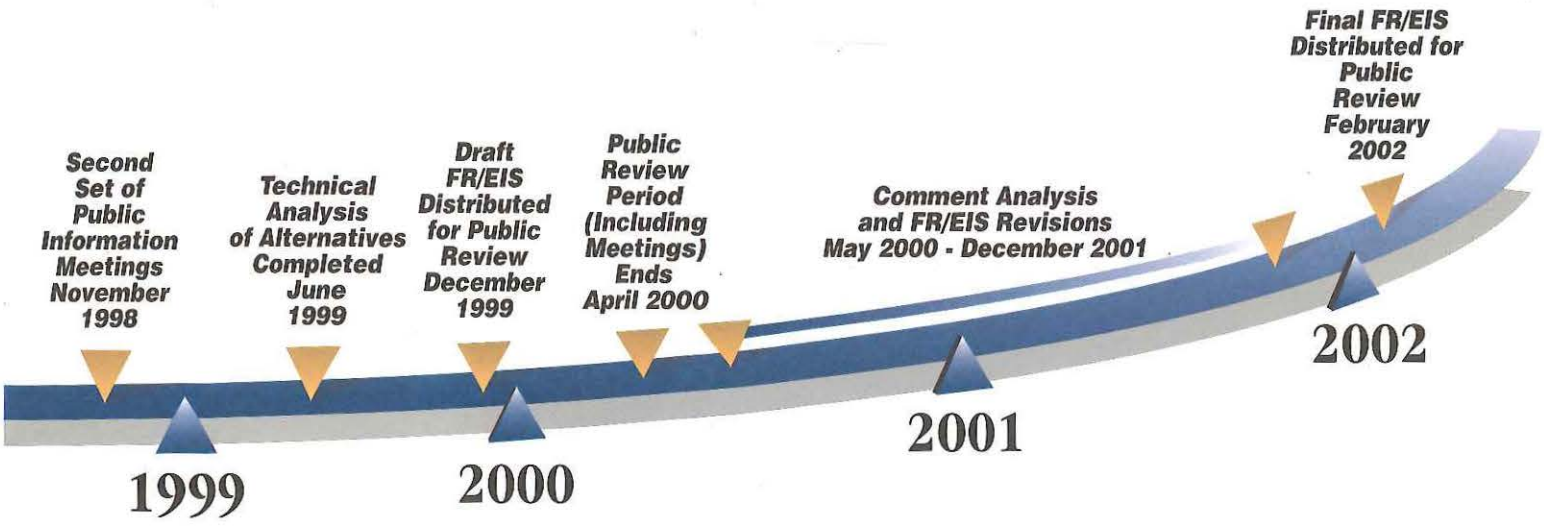
The Feasibility Study was officially announced to the public on June 5, 1995. In July 1995, the Corps conducted public scoping meetings to initiate the Feasibility Study and begin the National Environmental Policy Act process, a formal Federal environmental review process. The stated purpose of the Feasibility Study was to evaluate and screen structural alternative measures that may increase the survival of juvenile anadromous fish through the Lower Snake River Project (which includes the four locks and dams operated by the Corps on the lower Snake River: Ice Harbor, Lower Monumental, Little Goose, and Lower Granite) and assist in the recovery of listed salmon and steelhead stocks. In December 1996, the Corps issued the Interim Status Report, which marked the decision point to elevate dam breaching—removal of the earthen embankments and shutdown of hydropower operations at all four dams to allow for a near-natural flow—as the drawdown alternative that would be evaluated in the environmental impact statement.

Because the alternatives considered in this study would affect resources of concern to all people of the Pacific Northwest, the Corps structured the Feasibility Study process to involve participation of the whole region. Several Federal agencies, states, and tribes were direct participants in the Feasibility Study process. The U.S. Bureau of Reclamation, Bonneville Power Administration, and the U.S. Environmental Protection Agency are all cooperating agencies of the Feasibility Study. The Corps also made efforts to solicit input from Native American representatives, elected officials, other Federal and state agencies, and special interest groups (e.g., those concerned about impacts on river transportation, recreation, wildlife, irrigation, electrical rates, etc.) throughout the region to define and evaluate the primary alternatives identified for improving juvenile salmon and steelhead survival rates. During the alternative development stage, the Corps also provided numerous opportunities for public input through Regional Roundtable Workshops and a series of public information meetings held in 1997 and 1998.



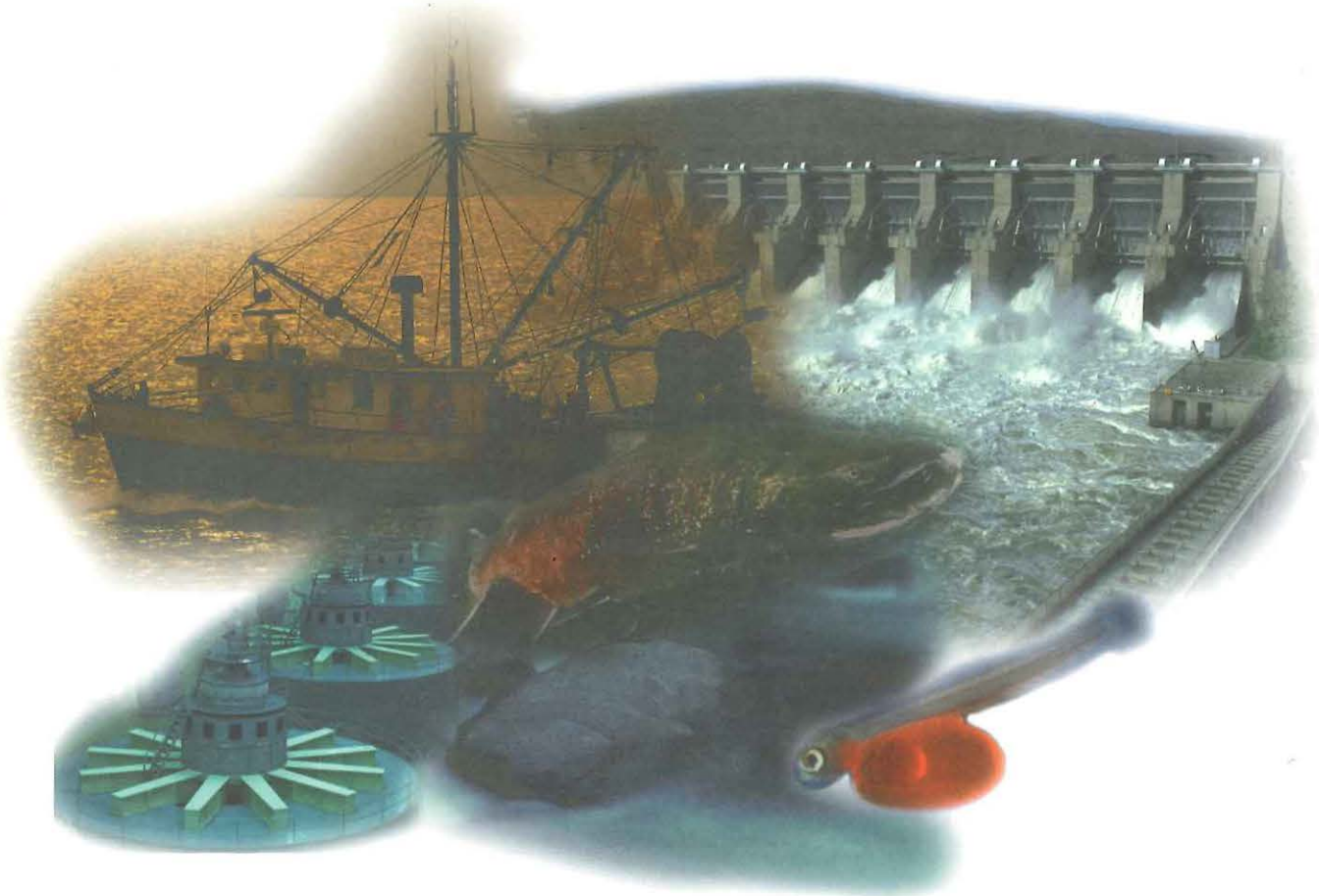
From 1997 to late 1999, the Corps formulated alternatives and analyzed impacts of those alternatives, not only to the salmon and steelhead, but also to other resources and to the people of the Pacific Northwest. Biological data was collected and analyzed to allow for the best possible comparison of alternatives and their associated effects on the migration of juvenile salmon and steelhead, and on other environmental resources. Most of the data related to anadromous fish was provided by NMFS and a workgroup called the Plan for Analyzing and Testing Hypotheses (PATH). PATH was composed of state, tribal, and Federal scientists from within and outside the region. Engineering analysis and design reviews of the alternatives were also conducted to present key engineering and cost information as well as the engineering/construction process necessary for implementation. Additional economic data was collected and analyzed to allow for an accurate cost comparison of the alternatives at both the regional and national levels. The Drawdown Regional Economic Workgroup (DREW), a group of regional economists convened for the Feasibility Study, provided input on the economic issues associated with the alternatives. All of this biological, environmental, engineering, and economic information was collected, reported, and evaluated in the Draft FR/EIS and its associated appendices.





The Draft FR/EIS and its associated appendices were released for public review and comment in December 1999. The Draft FR/EIS synthesized the biological, environmental, engineering, and economic information and evaluation to allow for a comparison between four selected alternatives. It provided a means to determine how each alternative would affect other uses and to consider the consequences of changing the way the Corps currently operates the Lower Snake River Project.

The comment period on the Draft FR/EIS began December 1999 and extended through April 30, 2000. Formal public meetings were conducted after the Draft FR/EIS was distributed for public review. In conjunction with the Federal Caucus (a group of Federal agencies with interests in salmon recovery efforts), a series of 15 formal meetings was held around the region in February and March 2000 to provide an opportunity for public questions, and comments on the Draft FR/EIS, the Corps' John Day Drawdown Study, and the Federal Caucus Conservation of Columbia Basin Fish "All H" Paper. A total of nearly 9,000 participants (consisting of stakeholders, special interest groups, elected officials, and individuals from the public) presented 1,787 oral and taped comments. Most meetings consisted of an open house, formal agency presentations, a question-and-answer session, and a public comment session. Oral comments, taped comments, and written comments were all accepted at the meetings. In addition to oral and taped comments, the Corps received over 230,000 written comment documents from the public during the comment period. Written comments were received in the form of individual letters, reports, notecards, petitions, e-mails, etc. Judging from the variety of locations from which comments were received, interest in the Feasibility Study is dispersed over the entire country. See Appendix U of the Final FR/EIS or the website (www.nww.usace.army.mil/lsr) for responses to public comments.



Over 230,000 Comment Documents Received from Coast to Coast

File Storage for Comment Documents

Review of Public Comments

The Corps evaluated each comment document received and oral/taped comments from the public meetings so that issues of concern could be identified and considered by technical experts. Issues raised by the public were summarized into issue statements which are provided, along with a response, in Appendix U to the Final FR/EIS. Issues raised through the comment/response process were used in the development of the Final FR/EIS and associated appendices.

Review of New Documents

In the interim period between the draft and this final document, NMFS released a new Biological Opinion on Federal Columbia River Power System operations in December 2000. The NMFS 2000 Biological Opinion, which supersedes the previous opinions, addresses juvenile salmon migration and approaches for improving survival during this migration. The Final FR/EIS considers the applicable aspects of the NMFS 2000 Biological Opinion. The Final FR/EIS also considers the U.S. Fish and Wildlife Service Biological Opinion and the Federal Caucus' Basinwide Recovery Plan released in December 2000.

Release of the Final FR/EIS.

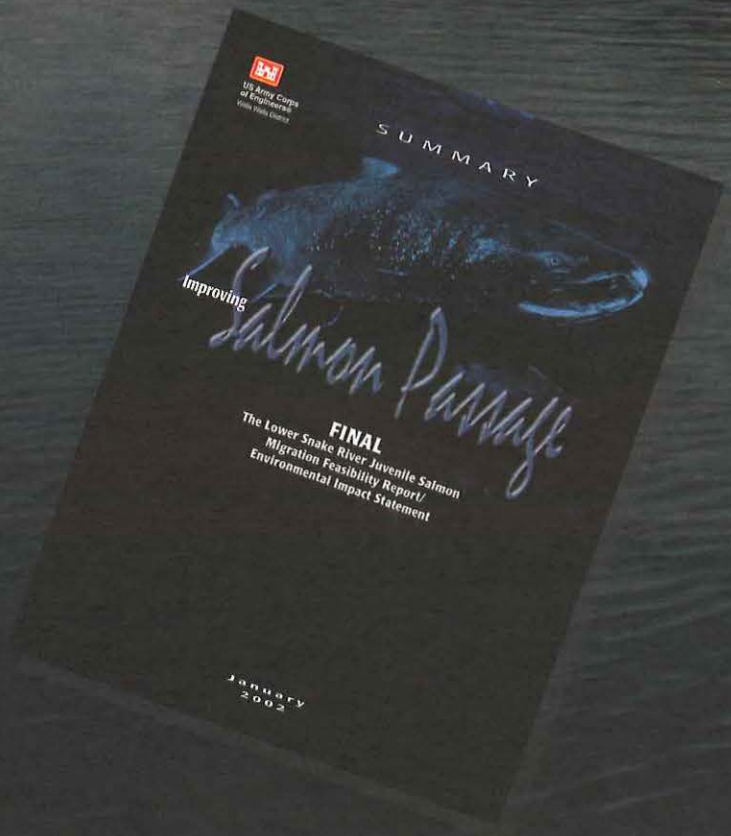
The Corps released the Final FR/EIS and its 21 associated appendices in February 2002. The Final FR/EIS incorporates evaluation of additional data, comments, and other information gathered since release of the draft document. The Final FR/EIS also provides river managers, users, and the general public with the information and evaluation processes that were used to select a preferred alternative.

The Final FR/EIS combines the format of a traditional Corps feasibility planning document and a National Environmental Policy Act EIS. The FR/EIS and associated technical appendices provide: 1) a complete presentation of study results and findings; 2) compliance with applicable statutes, Executive Orders, and policies; 3) a sound and documented basis with which both Federal and regional decision makers can judge the recommended solution; 4) scope, schedule, budgets, and technical performance requirements for the implementation of the selected alternative; and 5) documentation for subsequent funding for the implementation of specific measures associated with the recommended plan (preferred alternative).

At least 45 days after release of the Final FR/EIS to the public, the Corps will prepare a Record of Decision documenting the recommended action resulting from the Feasibility Study process.

Improving Salmon Passage

for the future



The Four Dams

The Snake River is the principal tributary to the Columbia River, draining approximately 109,000 square miles in Idaho, Wyoming, Utah, Nevada, Washington, and Oregon. Flows in the lower Snake River are highest in the spring (average annual peak of approximately 165,000 cubic feet per second) and lowest in late summer (averaging 25,000 cubic feet per second). The Lower Snake River Project features four locks and dams in the state of Washington: Ice Harbor Dam, Lower Monumental Dam, Little Goose Dam, and Lower Granite Dam. The dams became operational between 1961 and 1975. The four dams are all run-of-river facilities, which means that they have limited storage capacity in their reservoirs and pass water through the dam at about the same rate as it enters the reservoir. All four of these dams are multiple-use facilities that provide navigation, hydropower, irrigation, recreation, and fish and wildlife conservation benefits. These dams were not built to control floods.

Juvenile fish from the lower Snake River drainage system may have to travel past as many as eight Federal dams before reaching the Pacific Ocean. This Feasibility Study focuses on how best to improve the survival of juvenile fish as they pass through the Lower Snake River Project. Federal and private dams on the middle and upper Snake River are not included in this study. The four dams on the mainstem Columbia River are addressed in the Feasibility Study, where appropriate, because they are part of the corridor juvenile salmon travel between the Lower Snake River Project and the ocean.

Ice Harbor Dam

Ice Harbor Dam, near river mile 10 (as measured from the Snake River's joining with the Columbia River), was placed in service in 1961. It is nearest to the point where the Snake River flows into the Columbia River. There are more than 4,000 acres of Corps-managed lands surrounding the dam and its reservoir, Lake Sacajawea. The reservoir extends 31.9 miles upstream. The dam has three 90-megawatt and three 110-megawatt generators, and a 90-foot-high, 86-foot-wide single-lift navigation lock. The spillway has 10 spillbays. Benefits are derived from the dam's hydroelectric power generation, seven developed recreation areas, navigation lock, wildlife habitat areas, irrigation water, fish passage facilities, and two port facilities.

Lower Monumental Dam

Lower Monumental Dam, near river mile 42, was placed in service in 1969. There are more than 9,100 acres of Corps-managed lands surrounding the dam and its reservoir, Lake Herbert G. West. The reservoir extends 28.7 miles upstream. The dam has six 135-megawatt generators and a 100-foot-high, 86-foot-wide single-lift navigation lock. The spillway has eight spillbays. Benefits are derived from the dam's hydroelectric power generation, six developed recreation areas, navigation lock, wildlife habitat areas, fish passage facilities, provision for irrigation water, and one port facility.

Little Goose Dam

Little Goose Dam, near river mile 70, was placed in service in 1970. There are more than 4,800 acres of Corps-managed lands surrounding the dam and its reservoir, Lake Bryan. The reservoir extends 37.2 miles upstream. The dam has six 135-megawatt generators and a 100-foot-high, 86-foot-wide single-lift navigation lock. The spillway has eight spillbays. Benefits are derived from the dam's hydroelectric power generation, seven developed recreation areas, navigation lock, wildlife habitat areas, fish passage facilities, three port facilities, and provision for irrigation water.

Lower Granite Dam

Lower Granite Dam, near river mile 107, was placed in service in 1975. Of the four dams, it is the farthest upstream. There are more than 9,200 acres of Corps-managed lands surrounding the dam and its reservoir, Lower Granite Lake. The reservoir extends 39.3 miles upstream. The dam has six 135-megawatt generators and a 100-foot-high, 86-foot-wide single-lift navigation lock. The spillway has eight spillbays. Benefits are derived from the dam's hydroelectric power generation, 13 developed recreation areas, navigation lock, wildlife habitat areas, fish passage facilities, water for six municipal and industrial pump stations, and three port facilities on Lower Granite Lake.

How the Dams Operate

Spillway

The spillway is a series of gates along the top of the dam that can open, allowing water to spill. Water is passed through the spillway to release excess flows. At times, to assist in juvenile fish migration, the Corps voluntarily spills additional water through the spillways.

