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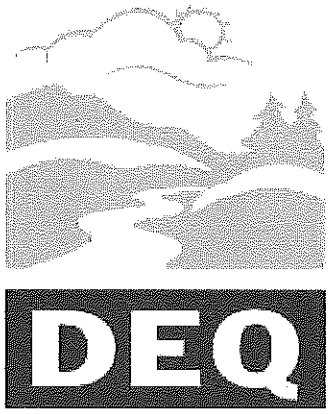
OREGON
ENVIRONMENTAL QUALITY
COMMISSION MEETING
MATERIALS 08/09/2001



State of Oregon
Department of Environmental Quality

Strategic Planning & Measures Topic
EQC Meeting, August 9th, 2001

Topic Objectives:

- Discuss DEQ's Planning & Budgeting Process Roadmap for a revised *Agency Strategic Plan* that incorporates executive measures.

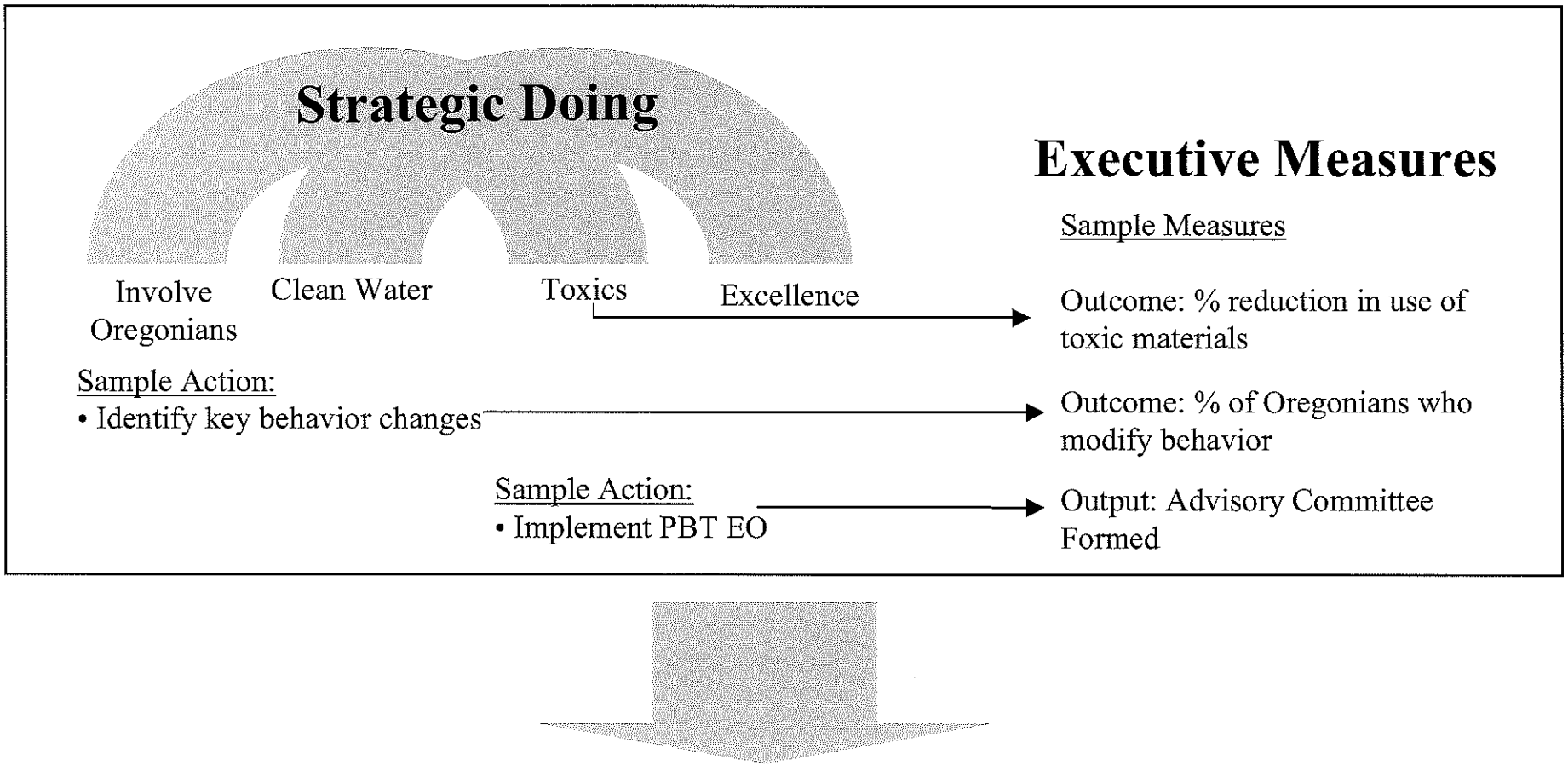
- Review DEQ's planning progress to date and solicit Commission feedback on the draft key actions.

Agenda:

Time	Activity
2:00-2:10 pm	I. Introductions & Agenda Review
2:10-2:30 pm	II. DEQ's Planning & Budgeting Process Roadmap • Steps in the Strategic Planning Process • Integration of Executive Measures
2:30-2:55 pm	III. Key Actions for Involving Oregonians • Description and justification • EQC discussion on proposed actions
2:55-3:20 pm	Key Actions for Clean Water
3:20-3:35 pm	(Break)
3:35-4:00 pm	Key Actions for Toxics
4:00-4:20 pm	Key Actions for Performance and Product Excellence
4:20-4:30 pm	IV. Meeting Wrap-up & Next Steps

Meeting Facilitators: Helen Lottridge & Dawn Farr