Navigation Lock

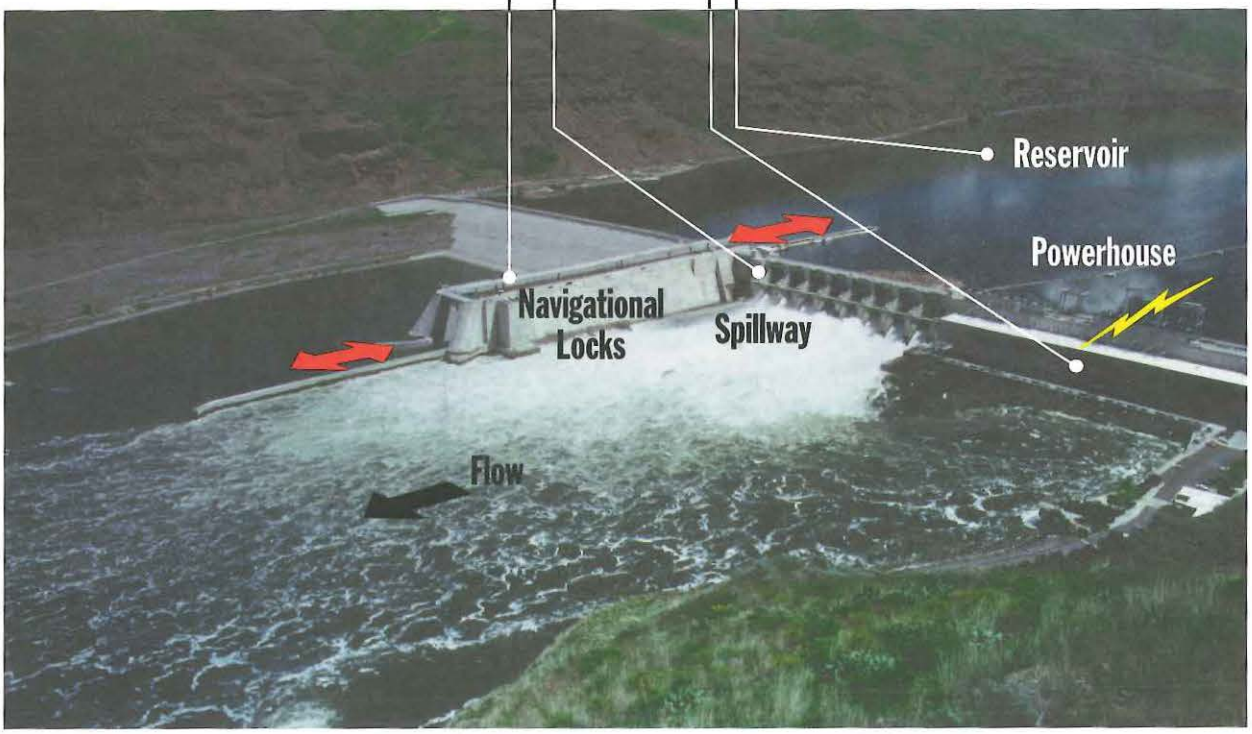
A navigation lock lifts and lowers boats and barges between the lower river level downstream of the dam and the higher reservoir level. Boats enter the lock, the gates close behind them, and the lock is slowly filled or drained until its water level is even with the destination water level. Then the gates are opened and the boats move from the lock to continue either upriver or down river.

Powerhouse

The powerhouse portion of the dam houses large generators for producing electricity. The water in the reservoir passes through turbine intakes in the powerhouse, rotating the turbines at 90 revolutions a minute, and then passes into the river downstream of the dam.

Reservoir

Spanning the river, the dam forms a physical barrier that impedes the river's flow, forming an artificial lake or reservoir. Water pools behind each dam covering land that was previously exposed, allowing navigation and creating opportunities for recreation, irrigation, and water supplies.



How Fish Currently Pass the Dams

In a free-flowing river, fish encounter natural structural obstacles, but rarely any as large as one of the lower Snake River dams. The height difference between the river on the downstream side of a dam and the reservoir behind the dam is approximately 100 feet. With this in mind, the four lower Snake River dams, as well as other dams on the system, were designed with features to aid the migration of both juvenile and adult fish. In the last 25 years, the Corps has consistently investigated and adopted new technologies for maximizing the number of fish that safely pass the dams in both directions. Successful features at the lower Snake River dams include adult fish ladders, juvenile bypass systems, and the fish transportation program.

For adult fish returning from the Pacific Ocean to spawn, fish ladders and devices to attract fish to the entrances of the ladders are the primary aid to their passing the dams. Fish ladders have been in place since the dams were built.

For juvenile fish traveling downriver, the dams and reservoirs present a more complex set of hazards. In the reservoirs near the dams, where the water is deep and slow, fish move slower than they do upstream. Slower water exposes juvenile fish to resident fish predators for a longer time. In addition, spill below the dam increases turbulence and exposure of juvenile salmon to predatory birds.

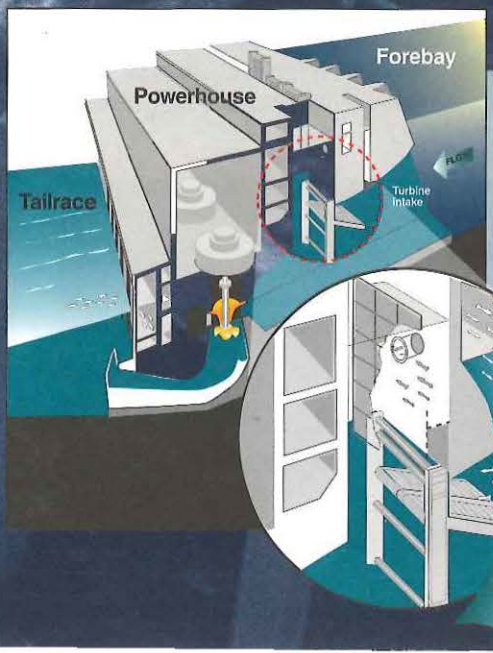
When juvenile fish arrive at a dam, they can pass it in three ways: through the turbines, through the spillway, or through bypass systems, where most are diverted to trucks or barges for transport downriver.

Turbines

Some juvenile fish may enter the intake openings of the powerhouse, move with water through the turbines, and exit on the other side. The fish may experience trauma from pressure changes, turbulent water conditions, or striking the machinery. About 90 to 95 percent of fish entering the turbines at each dam survive past that dam.

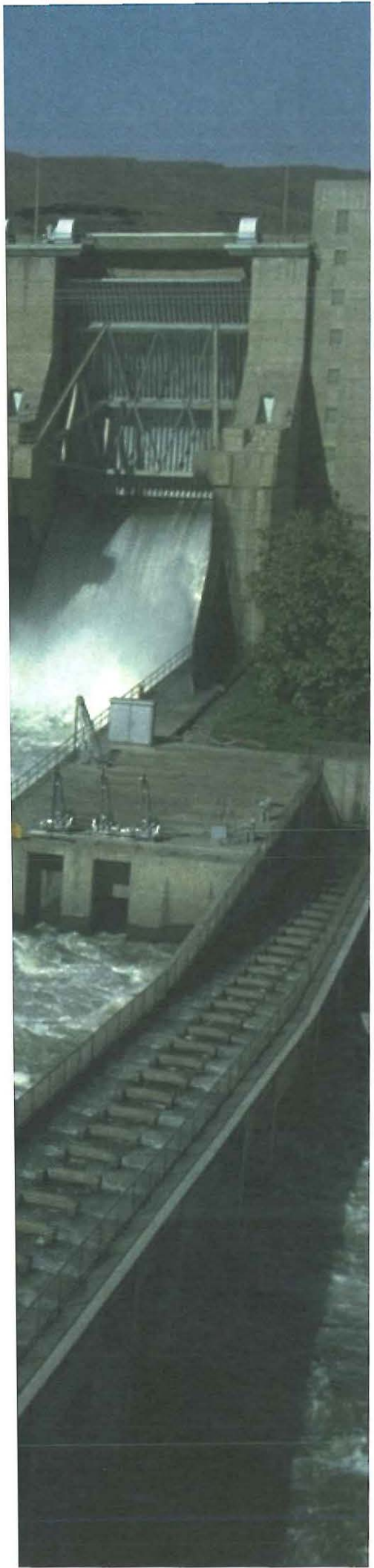
Spillway

Some juvenile fish travel in water that passes through the spillway to the lower river. The fish may be damaged passing through each spillway or be affected by harmful elevated dissolved gases in the water. About 98 percent of fish passing through the spillway at each dam survive past that dam.



Bypass

Most juvenile fish are guided away from the turbines by submerged screens and collected into channels that bypass the dam. They can be diverted into the river below the dam, into holding tanks where they can be loaded onto barges or trucks, or directly loaded on to barges and transported past the remaining lower Snake River and Columbia River dams. The collected and transported fish may suffer delays and handling stress. About 98 to 99 percent of the transported fish survive to the point of release below Bonneville Dam.



Fish Passage: What We Have Already Achieved

Adults

When the lower Snake River dams were built in the 1960s and early 1970s, scientists and engineers had a good understanding of what features adult fish needed to pass upstream to spawn. So, as part of the initial construction, fish ladders were installed to assist adult fish passage. Improvements to these ladders have been made at all four dams. Since 1996, the cumulative survival for adult salmon through all four lower Snake River dams and reservoirs ranges from 92 to 98 percent. The survival rate through each dam and reservoir is 96 to 100 percent.

Juveniles

At the time of construction, much less was known about juvenile salmon migration and how the dams might affect the migration, although by the time Lower Granite was constructed and completed in 1975, it had juvenile bypass facilities built in. By studying fish behavior, as well as river and dam conditions, scientists have worked with engineers over the years to design more effective fish passage systems for juveniles. The modifications the Corps has implemented at each dam to improve juvenile fish passage are noted on the next page.

Spread-the-risk Policy

Currently, the Corps, in coordination with NMFS, manages juvenile fish passage to "spread the risk." This spread-the-risk policy balances the number of fish that pass through the Lower Snake River Project in the river versus those that are diverted and transported below Bonneville Dam by barge or truck. About 50 to 65 percent of all fish traveling through the lower Snake River are diverted and collected for transport. The remainder are left in the river.

The spread-the-risk policy is necessary because the long-term positive and negative effects of both in river and juvenile fish transport are not clear. Balancing the two approaches is a prudent course of action while there is still some uncertainty because it ensures that no inadvertent reduction in survival occurs if one approach is significantly favored over another.

Direct Survival Rates

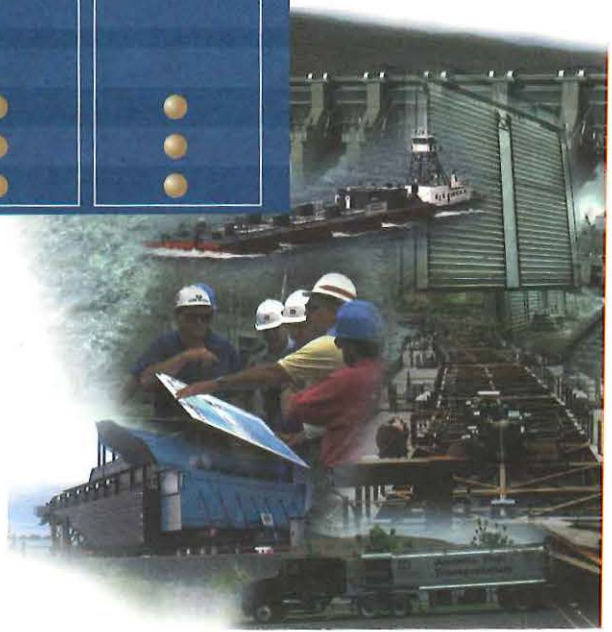
Short-term (direct) survival of juvenile fish through the Lower Snake River Project is measurable, and the numbers are generally positive. The average survival through a dam and reservoir on the lower Snake River for most stocks of juvenile salmon is in the low 90 percent range. Cumulative survival for juvenile salmon through all four dams and reservoirs is over 80 percent. Cumulative survival for juvenile salmon through all eight dams on the Columbia-Snake River System generally ranges from 45 to 60 percent.

Delayed/Indirect Mortality

Regional scientists find that delayed (indirect) mortality is far less straightforward and more difficult to measure than direct survival. Scientists do not know the cause of mortality for a certain portion of salmon who make it to the ocean as juveniles, but then do not return upriver to spawn as adults. Some suspect that a portion of this "extra mortality" is delayed mortality that may occur after juvenile salmon have passed Bonneville Dam. Scientists are unsure whether this delayed mortality could be caused by passing in the river through the series of eight dams and reservoirs from Lower Granite Dam to Bonneville Dam, from the transportation of fish by barge or truck, or by non-hydropower related causes.

Fish Passage Facilities at the Lower Snake River Project

Dams	Lower Granite	Little Goose	Lower Monumental	Ice Harbor
Adult Fish Passage Facilities (Fish Ladders/Fish Counting Stations)	●	●	●	●
Juvenile Fish Passage Facilities				
• Removable Spillway Weir	●			
• Standard Length Submerged Screens			●	●
• Extended Submerged Bar Screens	●	●		
• Vertical Barrier Screens	●	●	●	●
• Collection/Holding Facilities	●	●	●	
• Truck and Barge Loading Facilities	●	●	●	
• Sampling and Marking Facilities	●	●	●	●
• Passive Integrated Transponder Tag Detection & Deflector System	●	●	●	
• Prototype Surface Bypass Collectors and Behavioral Guidance System	●			
Operational Activities				
• Voluntary Spill	●	●	●	●
• Minimum Operation Pool	●	●	●	●
• Flow Augmentation	●	●	●	●



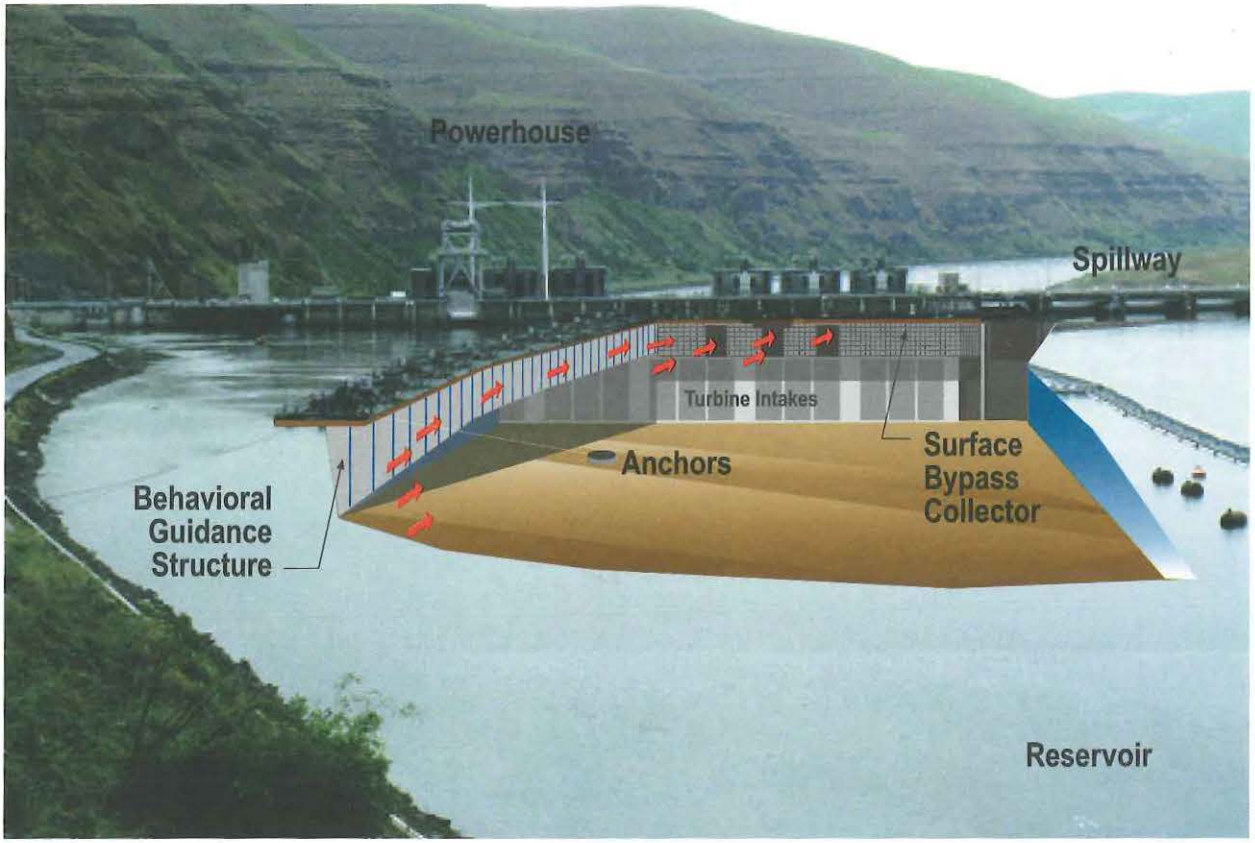
New Technology for Fish Passage

Some of the alternatives discussed in the Final FR/EIS consider implementation of several recently developed and/or tested technological improvements to increase survival through the Lower Snake River Project. Brief descriptions of surface bypass and behavioral guidance structures, removable spillway weirs, turbine improvements, and technology for reducing total dissolved gas are provided here.

Even though survival rates through the Lower Snake River Project dams are high, prototype systems of the surface bypass, behavioral guidance structure, and removable spillway weir have been tested at Lower Granite Dam to see if survival and passage conditions can be improved. Preliminary tests indicate increased fish passage efficiency through a combined system, including submerged screens. Development of additional system technologies is one of the measures recommended in the NMFS 2000 Biological Opinion on Federal Columbia River Power System operations.

Surface Bypass

This technology takes advantage of the natural behavior of juvenile fish to migrate near the surface. With screen bypass passage systems, salmon must dive down deep toward the turbine intake before being guided by submerged screens up into a bypass channel. The prototype surface bypass structure tested at Lower Granite Dam was 375 feet long with a series of vertical slots located in front of one half of the powerhouse. The surface bypass attracts surface-oriented fish in the dam forebay and directs them through the vertical slots into a collection structure. From there they can be routed through a low-volume spillway, or can be routed through the dam to be collected for transport in trucks or barges to the downstream side of Bonneville Dam. It is believed generally that surface bypass reduces stress on migrating fish because they do not experience the pressure changes associated with screen bypass systems.



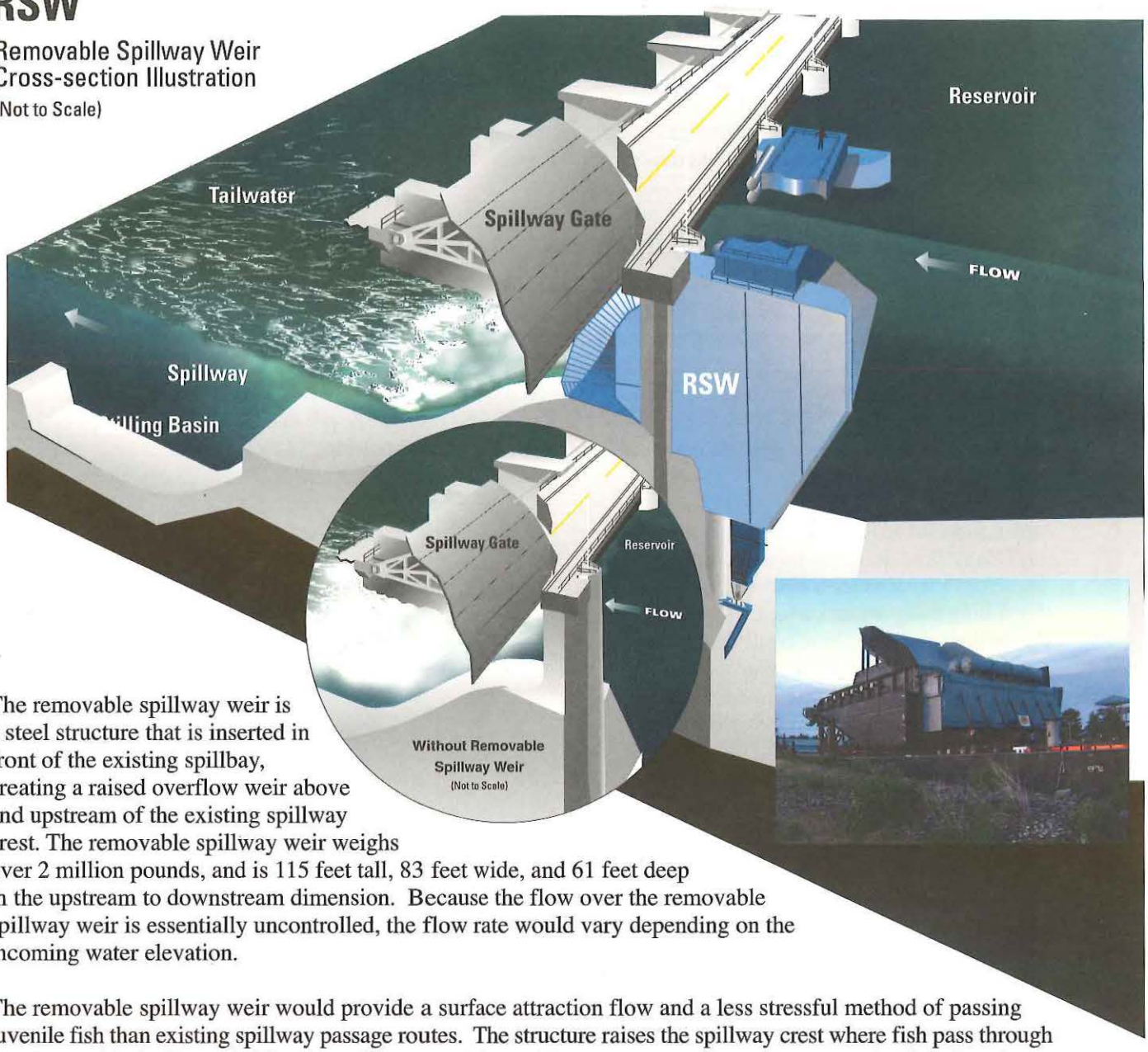
Surface Bypass
Representation of a Surface Bypass and Behavioral Guidance Structure
(Not to Scale)

Removable Spillway Weirs

The removable spillway weir is a new technology that would provide more flexibility for adjusting the balance between in river and barge or truck transportation for migrating juvenile salmon. Basically, when it is desirable to keep juvenile fish in the river instead of using the juvenile transport system, the surface bypass would be shut off, and the behavioral guidance structure could be used to guide fish to the removable spillway weirs.

RSW

Removable Spillway Weir
Cross-section Illustration
(Not to Scale)



The removable spillway weir is a steel structure that is inserted in front of the existing spillbay, creating a raised overflow weir above and upstream of the existing spillway crest. The removable spillway weir weighs over 2 million pounds, and is 115 feet tall, 83 feet wide, and 61 feet deep in the upstream to downstream dimension. Because the flow over the removable spillway weir is essentially uncontrolled, the flow rate would vary depending on the incoming water elevation.

The removable spillway weir would provide a surface attraction flow and a less stressful method of passing juvenile fish than existing spillway passage routes. The structure raises the spillway crest where fish pass through the dams with the flow. Raising the spillway would provide a more effective passage route for fish than the current dive they have to take through the dams in the existing 50-foot-deep gated flow. The expected advantages of the removable spillway weirs are:

- **Improved passage conditions for fish (less stress)**
- **More efficient fish passage (more fish per unit of flow)**
- **Potential for reduced spill due to better fish passage efficiencies**
- **Potential lower gas supersaturation and improved water quality**
- **Potential power generation benefits (due to more water available)**
- **Emergency removal capability for major flood events.**

Behavioral Guidance Structures

While the surface bypass measures aim to keep more juvenile fish near the surface, the goal of the behavioral guidance structure is to direct fish horizontally. Just as they tend to stay near the surface, migrating fish also favor the zones where water velocity is highest. The behavioral guidance structure is a steel wall, 80 feet deep sloping to 55 feet deep at the upstream end to the contour of the reservoir bottom. It is 1,100 feet long and floats. The behavioral guidance structure directs fish away from the powerhouse and towards the surface bypass when it is in use, or towards the spillway and the removable spillway weir.

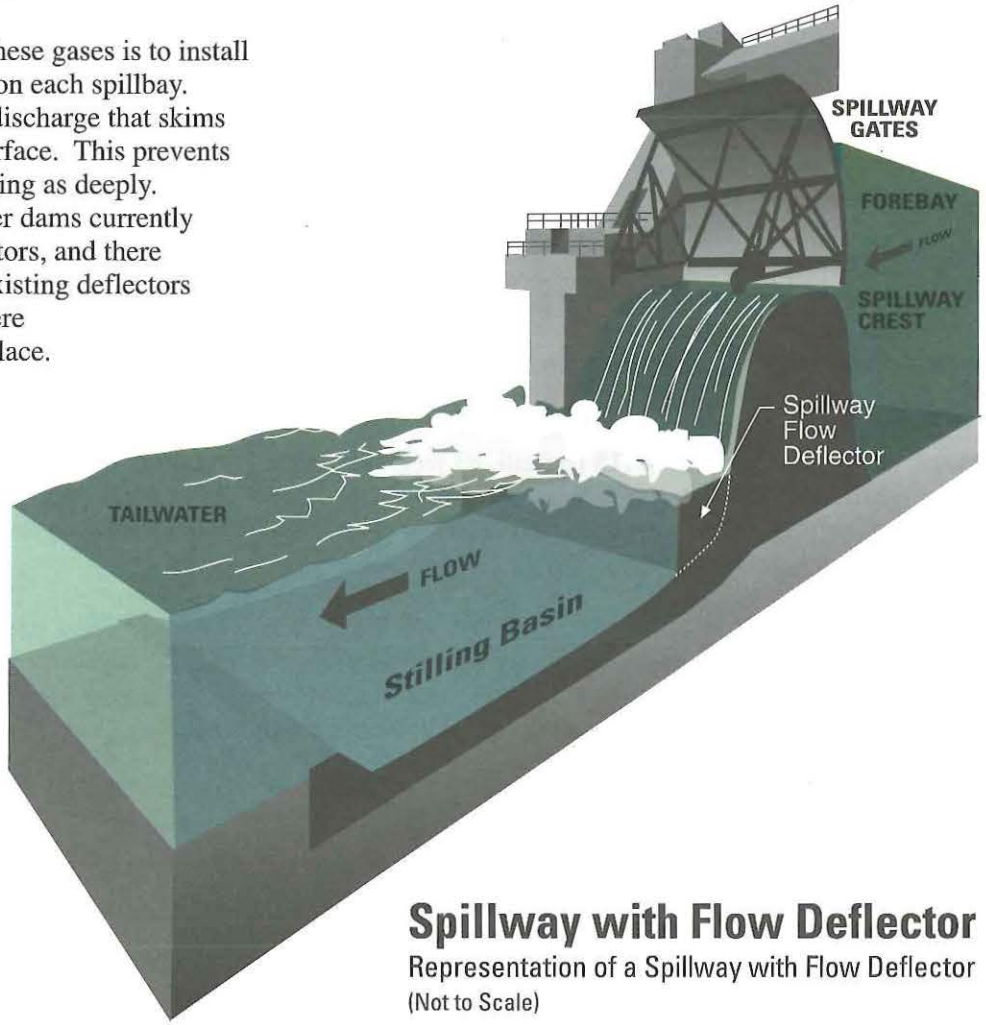
Turbine Improvements

Although maximum efforts are being made to prevent juvenile fish from passing through the turbines, some fish will still travel through the dam by this route. In the turbines, fish can be harmed by rapid changes in pressure, turbulence, and contact with surfaces. Scientists are investigating and pinpointing zones where injuries occur. Possible measures for preventing injuries are reducing the gaps between the turbine blades and hub, using smoother surface materials on turbine parts, and changing operational efficiency of the turbines.

Technology for Reducing Total Dissolved Gases

In the late 1970s, the Corps began intentionally spilling water (know as voluntary spill) to pass juvenile fish over the dams. Water is released through the spillway, carrying fish downstream to the basin below the dam. When the falling water plunges into the water below, air can be trapped and dissolved under pressure. This raises the percentage of total dissolved gases. High total dissolved gases can result in injury or death to fish. The NMFS 2000 Biological Opinion calls for enhanced spill and spillway improvements to facilitate higher spill volumes without increasing harmful total dissolved gas.

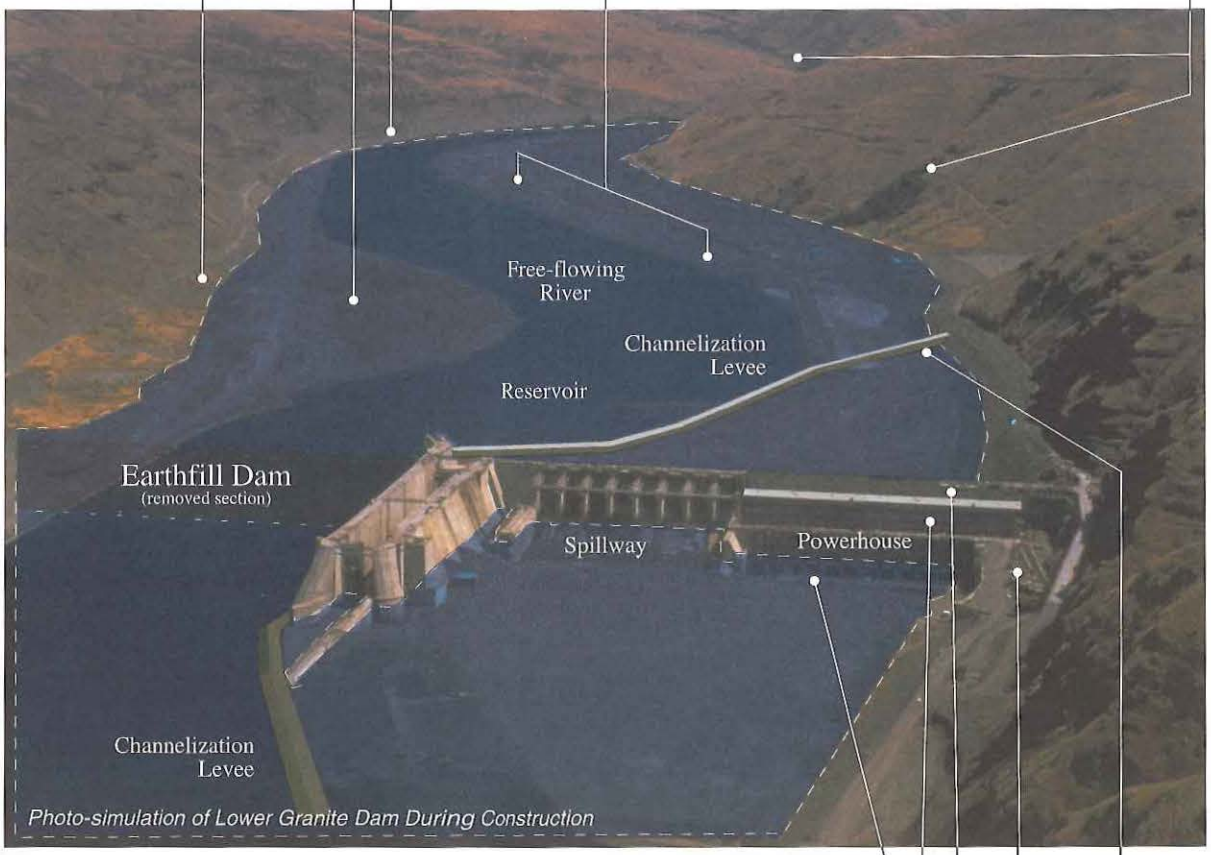
One option for reducing these gases is to install a spillway flow deflector on each spillbay. These devices produce a discharge that skims the stilling basin water surface. This prevents the spill water from plunging as deeply. All four lower Snake River dams currently have spillway flow deflectors, and there are plans for improving existing deflectors and adding deflectors where they are not currently in place.



Spillway with Flow Deflector
Representation of a Spillway with Flow Deflector
(Not to Scale)

Description of Dam Breaching

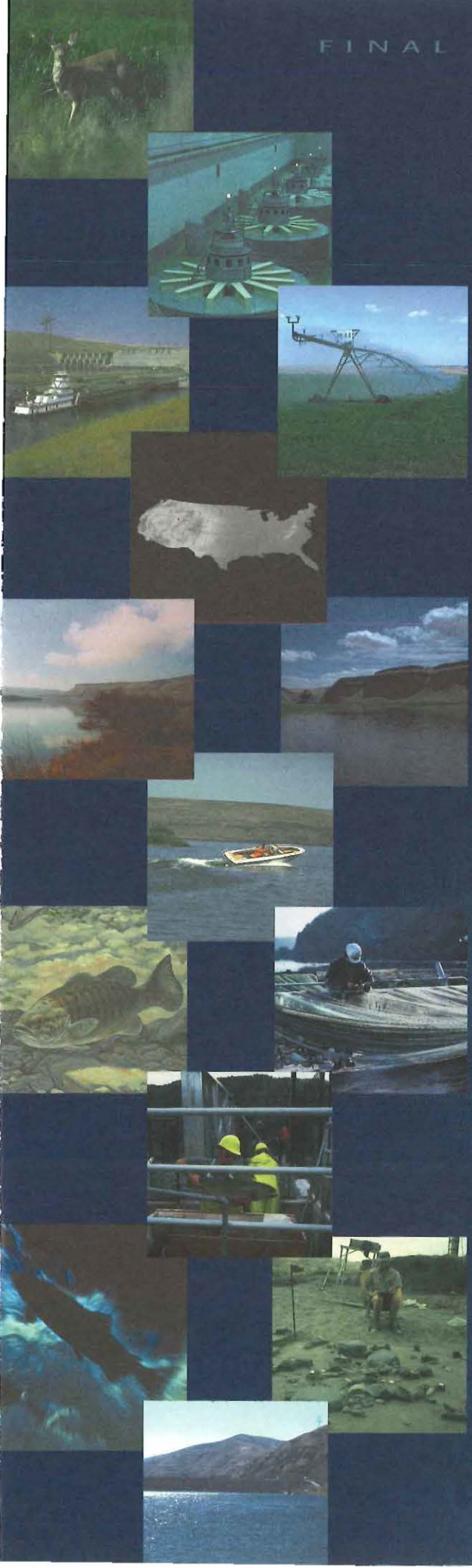
Dam breaching would create a 140-mile stretch of river with near-natural flow by removing the earthen embankment section of each dam and eliminating the reservoirs. The powerhouses, spillways, and navigation locks would not be removed, but would no longer be functional. All facilities for transporting fish would cease to operate, as would hydropower operation and navigation on the lower Snake River. The illustration below shows some of the specific measures involved in dam breaching.



Uncertainty in the Analyses of the Effects of the Alternatives

When evaluating the effects of the alternatives on the environmental resources and economic factors summarized in this document, it is important to note that some of the analyses carry with them varying degrees of uncertainty. Uncertainty is inherent in any planning effort, especially when the period of implementation may span several years, as is likely for this FR/EIS. Information might be unavailable, incomprehensive, and scientifically untestable or reflect wide natural variability in the resource studied. There are also uncertainties in the assumptions and models used to extrapolate this information to future conditions. Relevant uncertainties are described in the FR/EIS, where appropriate.

The relative importance of uncertainties will depend on how they influence efforts to compare the potential benefits and costs of the alternative actions. For this Feasibility Study, noticeable uncertainty exists in the effects analyses for salmon, recreation, and economics. Although space in this summary document is too limited to elaborate on these uncertainties, the uncertainties in environmental effects of each alternative are identified, described, and quantified when possible in the resource sections of Chapter 5 in the Final FR/EIS. These uncertainties are also summarized in Chapter 6 of the Final FR/EIS and in Appendix J, Plan Formulation.



Effects of the Alternatives

The four alternatives evaluated in the Final FR/EIS are **Alternative 1—Existing Conditions, Alternative 2—Maximum Transport of Juvenile Salmon, Alternative 3—Major System Improvements (Adaptive Migration), and Alternative 4—Dam Breaching.** The Corps has selected Alternative 3 as the recommended plan (preferred alternative). This alternative has been modified slightly since the Draft FR/EIS to provide more of a focus on adaptive migration, reflecting the strategies in the 2000 NMFS Biological Opinion. Adaptive migration is an approach that provides greater flexibility to switch between in river migration and barge or truck transportation as conditions require, and as new information becomes available.

The features and major effects of the alternatives are summarized here, followed by a discussion of the effects of each alternative on the key environmental resources and economic factors evaluated in the Final FR/EIS. Included is a discussion of salmon, resident fish, water quality and flow, sediment, vegetation and wildlife, air quality, cultural resources, Native American Indians, transportation, water supply and irrigation, electric power generation, recreation, and economic factors. It also describes the effects on people, in terms of the economic health of the communities and businesses that depend on the resources, not only along the Snake River, but also throughout the Pacific Northwest.

Before making its selection of a recommended plan (preferred alternative), the Corps evaluated the implications of each alternative. The Corps recognizes that actions taken as a result of this Feasibility Study can affect us all. The Feasibility Study is just one piece of Pacific Northwest salmon recovery efforts that encompass harvest, hatcheries, habitat, and hydropower issues.

Summary Comparison of the Four Final FR/EIS Alternatives

1 Alternative 1–Existing Conditions

Every FR/EIS has a starting point from which all other alternatives are measured. Alternative 1 is the baseline or no action alternative under which the Corps would continue operating the four lower Snake River dams according to their current configurations, including all fish passage programs now in operation. About 50 to 65 percent of the fish would be transported via truck and barge, while the remainder would migrate in river. This alternative does not mean that no further improvements would be made. The Corps, as part of its ongoing development plans and in response to changes in agency requirements, plans to improve technology at the dams to promote fish passage. The Corps' current plan calls for turbine improvements, structural modifications to fish facilities at Lower Granite Dam, new fish barges, adult fish attraction modifications, trash boom at Little Goose Dam, modifications to fish separators, added cylindrical dewatering screens, and more or improved spillway flow deflectors.

2 Alternative 2–Maximum Transport of Juvenile Salmon

Most of the improvements planned for Alternative 1 would also be included in Alternative 2. The emphasis in this alternative, however, is operating the existing facilities to maximize the passage of fish through the existing collectors into trucks or barges for transport downriver. Voluntary spill to bypass fish would be minimized. The majority of the juveniles would be collected in the existing facilities and transported past the dams. Under this alternative, there would be no need to modify spillway flow deflectors, because voluntary spill would be minimized. Some juvenile fish would still pass through the dam turbines.

3 Alternative 3–Major System Improvements (Adaptive Migration)

Alternative 3—Major System Improvements (Adaptive Migration) is the Corps' recommended plan (preferred alternative). This alternative would balance the passage of fish between in river and transport methods to minimize risks and provide for the flexibility of adaptive migration. Alternative 3 would include all of the existing or planned structural configurations from Alternative 1 and most structural configurations found under Alternative 2—Maximum Transport of Juvenile Salmon. This alternative also includes major system improvements that would improve effectiveness and increase flexibility for optimizing migration routes within seasons and years. Surface bypass collectors, behavioral guidance structures, and removable spillway weirs could be installed at one to four dams, if testing warrants, to maximize adaptive migration capabilities.

4 Alternative 4–Dam Breaching

This alternative consists of breaching the four dams and creating a 140-mile stretch of river with near-natural flow. This would involve removing the earthen embankment section of each dam and eliminating reservoirs behind all four of the dams. Under this alternative, all facilities for transporting fish would cease to operate. A river with near-natural flow can be achieved by removing only the embankment. The powerhouses, spillways, and navigation locks would not be removed, but would no longer be functional.

Features	Key Effects
• No major changes to fish passage systems, spill, juvenile transport • Continued flow augmentation	• Slightly reduced extinction risks for listed stocks (Cumulative Risk Initiative [CRI]) —Pre-1995 operations • Continued juvenile fish passage for listed stocks • Continued hydropower generation • Continued navigational activity • Continued irrigation and water supply • No major economic impacts
• Maximized juvenile fish transport with current systems • Minimized voluntary spill • Continued flow augmentation	• Slightly reduced extinction risks for listed stocks (CRI)—Pre-1995 operations • Slightly reduced juvenile fish passage for listed stocks • Continued hydropower generation • Continued navigational activity • Continued irrigation and water supply • No major economic impacts • Reduced total dissolved gases (voluntary spill)
• Testing of surface bypass systems to optimize in river passage and transport • Optimized voluntary spill • Continued flow augmentation • Operational modifications for flow augmentation and transportation	• Slightly reduced extinction risks for listed stocks (CRI)—Pre-1995 operations • Slightly increased juvenile fish passage for listed stocks • Continued hydropower generation • Continued navigational activity • Continued irrigation and water supply • No major economic impacts • Reduced total dissolved gases (voluntary spill)
• Removal of dam embankments • Conversion of reservoirs into riverine environment • Shutdown of navigation lock • Shutdown of power generation • End of juvenile fish transport program on the lower Snake River • Reevaluation of fish and wildlife mitigation • Expanded protection of cultural resources • Modifications to some reservoir facilities • Continued flow augmentation	• Moderately reduced extinction risks for fall chinook and steelhead (CRI)—Pre-1995 operations • Slightly reduced extinction risks for spring/summer chinook (CRI)—Pre-1995 operations • Moderately increased fish passage for listed stocks • Loss of hydropower generation; raised electric rates • Loss of navigational capacity; impact on other transportation systems; increased transportation costs • High sediment movement • Impacts to irrigation and water supplies • Short-term gain and long-term loss of jobs and income • Change in recreation opportunities • Reduced total dissolved gases (no voluntary or involuntary spills) • Increased risk of major economic impacts

The EFFECTS
Salmon

Background

Of the 12 anadromous fish stocks within the Columbia-Snake River System that are listed under the Endangered Species Act or that are candidates for listing, the Snake River stocks are: Snake River sockeye salmon, Snake River spring/summer chinook salmon, Snake River fall chinook salmon, and Snake River steelhead. Anadromous fish hatch in freshwater streams, rear in streams or lakes as juveniles, migrate downriver to the ocean, mature in the ocean, and then return upstream to spawn. This summary focuses on the effects of the alternatives on the juvenile lifestage of the listed salmon and steelhead stocks as they migrate downriver through the Lower Snake River Project. Conclusions about the effects of the alternatives on adult anadromous fish and species such as Pacific lamprey and American shad can be found in Chapter 5.5 of the Final FR/EIS; these effects are generally minimal.

Analyses Used

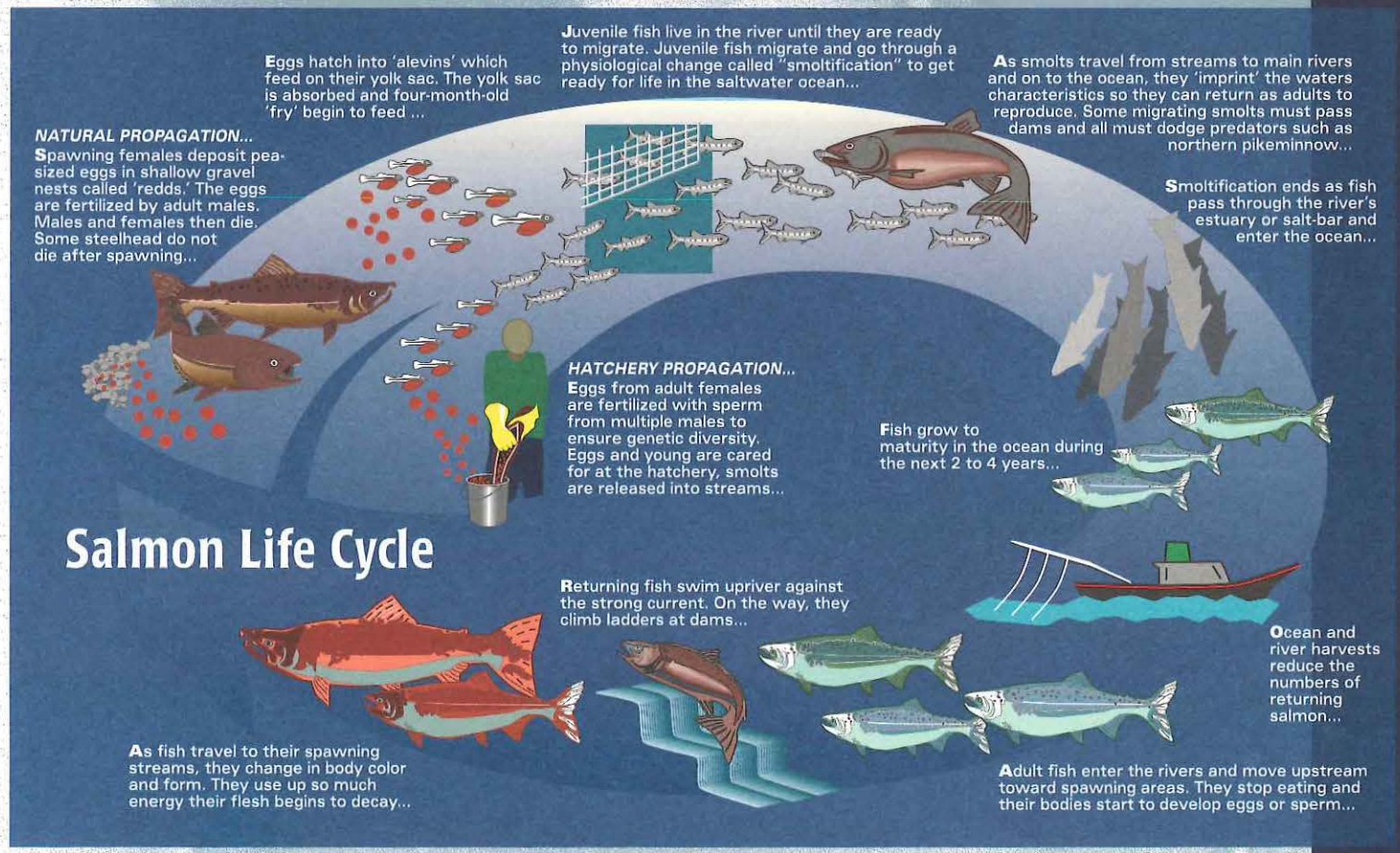
NMFS used two primary sets of analyses to help quantify the likely effects to the listed Snake River stocks—one developed by the Plan for Analyzing and Testing Hypotheses (PATH), and the other known as the Cumulative Risk Initiative (CRI).

The PATH analysis developed models that predict the likelihood of achieving survival and recovery of the listed Snake River stocks. The PATH model results were influenced by the effects of direct and indirect mortality. Direct mortality occurs while fish pass through the hydrosystem. Indirect mortality is assumed to occur after fish have left the hydrosystem, but is caused by having passed through the hydrosystem, including transportation. PATH defined indirect mortality in two general categories, differential delayed transport mortality and extra mortality. NMFS' evaluation (Appendix A) of these two categories stated, "Debate about the importance of post Bonneville effects of dams has been highly contentious and data with which to estimate these parameters are generally poor."

The CRI analysis estimated the likelihood of extinction of listed fish stocks occurring within specified time periods. It compared how certain actions, including those outside of the hydrosystem, affect the chance of the selected stocks meeting the NMFS definition of acceptable risk of extinction criteria. The CRI analysis also evaluated the effects that a delay in implementing actions would have on the chances of specific stocks going extinct.

Both CRI and PATH analyses relied on many assumptions for their predictions. Lack of specific values for many components in both lifecycle analyses generated outcomes with a high degree of uncertainty. Overall, PATH results indicate that the chance of meeting NMFS survival and recovery criteria for the four listed species under Alternative 1 would likely be the same or slightly better than Alternatives 2 and 3. Alternative 4 provides the highest probability of meeting the survival and recovery criteria under the PATH analysis. Both the CRI and PATH analyses indicate that further improvements in the hydrosystem passage system are unlikely to recover listed Snake River stocks unless there is an improvement in juvenile fish survival downstream of Bonneville Dam, either through such factors as improved fish conditions or improved timing of entry into the ocean. However, PATH does not address whether it is necessary to breach the dams. NMFS 2000 Biological Opinion on Federal Columbia River Power System operations indicated the need for improvements in all areas of impact: harvest, hatcheries, habitat, and hydrosystem. The Biological Opinion states:

> "Although breaching is not essential to implementation of the initial actions called for in the Reasonable and Prudent Alternative (RPA) which constitute a non-breach approach, the RPA requires that the Action Agencies prepare for the possibility that breaching or other hydropower actions could become necessary."



The EFFECTS
Salmon

The Bottom Line

While a considerable amount of information and analysis has been developed to assess the alternatives, the bottom line is that no single alternative stands out as the "silver bullet" for listed stocks.

Anticipated Effects of Each Alternative on Snake River Anadromous Fish

Alternatives	Extinction 1/
Alternative 1- Existing Conditions 5/	
SPRING/SUMMER CHINOOK	◓
FALL CHINOOK	◓
STEELHEAD	●
SOCKEYE	◓
PACIFIC LAMPREY	6/
Alternative 2 - Maximize Transportation 5/	
SPRING/SUMMER CHINOOK	◓
FALL CHINOOK	◓
STEELHEAD	◓
SOCKEYE	◓
PACIFIC LAMPREY	6/
Alternative 3 - Major Systems Improvements (Adaptive Migration) 5/	
SPRING/SUMMER CHINOOK	◓
FALL CHINOOK	◓
STEELHEAD	◓
SOCKEYE	◓
PACIFIC LAMPREY	6/
Alternative 4 - Dam Breaching 5/	
SPRING/SUMMER CHINOOK	◓
FALL CHINOOK	●
STEELHEAD	◓
SOCKEYE	◓
PACIFIC LAMPREY	6/

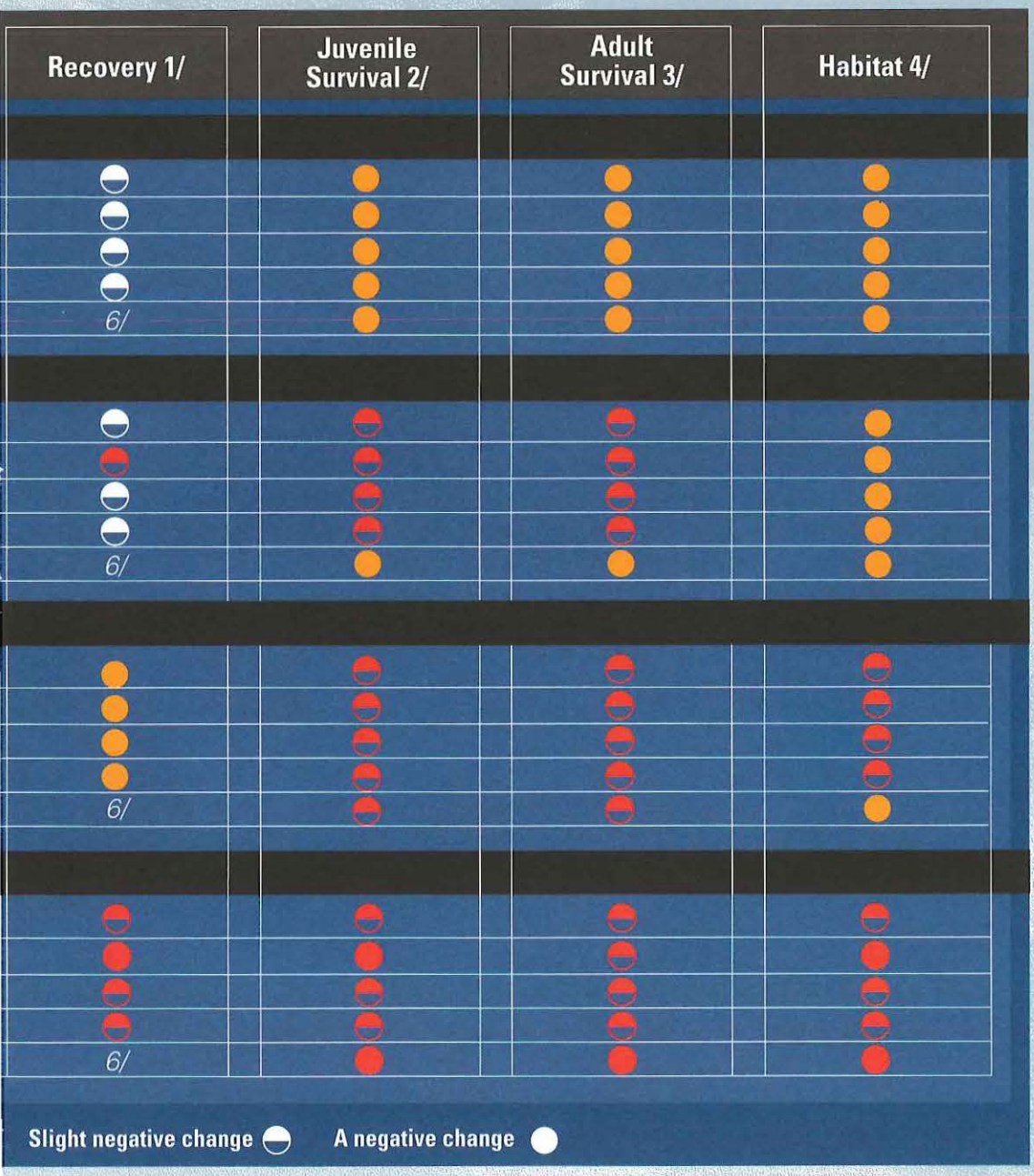
A positive change ● Slight positive change ◓ No change ●

1/ Extinction and Recovery parameters are estimates limited to the contributions of lower Snake River hydrosystem actions as evaluated by CRI (Extinction) and PATH (Recovery). They are represented by the NMFS lambda estimates reported in Table 6-3 of the FR/EIS main report.

2/ Estimate of effects based on total system juvenile passage survival through the eight lower Snake/lower Columbia River Federal mainstem dams, with and without transportation, as applicable to the alternative operations using ranges found in the FR/EIS.

3/ Estimate of effects based on total system adult passage survival through the four lower Snake River dams.

The chart below summarizes the effects on salmon by alternative based on the NMFS anadromous fish analysis that incorporates certain aspects of both CRI and PATH. The specific differences, distinctions, and details of both CRI and PATH are discussed in the FR/EIS and Appendix A, Anadromous Fish Modeling.



4/ Habitat effects are estimated based on fish passage, rearing, and spawning.

5/ Alternative 1 is change through time relative to existing conditions; Alternatives 2, 3, and 4 are compared to Alternative 1.

6/ No estimate of extinction or recovery is available for Pacific lamprey (not an ESA-listed species).

The EFFECTS

Resident Fish

In addition to the migrating anadromous fish that are the focus of this study, there are resident fish that occupy the lower Snake River and the reservoirs behind the four dams. These resident fish do not migrate to the ocean; they spend their entire lives in the river and the reservoirs created by the dams. Some of the fish are native and others have been introduced as sports fish. The common species are northern pikeminnow, rainbow trout, common carp, smallmouth bass, crappie, catfish/bullhead, and yellow perch. Most of these fish prefer calmer and warmer water than do the anadromous fish. The bull trout, although not common in the lower Snake River, is listed as threatened under the Endangered Species Act.

Alternatives 1, 2, and 3—Existing Conditions, Maximum Transport of Juvenile Salmon, and Major System Improvements

Under Alternatives 1, 2, and 3, none of the proposed actions are likely to have an effect on resident fish. Although, if voluntary spill is reduced under Alternatives 2 and 3, the resulting lower total dissolved gases could benefit resident fish.

Alternative 4—Dam Breaching

Under Alternative 4, there would be some negative effects on resident fish. In the short term, if the dams were breached, the rapid lowering of the reservoirs could strand some fish in shallow pools that would eventually stagnate. In addition, high turbidity and sediment in the water could cause trauma and injury, low water elevations could expose more fish to predators, and breaching could negatively affect spawning and overwintering habitat in the short term.

In the long term, the resident fish population would be altered because some species would not thrive in a faster flowing river. Declines in crappie, peamouth, pumpkinseed, bluegill, yellow perch, bullhead, and largemouth bass would be expected. Other species, including the chiselmouth, redside shiner, speckled dace, sucker, sculpin, white sturgeon, northern pikeminnow, bull trout, and smallmouth bass might benefit from near-natural river conditions.

Water Resources

The Feasibility Study looks at the effects of the alternatives on water flow, suspended sediment, temperature, contaminants, and dissolved gases, which are the qualities of lower Snake River water resources that can have direct effects on anadromous fish.

Alternative 1—Existing Conditions

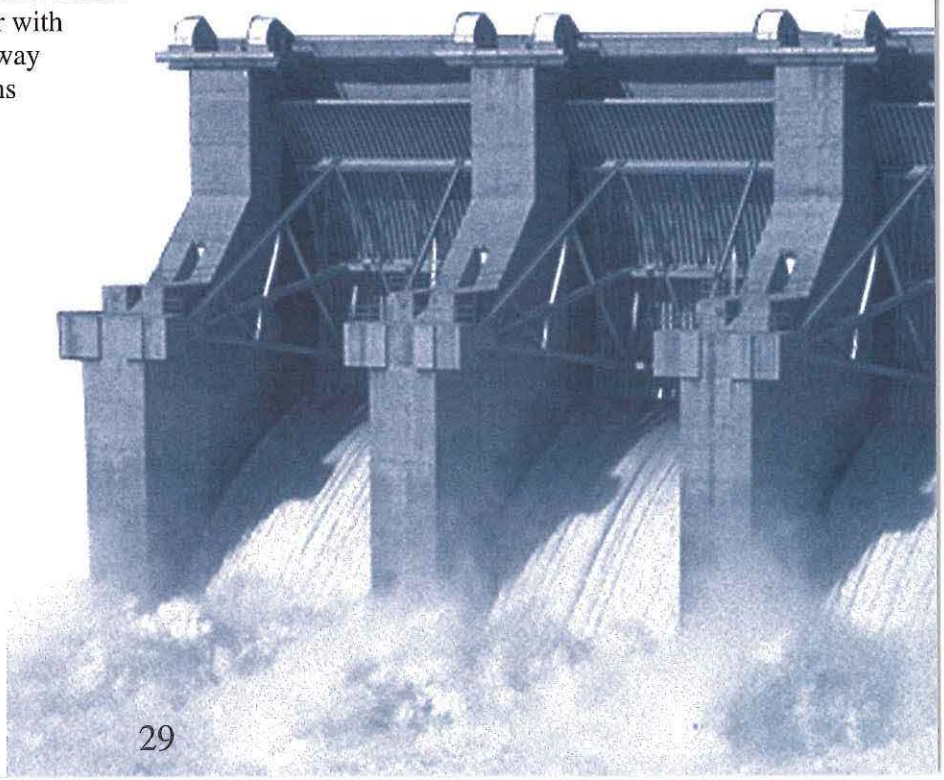
Under the current conditions represented by this alternative, water velocity varies considerably throughout the reservoir. Directly downstream of the dams, the water is turbulent and fast moving for a short distance. Turbidity (the amount of suspended particulate matter in water) tends to decrease as the water velocity is reduced in the reservoir. Water temperatures throughout the Snake River can be very warm during portions of the year; however, cold water is released at certain times from Dworshak Dam upstream to aid in cooling water temperature in the lower Snake River to benefit fish. Contaminants are not a significant water quality issue under current conditions. While there is always some dissolved gas in turbulent water, the dams tend to increase total dissolved gas downstream due to voluntary and involuntary spill. The improvements proposed under this alternative would slightly reduce total dissolved gases.

Alternatives 2 and 3—Maximum Transport of Juvenile Salmon and Major System Improvements

Under these alternatives, water flow and water quality conditions would be the same as for Alternative 1. Dissolved gases could decrease slightly because there would be less voluntary spill to cause elevated dissolved gas concentrations.

Alternative 4—Dam Breaching

Under this alternative, flow velocities would increase and depths would decrease throughout the lower Snake River. Suspended sediment (50 to 75 million cubic yards of material) could be released during dam breaching and could adversely affect aquatic organisms and other beneficial uses during the first 2 years after dam breaching. Water temperatures would be more like they were before the dams went into operation. Higher daily fluctuations in water temperatures, such as those observed before the dams were built, may occur. In a river with near-natural flow, there would be no spillway flows, so total dissolved gas concentrations would decrease.



Sediment

Closely related to water quality is the amount of sediments found in the river. The dams reduce sediment movement in the lower reservoirs and trap sediments above Lower Granite Dam. The Lower Granite reservoir currently captures an average sediment load of 3 to 4 million cubic yards per year. It has been estimated that 100 to 150 million cubic yards of sediment have accumulated behind the four lower Snake River dams since their construction. Approximately half these sediments are fine-grain silts and the remainder is coarser sands.

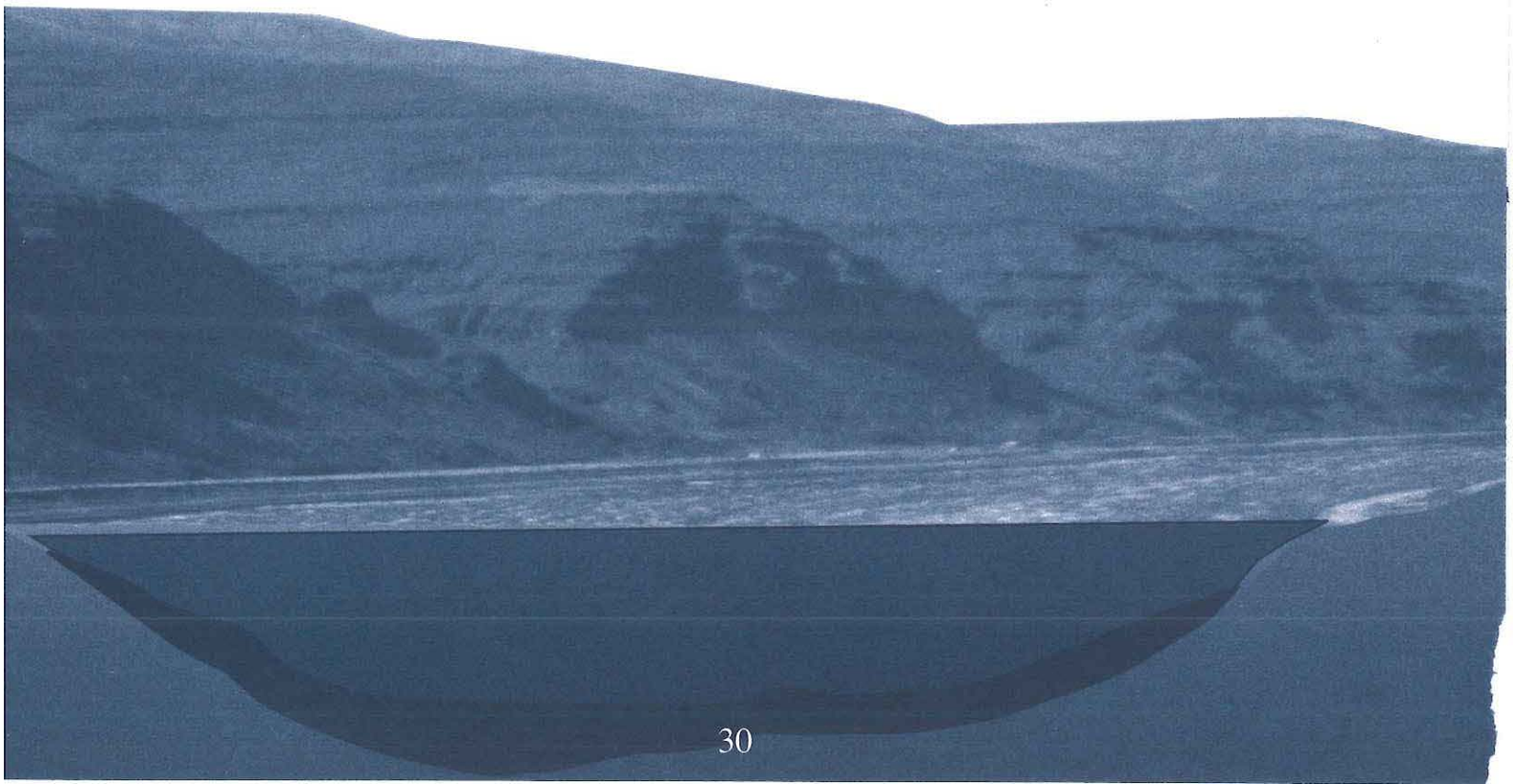
Alternatives 1, 2, and 3—Existing Conditions, Maximum Transport of Juvenile Salmon, and Major System Improvements

The amount of sediment buildup would not change under the first three alternatives.

Alternative 4—Dam Breaching

Dam breaching could result in significant movement of sediments. It is estimated that 50 to 75 million cubic yards of existing sediments may be eroded and moved downstream. The majority of fine-grain silts would move quickly in the first few years following breaching. The coarser sands would move slowly downstream over 5 to 10 years. These existing and future sediments could move freely downstream toward McNary Dam and may cause temporary adverse effects on food supplies for fish and bottom-feeding aquatic organisms. In addition, silt and sand now accumulated behind the dams could cause damage to pumps, valves, and other water system components.

Resuspension of sediments following dam breaching could result in exposing chemical contaminants that have been contained in reservoir sedimentation. Total DDT, dioxin, manganese, and un-ionized ammonia are of concern. DDT could potentially affect the biological system, and un-ionized ammonia concentrations may exceed EPA water quality criteria for the protection of aquatic life.



Vegetation and Wildlife

The lower Snake River region is steppe and shrub-steppe terrain with bunchgrass and sagebrush predominant around the dams. There are 87 species of mammals and 257 species of birds in the study area. These include deer, elk, bear, waterfowl, songbirds, and raptors. A number of vegetated islands were inundated when the dams were built. Agricultural and transportation activities have also affected vegetation and wildlife in the area. The Corps developed and manages 62 Habitat Management Units (approximately 9,300 acres) on lands around the reservoirs for wildlife conservation. Through purchase or lease, the Corps has acquired 24,000 acres of land for off-site mitigation.

Alternative 1—Existing Conditions

This alternative would not have appreciable effects on either vegetation or wildlife.

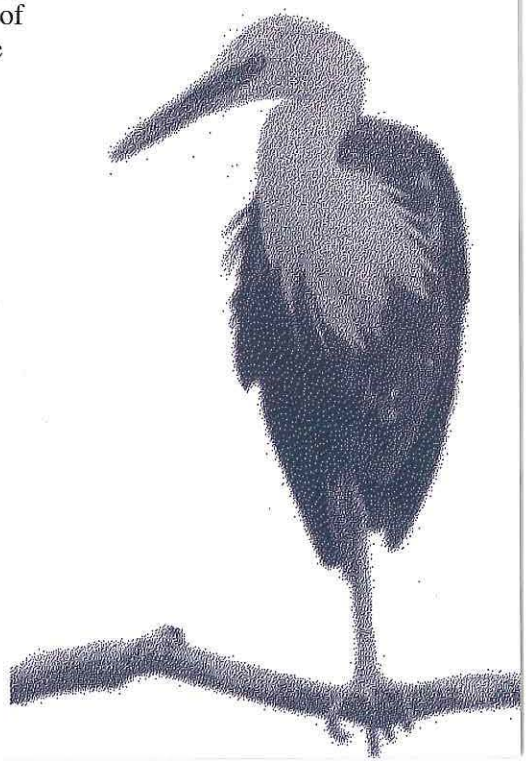
Alternatives 2 and 3—Maximum Transport of Juvenile Salmon and Major System Improvements

These alternatives would not have appreciable effects on vegetation or most wildlife. However, reduced in-river transport under Alternative 2 could decrease the number of birds that prey on juvenile fish because there will be fewer fish in the river.

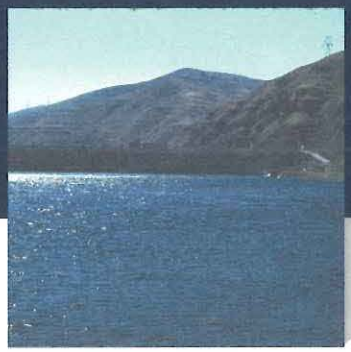
Alternative 4—Dam Breaching

Under Alternative 4, approximately 14,000 acres of land that are now under the reservoirs would be drained and exposed. In the short term, this would have an adverse effect on wildlife directly dependent on reservoir conditions, as well as on game birds, big game, small mammals, and amphibians and reptiles. Loss of open water habitat would have short-term negative effects on waterfowl. Increased mudflats and open islands would have short-term positive effects on shorebirds and colonial-nesting birds.

The Corps would manage plantings of native species to support wildlife native to the area and control undesirable vegetation that would encroach on the exposed shorelines. In the long term, as vegetation becomes reestablished, breaching the dams would have positive effects on most wildlife groups through the expected development of a more contiguous riparian zone and increased area of other habitat types, such as shrub-steppe and grassland. This assumes that the riparian zone and adjacent uplands would be managed for the wildlife resources.



Air Quality



The main air quality issues for the four alternatives are construction-related fugitive dust emissions, emissions associated with loss of barge transportation, fugitive dust from exposed sediments, and emissions associated with replacement power generation.

Alternative 1—Existing Conditions

The changes to the four dams under this alternative are not anticipated to affect air quality. Hydropower-produced electricity is considered a clean source of energy with regard to air emissions.

Alternative 2—Maximum Transport of Juvenile Salmon

Again, as with Alternative 1, changes to the four dams under this alternative are not anticipated to affect air quality.

Alternative 3—Major System Improvements

Because Alternative 3 involves possible construction of several structural improvements, there could be a slight localized increase in dust associated with construction equipment and haul roads used during construction of the surface bypass, removable spillway weirs, and other modifications.

Alternative 4—Dam Breaching

Under Alternative 4, there would be local impacts to air quality during the dam breaching process. Removing the four embankments would be a large-scale construction project, resulting in dust and emissions. Commercial river transportation would be eliminated, and the use of more trucks and trains would increase some emissions. Dust would also arise from newly exposed land when the reservoirs empty, but dust would decrease as new vegetation covered the land.

If the four dams were breached, approximately 3,033 megawatts of the total peaking capacity would likely be replaced in part by 1,550 megawatts from new plants fueled by natural gas. The Feasibility Study analysis looked at the dams as part of the Western Systems Coordinating Council. This council manages the interconnected power system that includes all or part of 14 western states, two Canadian provinces, and a small area of northern Mexico. The analysis indicates that total emissions (from operation of replacement powerplants) throughout this system would increase 4 million tons per year if the dams were breached.

Water Supply

Water from the lower Snake River is used to irrigate crops, supply backup water for municipal systems and industries, enhance wildlife habitat, and water livestock. In the counties adjacent to the four lower Snake River reservoirs, 19 percent of the agricultural land is irrigated, most of which is located in Franklin (68 percent) and Walla Walla (29 percent) counties. Nearly all of the water for irrigation comes from 12 pumping stations near Ice Harbor Dam. There are also eight municipal and industrial pumping stations along the Snake River. Some additional irrigation water comes from wells, some of which are influenced by the reservoirs.

Alternatives 1, 2, and 3—Existing Conditions, Maximum Transport of Juvenile Salmon, and Major System Improvements

Under the first three alternatives, there would be no changes in the current water supply.

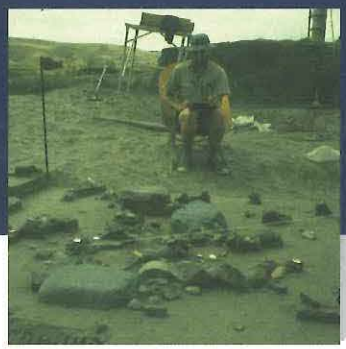
Alternative 4—Dam Breaching

If the dams were breached, pumping station intakes that currently withdraw water from the reservoirs would be above the new water level. Pump modifications would be required for Snake River water to be pumped for irrigation and other water uses. If irrigation water from the Snake River was no longer available, the economic impact in terms of lowered farmland value could equal $134,240,000. Pump modification costs calculated for municipal and other industrial water users were estimated to range from $11,514,000 to $55,214,000. Irrigation wells within one mile of the reservoirs could also require modifications, which were estimated to cost $56,447,000. These costs combined would result in an annual average cost of $15,424,000 over the 100-year period of analysis used for this study. This average cost was calculated using a 6.875 percent interest rate.

Another potential impact of Alternative 4—Dam Breaching is the release of silt and sand now accumulated behind the dams, which could cause damage to pumps, valves, and other water systems components. Most of the costs identified would be non-Federal costs.

The EFFECTS

Cultural Resources



Cultural resources in the Snake River Basin are a rich source of information about prehistoric and historic human use and occupation dating back almost 11,000 years. Cultural resources include sacred places, prehistoric archaeological sites, historic sites, and traditional cultural places. Sacred places include but are not limited to burial grounds, cemeteries, or locations of ceremonial use and focus. Prehistoric archaeological sites typically include villages, open campsites, rock shelters, and rock features or alignments. Historic sites include archaeological resources and structures, buildings, and objects that represent Euro-American influences. Traditional cultural places are areas and resources that are associated with cultural practices or beliefs of a living community that are rooted in that community's history and are important in maintaining the continuing cultural identity of the community.

There are approximately 375 known prehistoric and historic archaeological sites within the reservoirs of the four lower Snake River dams, some of which are partially or completely inundated. Negative impacts to cultural resources result from high water flows, wave action, and human activities (e.g., vandalism). Cultural resources are protected by law.

Alternatives 1—Existing Conditions

There would be no change from current conditions under this alternative. Current efforts related to cultural resources protection would continue.

Alternatives 2 and 3—Maximum Transport of Juvenile Salmon and Major System Improvements

There would be a slight increase in wave action impacts from additional barge traffic under Alternative 2 compared to Alternative 1. However, that number is very small; therefore, the expected change in number of barge trips would have little effect on potential wave action impacts. Alternative 3 would also produce a temporary slight increase in wave action during installation of new bypass systems. Otherwise, there would be no change from current conditions under these alternatives.

Alternative 4—Dam Breaching

This alternative would expose sites that have been inundated for decades. While this would make cultural resources accessible for study and tribal use, it would also expose them to the fluctuations of a river with near-natural flow, erosion, vandalism, and trampling by animals. In the event of dam breaching, the Corps would conduct a comprehensive inventory to identify and assess cultural resource conditions and develop an appropriate resource management strategy to help protect these sites.

Native American Indians

The FR/EIS discusses the following Native American Indian tribes and bands whose interests and/or rights may be affected by the proposed Federal actions described in the FR/EIS:

Confederated Tribes of the Umatilla Indian Reservation

Confederated Tribes and Bands of the Yakama Nation of the Yakama Reservation

Nez Perce Tribe of Idaho

Confederated Tribes of the Colville Indian Reservation

Wanapum Band

Confederated Tribes of the Warm Springs Reservation of Oregon

Shoshone-Bannock Tribes of the Fort Hall Reservation

Shoshone-Paiute Tribes of the Duck Valley Reservation

Burns Paiute Tribe of the Burns Paiute Indian Colony

The Spokane Tribe of the Spokane Reservation

Coeur d'Alene Tribe

Kalispel Indian Community of the Kalispel Reservation

Kootenai Tribe of Idaho

Northwestern Band of the Shoshoni Nation.

Five tribes—the Nez Perce Tribe, the Confederated Tribes of the Umatilla Indian Reservation, the Yakama Nation, the Confederated Tribes of Warm Springs Reservation of Oregon, and the Shoshone-Bannock Tribes of the Fort Hall Reservation— provided specific input because of their close cultural and economic links to the salmon and the lower Snake River. Impacts to tribal circumstances may be viewed in terms of tribal ceremonial, subsistence, and commercial harvest of salmon, and tribal access to lands significant to the tribes.

A Tribal Circumstances report was prepared by a private consultant in association with the Columbia River Inter-Tribal Fisheries Commission. The following alternative analysis was derived from that report.

Tribal salmon harvest numbers presented in that report were based on preliminary PATH data weighted by its scientists and extended by the Drawdown Regional Economic Workgroup (DREW) Anadromous Fish Workgroup to represent all Snake River wild and hatchery stocks. Due to concerns associated with the weighting process, unweighted PATH results were used in all other analyses for this Feasibility Study.

Alternatives 1, 2, and 3—Existing Conditions, Maximum Transport of Juvenile Salmon, and Major System Improvements
According to the Tribal Circumstances report, Alternatives 1 and 2 offer limited hope of salmon recovery within a timeframe considered reasonable by the five tribes represented. The report does not address Alternative 3, but the impacts of Alternative 3 are likely to compare closely with those for Alternative 2. There would be no change in tribal land use under any of these alternatives.

Alternative 4—Dam Breaching
According to the Tribal Circumstances report, this alternative would produce 2.4 times more tribal harvest of Snake River wild salmon and steelhead stocks compared to Alternative 1 (2.6 times more harvest than Alternative 2). At the 50-year benchmark, estimated tribal wild and hatchery harvest would increase by about 1.7 million pounds. The Tribal Circumstances report concludes that only this alternative would redirect river actions toward significant improvements of the cultural and material circumstances of the tribes.

Approximately 14,000 acres of previously inundated land would be exposed under this alternative. The Tribal Circumstances report states that the tribes would benefit from implementation of this alternative by gaining access to lands once used for cultural, material, and spiritual purposes.

The EFFECTS

Transportation

The Federally maintained, 465-mile-long Columbia-Snake Inland Waterway is formed by the eight dams and lock facilities on the lower Columbia and Snake Rivers. Each of the eight dams maintains a system of locks with sufficient depth to accommodate commercial barges. This system provides inland waterborne navigation from Lewiston, Idaho, to the Pacific Ocean, carrying commodity shipments from inland areas of the Pacific Northwest as far away as North Dakota. Tugs, barges, log rafts, and recreational boats use the locks throughout the year.

Downriver commodity shipments are about nine times the volume of the upriver movements. This is primarily because of the large movements of grain bound for Columbia River export terminals. Columbia-Snake Inland Waterway transport accounts for approximately 40 percent of grain arriving at downriver export terminals.

Grain products, mostly wheat and barley, make up 78 percent of the shipments passing through the Ice Harbor navigation lock. Wood chips and logs are about 16 percent of the river transport loads and petroleum products account for about 3 percent. The yearly average of commodities traveling through the Ice Harbor navigation lock from 1987 through 1996 averaged about 3.8 million tons per year.

Any major changes to this mode of transportation would affect other regional transportation systems and the economics of shipping goods.

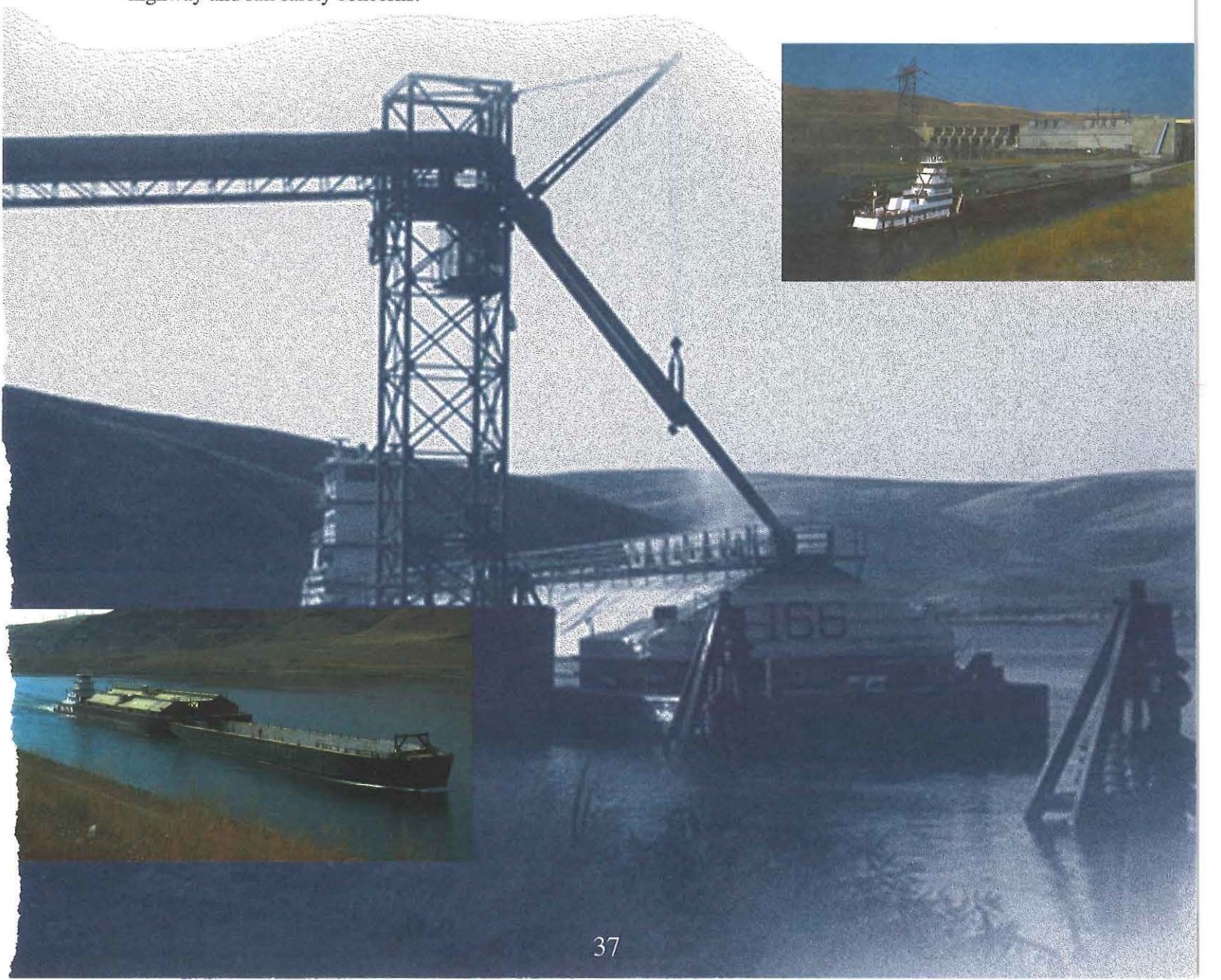
Alternatives 1, 2, and 3—Existing Conditions, Maximum Transport of Juvenile Salmon, and Major System Improvements

Under the first three alternatives, the navigation locks would continue to operate as they do now. None of these alternatives would cause major changes in commodity shipping patterns.

Alternative 4—Dam Breaching

This alternative would have a significant impact on commercial shipments because barge transportation would no longer be available through the lower Snake River. To move these commodities, including an estimated 126.6 million bushels of grain annually, additional truck or rail transportation would be needed. Commodities would be rerouted by truck to river elevators on the Columbia River or shipped by rail directly to export terminals. Transportation costs would increase because barge transport is less costly and, in some cases, more direct than other transportation modes. Major improvements in rail and highway capacity would be needed to accommodate the shift. The projected increase in cost per bushel of grain is estimated to range from 6 cents in Oregon to 21 cents in Montana. The costs for transporting other commodities are anticipated to increase by about 5 percent. The average annual cost associated with transportation would be approximately $38 million. This cost has been revised from the average annual cost of $24 million reported in the Draft FR/EIS. During review of the Draft FR/EIS independent reviewers and the public raised questions about the assumption that grain-handling capacity could be expanded and other infrastructure improvements could be made without upward pressure on average costs. In response to these concerns, marginal costs and revenue of infrastructure improvements were compared and costs in excess of marginal revenue (fees and other revenue from handling and transporting grain that would be diverted from the lower Snake River) were added to the National Economic Development (NED) costs of dam breaching.

Approximately 29 percent of the grain would likely be diverted to rail transport. This increase in volume would require improvements to railroad infrastructure in terms of mainline railroad upgrades, short-line railroad upgrades, additional rail cars, and increased export terminal rail car shortage. These improvements are estimated to cost from $50 million to $89 million. The rest of the grain would likely be moved by trucks. Breaching the dams would result in a decrease of about 1.9 million truck miles in Idaho (because grain would be shifted to rail transport), but there would be an increase of approximately 3.9 million truck miles in Washington (because trucks would carry grain the additional miles to reach the Columbia River ports). If the dams are breached, required highway improvements are estimated to range from $84 million to $101 million. River and country grain elevator improvements would also be required. The cost of these elevator improvements is estimated to range from about $60 million to over $352.3 million. The additional traffic, due to increased transportation of goods, could increase highway and rail safety concerns.



The EFFECTS

Electric Power Generation

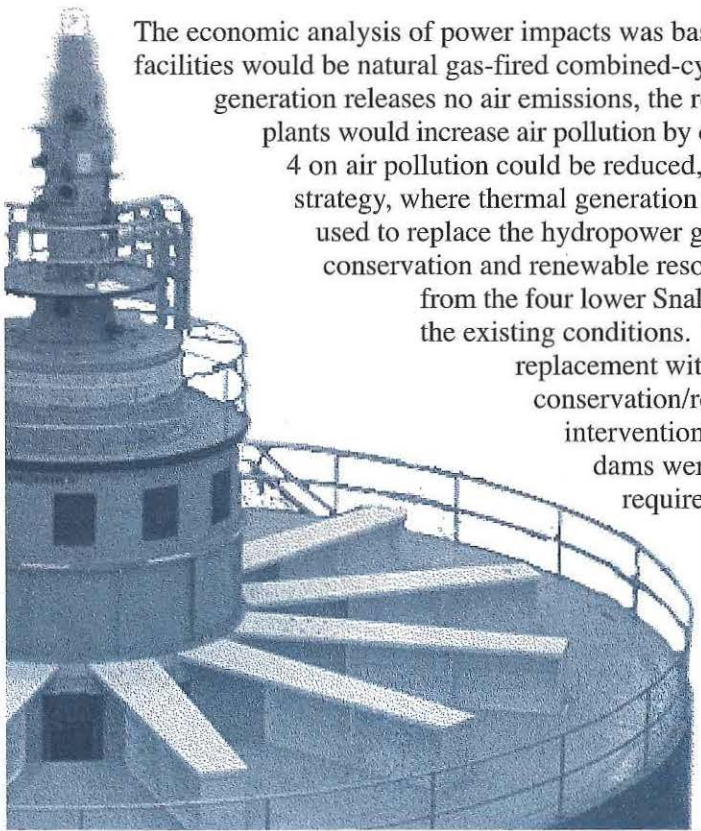
The Columbia River and its tributaries are extensively developed for hydroelectric power, with over 250 Federal and non-Federal dams constructed since the 1930s, including 30 major multi-use facilities built by Federal agencies. These facilities, on average, account for about 60 percent of total regional energy needs and 70 percent of total electric generating capacity. Hydropower generation has kept Pacific Northwest electricity rates low. Surplus hydropower is also an important export. The four lower Snake River dams have a peaking capacity of 3,033 megawatts, which accounts for approximately 5 percent of energy produced in the Pacific Northwest. Bonneville Power Administration distributes and markets hydropower generated by these facilities.

Alternatives 1, 2, and 3—Existing Conditions, Maximum Transport of Juvenile Salmon, and Major System Improvements

Under the first three alternatives, the dams would continue to produce hydropower. Hydropower generation from existing facilities could increase as projected by power needs. There are no changes anticipated in electricity rates resulting from actions under these alternatives.

Alternative 4—Dam Breaching

If the four dams were breached, the four lower Snake River hydropower facilities would no longer be operated or produce hydropower electricity. The loss of this approximately 3,033 megawatts of peaking capacity could require the construction and operation of alternative power sources. Lost hydropower could be replaced by a more expensive form of electric generation, which could result in increased costs of $251 to $291 million per year. The costs involved in replacing this electric power capacity could result in electric rate increases for residences and businesses in the Pacific Northwest. Depending on what facilities are built and how they are funded, residential electrical bills could increase from $1.20 to $6.50 per month. Pacific Northwest aluminum companies, which are extremely large consumers of electricity, could see average monthly increases between $170,000 and $940,000.



The economic analysis of power impacts was based on the assumption that any new replacement generating facilities would be natural gas-fired combined-cycle combustion (CC) turbine plants. Since hydropower generation releases no air emissions, the replacement of the hydropower generation with thermal-based plants would increase air pollution by over 4 million tons per year. To see if the effects of Alternative 4 on air pollution could be reduced, a study was done to evaluate a conservation replacement strategy, where thermal generation resources, renewable resources, or conservation could be used to replace the hydropower generation lost with dam breaching. It was determined that conservation and renewable resources could be used to replace the hydropower generation from the four lower Snake River dams and result in no net change in air pollution from the existing conditions. The costs would be similar to, but higher than, the replacement with natural gas-fired CC turbine plants. The implementation of conservation/renewables would, however, require considerable government intervention, including subsidies, and implementation long before the dams were breached. The CC plant replacement strategy would require almost no government intervention or subsidies.

Recreation and Tourism

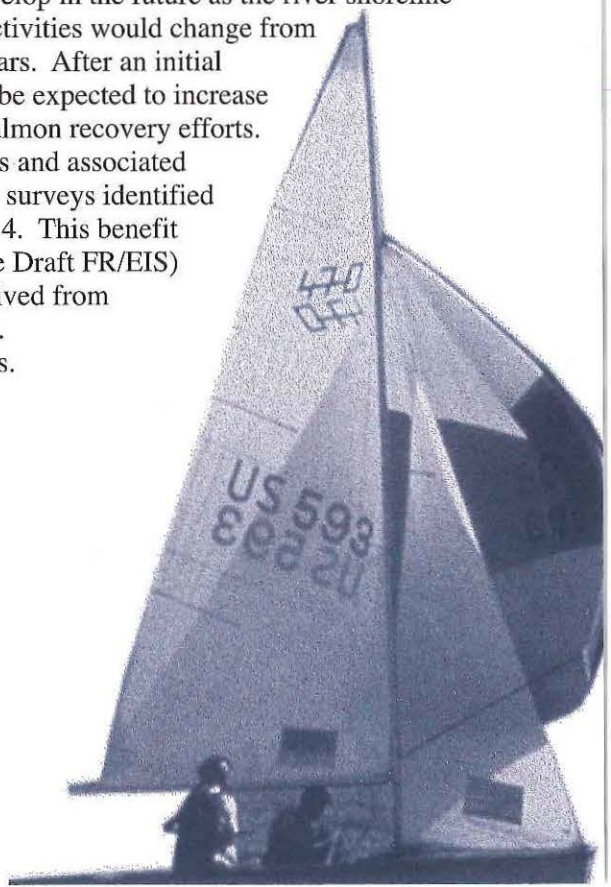
The lower Snake River, its reservoirs, dams, and adjacent shorelines offer both land- and water-based recreational activities. Water-based recreational activities include fishing, water-skiing, boating, windsurfing, and swimming. Boat launch ramps, beaches, marinas, and other facilities have been developed to support these activities. Land-based activities such as picnicking, camping, hunting, and hiking are also popular and take place at facilities along the reservoirs. The dams and reservoirs are also important recreational sites, receiving significant numbers of visitors throughout the year. Powerhouse tours and adult fish viewing are popular visitor activities at the dams. There are 33 developed recreational sites around the lower Snake River reservoirs. Approximately 2 million visitors use these facilities each year.

Alternatives 1, 2, and 3—Existing Conditions, Maximum Transport of Juvenile Salmon, and Major System Improvements

There would be little impact on recreation activities under these three alternatives. Current use patterns would generally continue, although the demand for recreation opportunities would likely increase as the regional population grows. Alternatives 2 and 3 could produce improvement in fishing-related opportunities and use of facilities if fish population levels increase.

Alternative 4—Dam Breaching

Breaching the four dams would change current developed recreation areas and dispersed recreation sites, as well as recreation activities and visitation. The existing reservoirs would be replaced by a river with near-natural flow. Some activities that occur on reservoirs, such as certain types of boating, fishing, and wildlife viewing, could also occur on a river with near-natural flow. However, 29 of 33 developed recreation areas would either be closed or would require extensive modifications. Many current dispersed sites dependent on water access or viewing would no longer be used, but new dispersed sites would develop in the future as the river shoreline stabilized and beaches and views developed. Water-based recreation activities would change from flat-water to river-oriented and use patterns would shift over several years. After an initial decrease in use, both recreational fishing and general recreation would be expected to increase within 10 years as the river is restored and if fish respond to regional salmon recovery efforts. Recreation use surveys were conducted to project the number of visitors and associated value under each alternative. The analysis based on the results of these surveys identified net average annual recreation benefits of $71 million under Alternative 4. This benefit reported in the Final FR/EIS was revised (down from $82 million in the Draft FR/EIS) after additional analyses were conducted in response to comments received from independent technical reviewers, the public, and government reviewers. This value does not directly correspond to local expenditures by visitors. Rather, it represents a measureof the utility that visitors would obtain from the near-natural river recreation experience.



The EFFECTS

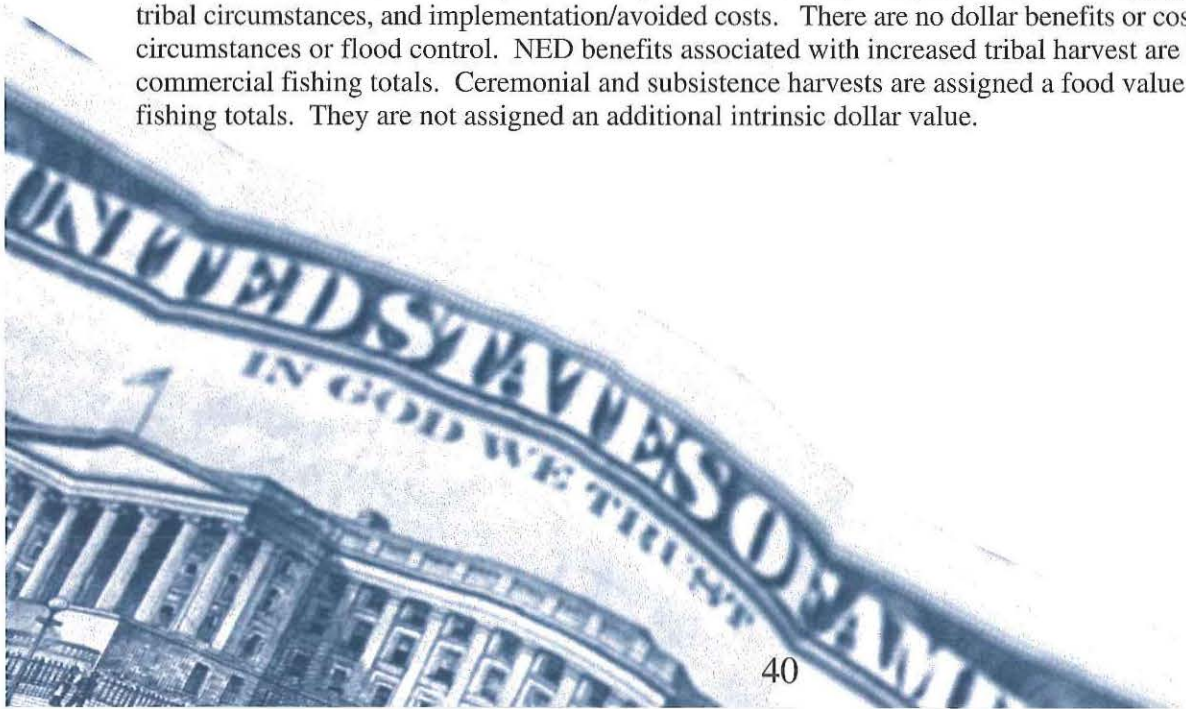
Economic Uses

Actions taken to improve fish passage and survival along the lower Snake River could have economic and social effects on local communities, the Snake River region, the Pacific Northwest, and the nation as a whole. The economic and social effects of actions related to the lower Snake River have been analyzed by numerous entities throughout the region. To reduce conflicting analyses and pool resources for a more efficient effort, the Corps convened the Drawdown Regional Economic Workgroup (DREW) to develop a combined economic and social analysis. Members of DREW included representatives of various Federal and regional agencies, tribal representatives, and other interested parties.

DREW conducted the technical analyses to assess the potential economic and social effects of the four alternatives. Primary areas of analysis included power, recreation, transportation, irrigation, water supply, commercial fishing, avoided costs, implementation costs, and tribal circumstances. The final analysis addresses potential economic and social effects at three geographic scales—national, regional, and local. National and regional effects are addressed in separate accounting stances. The National Economic Development (NED) account displays changes in the economic value of the national output of goods and services, while the Regional Economic Development (RED) account addresses changes in the distribution of regional economic activity. Local effects—specifically those to potentially affected local communities and tribes—are addressed under separate accounts. The results of the tribal analysis conducted as part of the Feasibility Study are discussed in the Native American section of this summary document (page 35). The results of the NED, RED, social, and community analyses are discussed in this section (Effects of Economic Uses) and the following section (Effects on Regional Economic Development, Social Resources, and Communities).

National Economic Development

The NED account addresses the net effects of a proposed action upon the nation. NED analysis is concerned only with economic efficiency at the national level. Economic gains achieved by one region at the expense of another region are not measured as NED benefits. NED costs and benefits are expressed in dollars. The NED analysis conducted for this study addresses power, recreation, transportation, water supply, commercial fishing, tribal circumstances, and implementation/avoided costs. There are no dollar benefits or costs presented or tribal circumstances or flood control. NED benefits associated with increased tribal harvest are included in the commercial fishing totals. Ceremonial and subsistence harvests are assigned a food value in the commercial fishing totals. They are not assigned an additional intrinsic dollar value.



Summary of Average Net Annual Economic Effects, 1998 Dollars in Thousands of Dollars at 6.875 percent Discount Rate

	Alternative 2	Alternative 3	Alternative 4
Costs			
Implementation Costs	-	(22,880)	(48,790)
Power	-	-	(271,000)
Transportation	-	-	(37,813)
Water Supply	-	-	(15,424)
Avoided Costs	-	(10)	-
Total Cost	-	*(22,890)*	*(373,027)*
Benefits			
Avoided Costs	-	-	33,570
Recreation	1,405	1,437	71,255
Commercial Fishing	160	158	1,486
Implementation Costs	3,460	-	-
Power	8,500	8,500	-
Total Benefits	*13,525*	*10,095*	*106,311*
Net Benefits	**13,525**	**(12,795)**	**(266,716)**

Notes:

1. These costs and benefits, calculated for a 100-year period of study extending from 2005 to 2104, are discounted using a 6.875 percent discount rate and converted to 1998 dollars.
2. Costs and benefits are presented for Alternatives 2 through 4 net of the base case (Alternative 1—Existing Conditions).
3. A positive monetary value indicates that the alternative being evaluated has a lower cost or greater benefit than Alternative 1—Existing Conditions. A negative monetary value (in parentheses) indicates that the evaluated alternative has a higher cost or lower benefit than Alternative 1—Existing Conditions. Positive monetary values, therefore, represent benefits, while negative values represent costs.

Source: Appendix I, Economics (Table ES-11).

NED costs are:

- Implementation costs, including all project-related construction and acquisition costs; interest during construction; and operation, maintenance, repair, replacement, and rehabilitation costs. Implementation costs also include water acquisition from U.S. Bureau of Reclamation, mitigation costs for fish and wildlife programs, and cultural resources protection (Alternatives 3 and 4)
- Cost increases associated with the shift from hydropower to more expensive forms of replacement power (Alternative 4—Dam Breaching)
- Transportation cost increases associated with the shift of barge-transported commodities to more costly truck and rail systems (Alternative 4—Dam Breaching)
- Construction/operation and maintenance costs for irrigation and water supply systems (Alternative 4—Dam Breaching)
- Avoided costs—costs incurred under Alternative 3—Major System Improvements that would not be incurred under Alternative 1—Existing Conditions, or under Alternatives 2 and 4 (turbine maintenance and replacement, lock and dam maintenance, etc.).

NED benefits are:

- Costs incurred under Alternative 1—Existing Conditions that would be avoided under Alternative 4—Dam Breaching. These include operations, maintenance, repair, and replacement costs, as well as the costs associated with the rehabilitation of existing infrastructure
- Recreation benefits from increased fish runs and the shift to a near-natural river
- Commercial fishing benefits from increased fish runs
- Implementation costs for fish-related improvements that would not be incurred under Alternative 2—Maximum Transport of Juvenile Salmon
- Power benefits from increases in system hydropower generation (Alternatives 2 and 3).

Passive Use Estimates

Economists generally recognize that there is a benefit associated with knowing that a resource exists, even if no use is made of it. These values are typically referred to as passive use, non-use, or existence values. There are, however, disagreements about how to measure passive use values. Although DREW initially requested that an original passive use survey be conducted for this study, this was not possible. Passive use values were estimated by transferring and adapting values from other passive use studies. Corps Planning Guidance does not allow passive use values to be included in NED analysis. However, since these values could be useful as a social indicator, they were calculated as part of the Feasibility Study to provide additional information for the decision maker to consider.

The passive use value estimates for salmon were calculated on a per fish basis based on the preliminary PATH results, which have been updated since the passive use analysis was completed. Values were calculated for Alternatives 2 through 4 net of Alternative 1. Under Alternative 2, net gains over Alternative 1 were estimated to range from $0.25 million to $4.02 million per year. Salmon and steelhead runs projected for Alternative 3—Major System Improvements were less than those projected for Alternative 1—Existing Conditions, resulting in an estimated net average annual reduction ranging from about $0.7 million to about $31.1 million per year. Passive use values for Alternative 4—Dam Breaching ranged from $22.8 million to $301.5 million per year. The passive use value of a near-natural lower Snake River was estimated at $420 million per year.

Using the more recent 1999 PATH model results would lower the estimated passive use value for Alternative 4 and reduce the difference between Alternatives 1 through 3 and Alternative 4. The passive use values associated with the near-natural river would not change.

Regional Economic Development, Social Resources, and Communities

The RED account measures the impacts that the types of economic effects addressed in the NED account would have upon the regional economy. Direct changes in one sector of the economy have indirect and induced effects distributed throughout the regional economy. Economic activity within one industry ("direct" activity) generates activity in others as firms purchase services and materials as inputs ("indirect" effects) and employees spend their earnings within the local economy ("induced" effects).

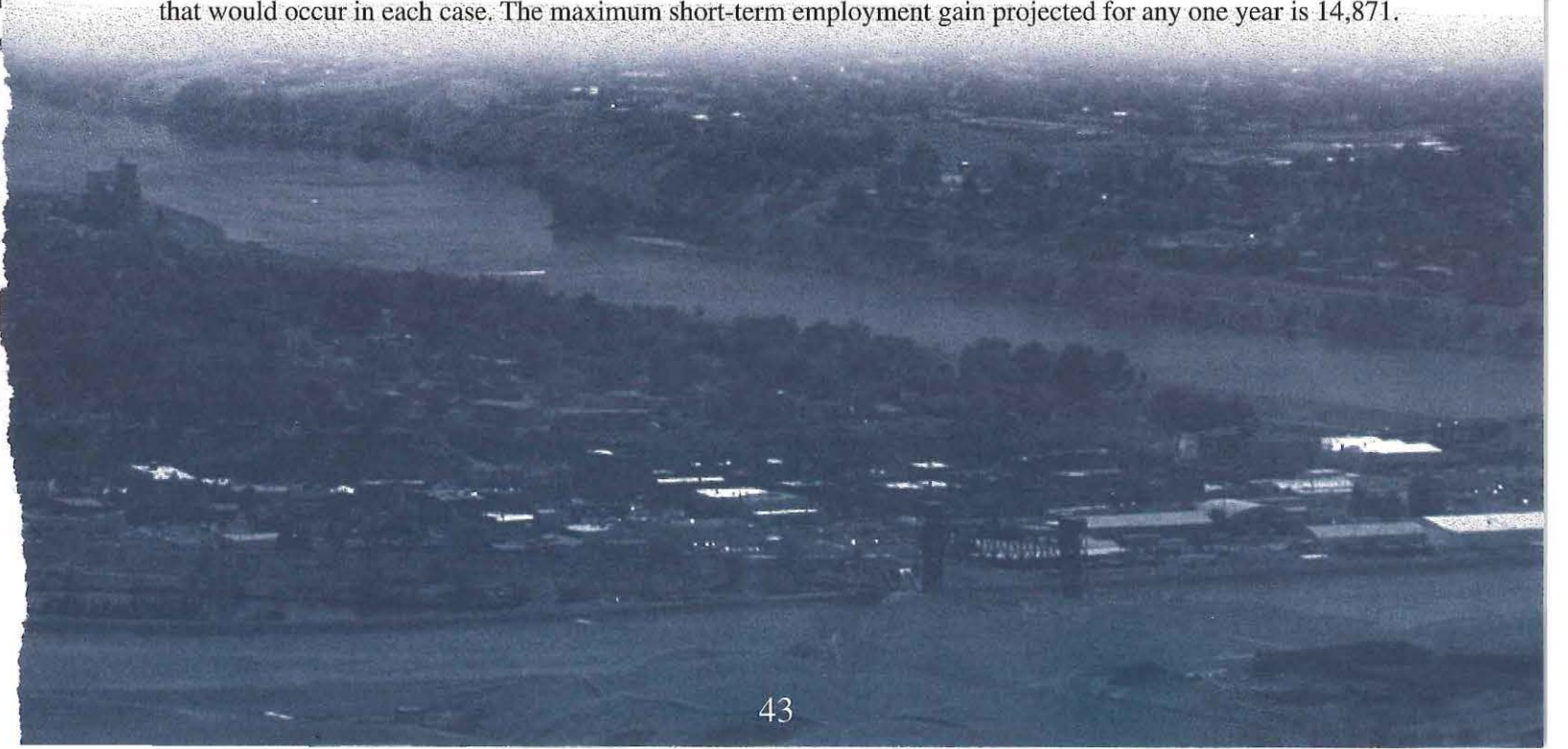
The following discussion addresses the regional effects that the proposed alternatives would have upon the lower Snake River region and the Pacific Northwest. This section also summarizes the potential effects of the proposed alternatives upon local communities and low income and/or minority populations.

Lower Snake River Region

Regional impacts under Alternatives 2 and 3 would be relatively minor. There could be minor job gains associated with implementation costs, avoided costs, and anadromous fish harvest.

Alternative 4—Dam Breaching would result in a number of jobs in the region being permanently lost, with others permanently gained. Job losses are anticipated as a result of projected reductions in irrigated farmland, reductions in spending by the Corps, and the loss of barge transportation and cruise ship operations. Permanent job gains are expected to result from replacement power facilities, changes in recreation activity, and long-term implementation expenditures. Permanent job losses are projected to be larger than permanent gains, with a net long-term loss of 1,372 jobs in the lower Snake River region.

Breaching the dams would generate a substantial number of short-term jobs in the lower Snake River. These jobs are primarily expected to occur as a result of construction activities associated with replacement power facilities, recreation facilities, transportation infrastructure, pump and well modification, and project implementation. Relatively large short-term employment is expected to be associated with power plant construction (5,572 jobs) and transportation facilities construction (6,982 jobs). These totals represent the maximum annual employment that would occur in each case. The maximum short-term employment gain projected for any one year is 14,871.

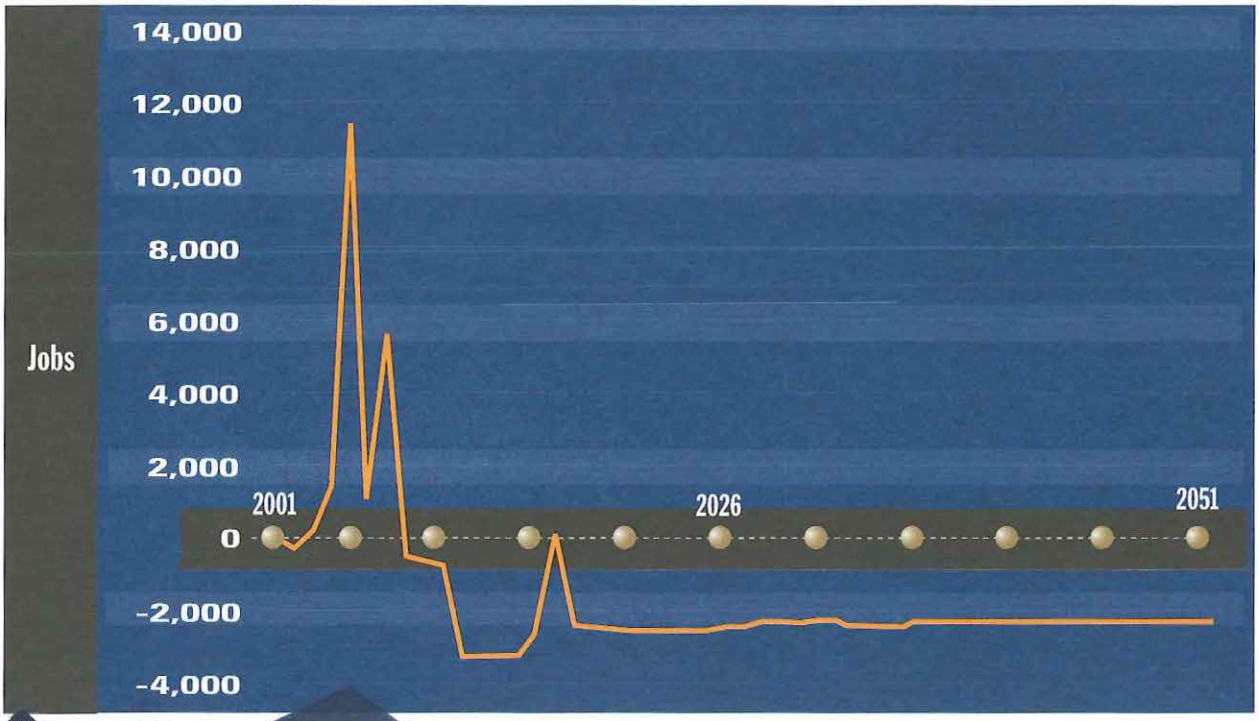


Pacific Northwest

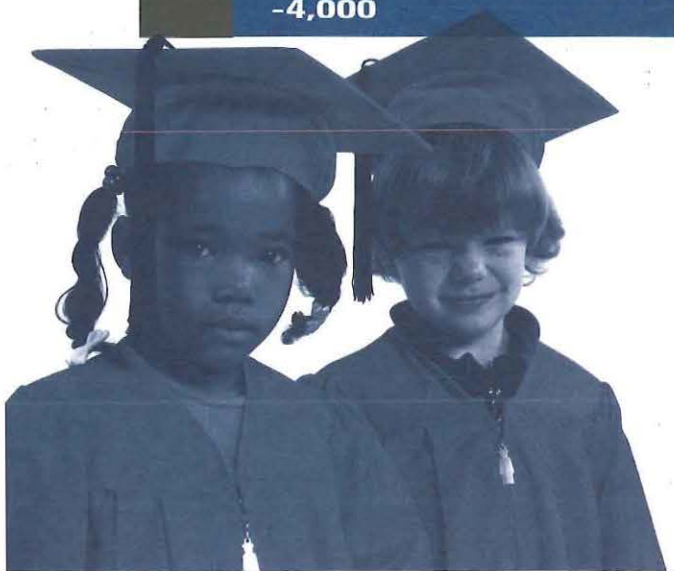
The preceding section only addresses those changes that are expected to occur in the lower Snake River area. Alternative 4—Dam Breaching would also have effects that would either occur throughout the Pacific Northwest or in an area of the region outside of the lower Snake River area. Additional jobs would be permanently lost, with others permanently gained. Job losses would mainly be associated with projected increases in electricity bills (2,382 jobs). Permanent job gains are expected to result from replacement power facilities (located outside the lower Snake River area), changes in transportation, and changes in commercial and ocean recreational fishing. There would also be short-term job gains associated with construction activities that would take place outside the lower Snake River area (power plant construction and railcar storage construction).

The overall regional impacts of Alternative 4—Dam Breaching for the Pacific Northwest are illustrated in the figure below, which shows the projected annual net change in employment for project years 1 through 50. This figure illustrates that the maximum annual net employment gain for the region as a whole would be 11,384 jobs in project year 5. In the long term, the projected number of permanent job losses is expected to be larger than permanent gains, with a net long-term loss of 2,290 jobs in the region as a whole.

Net Annual Total Regional Employment Change (2001 to 2051)



Source: FR/EIS Appendix I, Economics, Figure 6-4.



Communities

Under Alternatives 2 and 3, effects on communities would generally be minor. Some communities upriver may be adversely affected by lower probabilities of salmon recovery. Uncertainty surrounding the future of the dams may negatively affect some communities. Coastal communities could receive minor economic benefits from increased fish runs if salmon returns increase significantly.

Under Alternative 4, upriver communities would likely gain jobs from recreation and tourism associated with a near-natural river and increased fish runs. Job losses may occur in the forest products sector as a result of the loss of river navigation. Communities in the reservoir subregion would likely experience a net decrease in employment due to reductions in Corps employment and increased pressure on family farms. Downriver communities would lose jobs if farms currently irrigated from the Ice Harbor reservoir go out of business. These losses would be partially offset by gains in transportation-and power generation-related employment. Coastal communities would receive economic benefits from increased fish runs.

Adverse community effects perceived by residents of communities in the lower Snake River region include decreases in population, tax revenues, businesses, property values, agricultural base, decreased quality of schools, as well as increased traffic congestion and business failures. Other lower Snake River region communities with more tourist-oriented economics perceived benefits. Residents of Southern Idaho communities perceived impacts ranging from somewhat beneficial to very adverse. Beneficial effects were associated with increased fish runs. Negative effects included increased transportation and utility costs.

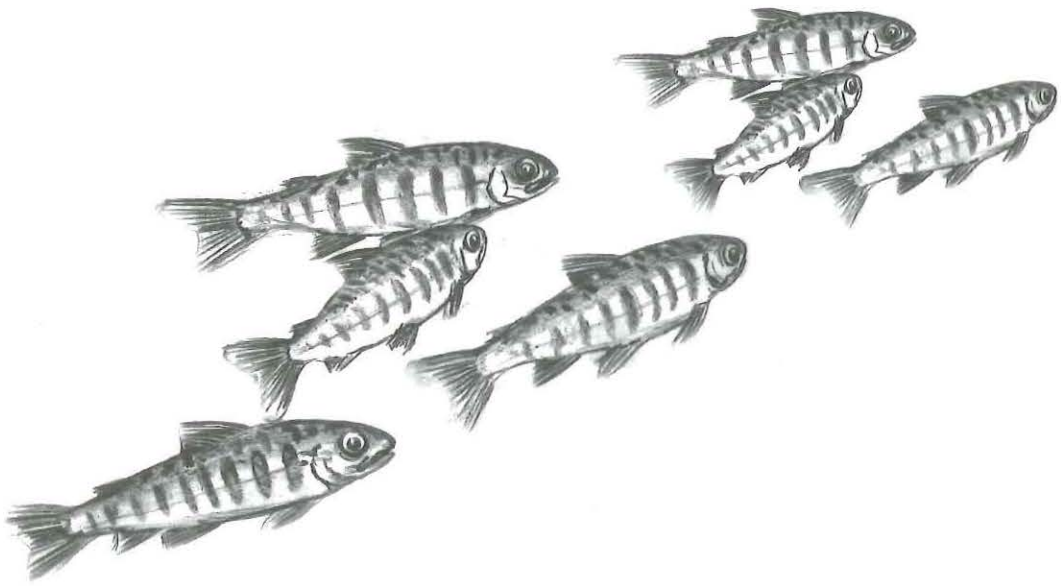
Low Income and/or Minority Populations

Tribal representatives stated that Alternatives 1, 2, and 3 would do "little or nothing" to correct the cumulative inequities that tribes have suffered from construction and operation of the four dams. Under Alternative 4—Dam Breaching, increased salmon runs would benefit the tribes, as would the exposure of approximately 14,000 acres of currently inundated lands. Conversely, Hispanic workers employed on farms irrigated from the Ice Harbor reservoir would be disproportionally affected if these farms go out of business as a result of Alternative 4—Dam Breaching.

The Recommended Plan
(Preferred Alternative)

Based on a thorough examination of the best available biological, economic, social, environmental, and other related information, the Corps has selected a recommended plan (preferred alternative). The recommended plan is a modified version of Alternative 3—Major System Improvements (Adaptive Migration), with increased focus on adaptive migration capabilities. The alternative analysis and evaluation of impacts summarized in this document and described in detail in Chapter 5 of the Final FR/EIS include all components or actions contained in the recommended plan.

The recommended plan combines a series of the structural and operational measures described and evaluated in the FR/EIS for Alternative 3 that are intended to improve fish passage through the four lower Snake River dams. This alternative provides the maximum operational flexibility for juvenile fish passage; it optimizes in river passage when river conditions are best for fish and optimizes the juvenile transportation program when that operation is best for fish. It also allows for optimized combined passage when necessary for spread-the-risk operation or to conduct needed research. These improvements are not only intended to reduce direct mortality associated with dam passage, but also to reduce stress on juvenile fish, reduce total dissolved gas, and improve operational reliability.



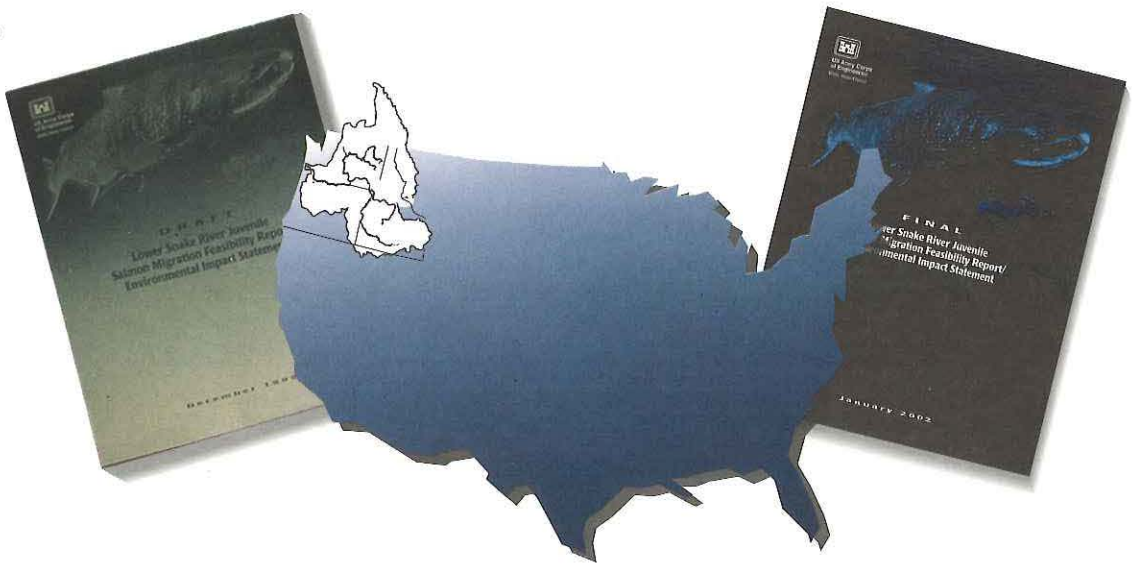
Selection of the Recommended Plan
(Preferred Alternative)

The rationale for selecting the recommended plan (preferred alternative) is a composite of analyses, information briefings, evaluations, technical expertise, and comments concerning the factors evaluated as part of the Feasibility Study. The selection of the recommended plan resulted from the evolution and development of the extraordinary collection of scientific data and information presented in the FR/EIS, its associated appendices, and supporting research materials and reports. The Corps believes the information collected represents the best available science and information to date.

The key factors supporting the selection of this alternative were:

- High current juvenile and adult salmon and steelhead survival rates through the Lower Snake River Project
- Proposed improvements provide the maximum flexibility of all alternatives in terms of optimizing both in river migration conditions and transport conditions
- Lesser magnitude of uncertainty in current biological information
- Minimal economic impacts to users
- Compatibility with NMFS and USFWS 2000 Biological Opinions
- Minimal effects to other environmental resources.

Other factors considered in this selection include, but were not limited to, those effects associated with social and community resources, Native Americans, technical feasibility, effectiveness of structural modifications, regional acceptability, public comments, and length of implementation.



Components of the Recommended Plan (Preferred Alternative)

The structural and operational measures identified for the recommended plan (preferred alternative) are considered to be technically feasible, implying that the Corps has the capability to design, construct, and operate these measures.

Structural Measures

The structural improvements associated with the recommended plan can be placed into two categories. The first category is near-term improvements, consisting of modifications to existing systems using current technology. These require little or no additional study or research. Near-term improvements can be implemented relatively quickly (within the first 5 years after the final Record of Decision is signed). The second category is long-term improvements. These improvements require additional evaluation, prototype development, and testing. Therefore, these improvements take more time to put into place. The actual determination on if, where, how, and when these long-term improvements are implemented would be contingent on the prototype testing and evaluation results. Implementation would also be dependent on a continued need for improvements in the hydropower system.

Near-term improvements proposed are:

- Complete installation of spillway flow deflectors at Lower Monumental and Little Goose
- Upgrade auxiliary fish ladder water supply systems at Ice Harbor, Lower Monumental, Little Goose, and Lower Granite
- Modify extended submerged bar screens at Little Goose and Lower Granite
- Use additional barges for transport with upgraded mooring facilities at Lower Granite.

Long-term improvements proposed are:

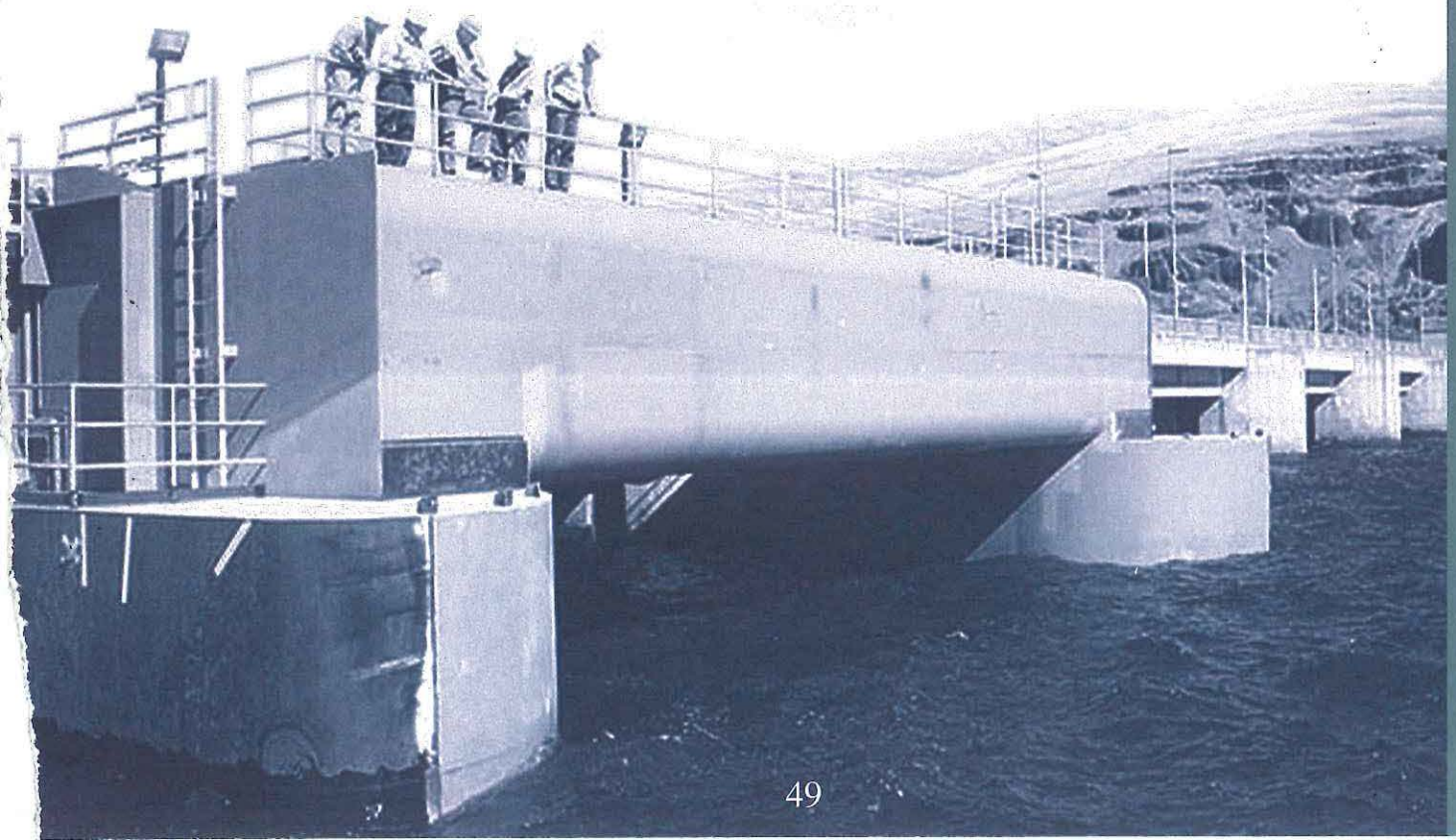
- Install new juvenile facility at Lower Granite
- Install new cylindrical dewatering screens at all dams
- Replace submerged traveling screens with extended-length submerged bar screens at Ice Harbor and Lower Monumental
- Install new wet separators at Lower Monumental and Little Goose
- Install turbine improvements (as powerhouses are rehabilitated)
- Install removable spillway weirs with or without behavioral guidance structure at all four dams
- Install two-unit powerhouse surface bypass with or without dewatering system at Lower Monumental and Lower Granite
- Build full-length powerhouse occlusion structure at Little Goose.

Operational Measures

In addition to current operational measures and continued participation in ongoing monitoring, evaluation, and regional coordination programs, there are two principal areas where potential future operational changes for the lower Snake River need to be further investigated. These areas are:

- Develop and implement biological rules for flow augmentation
- Develop and implement biological rules for smolt transportation, including optimal spill for salmon.

The Corps plans to coordinate with Federal agencies to establish these specific rules for both smolt transportation and flow augmentation. All such operational rule development will continue to be regionally coordinated in a manner consistent with the NMFS 2000 Biological Opinion.



Comparison with Other Alternatives

Sensitivity and trade-off analyses were conducted and considered for each alternative.

During these analyses **Alternative 1—Existing Conditions** was eliminated because it failed to meet the biological requirements in the NMFS 2000 Biological Opinion. Due to the major uncertainty related to the delayed mortality of transported fish, **Alternative 2—Maximum Transport** was ranked lowest of the remaining alternatives because it maximized the collection and transport of juvenile salmon and steelhead.

Although **Alternative 4—Dam Breaching** had a number of positive benefits, it was ranked lower than the recommended plan (preferred alternative) for the reasons including, but not limited to, the following:

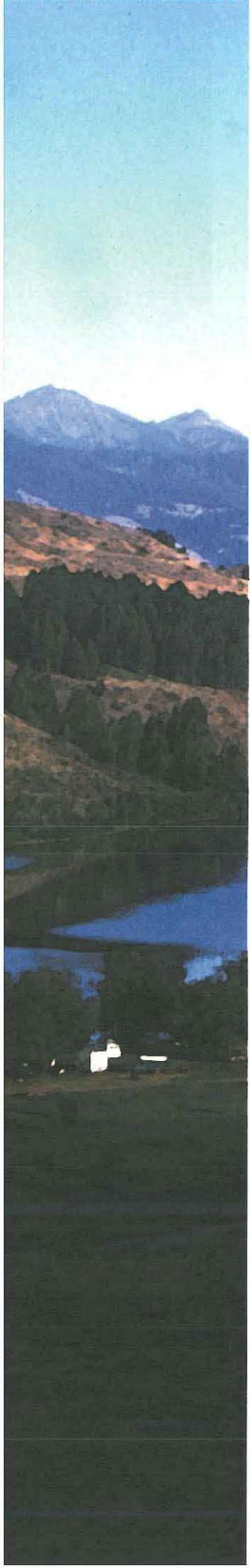
- **Determination that breaching is not necessary at this time to recover listed salmon and steelhead stocks (breaching has not been determined necessary at this time by the NMFS 2000 Biological Opinion)**
- **Maximum negative economic impacts to current system users (i.e., loss of power, navigation, and irrigation)**
- **High sediment movement in the short term**
- **Uncertainty of possible harmful effects associated with the potential resuspension of contaminants in sediments**
- **High degree of uncertainty in the implementation and longest period before positive benefits to listed stocks**
- **Most negative impact to low-income and minority populations.**

Summary Comparison of the Effects of the Alternatives

Resource List	Alternative 2 Maximum Transport	Alternative 3 Adaptive Migration	Alternative 4 Dam Breaching (Short Term)	Alternative 4 Dam Breaching (Long Term)
Aquatic Resources–Anadromous Fish	●	●	○	●
Aquatic Resources–Resident Fish	●	●	○	●
Water Resources				
Sediment	●	●	○	○
Temperature	●	●	●	●
Dissolved Gas	●	●	●	●
Contaminants	●	●	○	●
Terrestrial Resources	●	●	○	●
Air Quality				
Fugitive Dust Emissions	●	●	○	●
Transportation Emissions	●	●	●	●
Replacement Power Emissions	●	●	○	○
Water Supply/Irrigation	●	●	○	○
Cultural Resources	●	●	●	●
Native American Indians (Tribal values)	●	●	●	●
Transportation (Navigation)	●	●	○	○
Electric Power	●	●	○	○
Recreation and Tourism	●	●	○	●
Implementation/Avoided Costs (Economics)	●	○	○	○
Social Effects	●	●	○	○

● A positive effect ● Minimal or notable change in effect ○ A negative effect

Source: Condensed from Table 6-14 of Final FR/EIS, which also includes comparisons for lamprey, bull trout, traffic safety, geological resources, aesthetic resources, etc.



Consistency with Planned Regional Salmon Recovery Efforts

Of all the alternatives investigated in the FR/EIS, the recommended plan (preferred alternative) most closely matches recommendations in the NMFS 2000 Biological Opinion for the Lower Snake River Project. The NMFS 2000 Biological Opinion concluded that dam breaching on the lower Snake River is not necessary at this time, but reserved this action as a contingency management alternative if the listed stocks continue to decline in the near future (2005 to 2008). The Corps' selection of a modified version of Alternative 3—Major System Improvements (Adaptive Migration) as the recommended plan (preferred alternative) is consistent with this conclusion. The plan includes implementation of the actions applicable to the Corps as recommended in the NMFS 2000 Biological Opinion and the USFWS 2000 Biological Opinion for system operations, configuration measures, habitat restoration, and continued research and monitoring activities (or alternative measures that result in achieving the current or revised established performance standards).

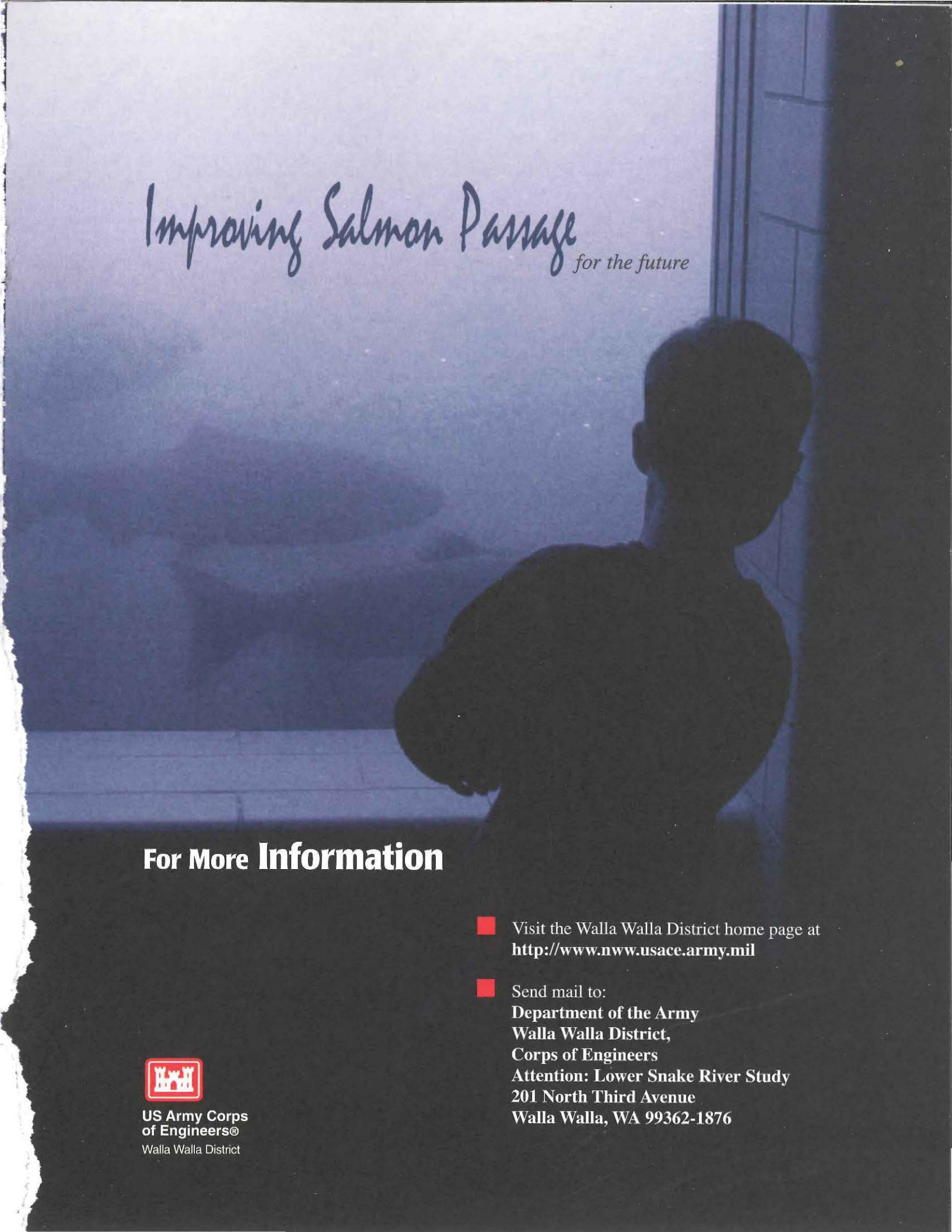
In implementing the Biological Opinions' lower Snake River actions, the Corps will also contribute to the attainment of the goals identified in the *Conservation of Columbia Basin Fish: Final Basinwide Salmon Recovery* dated December 2000. This strategy was developed by several Federal agencies (including the Corps) as part of the Federal Caucus. It is a comprehensive, long-term plan to recover 12 anadromous fish stocks and other listed species (i.e., bull trout and sturgeon) in the Columbia-Snake River Basin.

Where Do We Go From Here?

A final Notice of Availability will appear in the Federal Register indicating that the Final FR/EIS is ready for release to the public. The public will have at least 45 days to consider the recommendation and the rationale before a Record of Decision (ROD) is signed. During the preparation of the ROD, the Corps will consider new data, science, objections, comments, or opinions brought forward to the Corps during the 45-day period.

The Final FR/EIS, including the recommended plan (preferred alternative) and ROD, will be forwarded to the Northwestern Division Engineer for approval and signature. Since the recommended plan (preferred alternative) is consistent with existing project authorities and does not require additional Congressional authorization, the Division Engineer is slated as the signatory of the ROD. However, many of the proposed actions will be included in the Corps' regular appropriation and budget process, which provides opportunity for input from Congress.

The short-term and long-term actions described in the recommended plan (preferred alternative) will be folded into the existing processes for consideration and coordination with the Regional recovery efforts, as they proceed towards implementation. Any further National Environmental Policy Act documentation that is needed will be completed as the specifics and details of construction and implementation, etc., become available on future proposed actions.



For More Information

- Visit the Walla Walla District home page at **http://www.nww.usace.army.mil**
- Send mail to:
  Department of the Army
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For More Information on

Improving Salmon Passage

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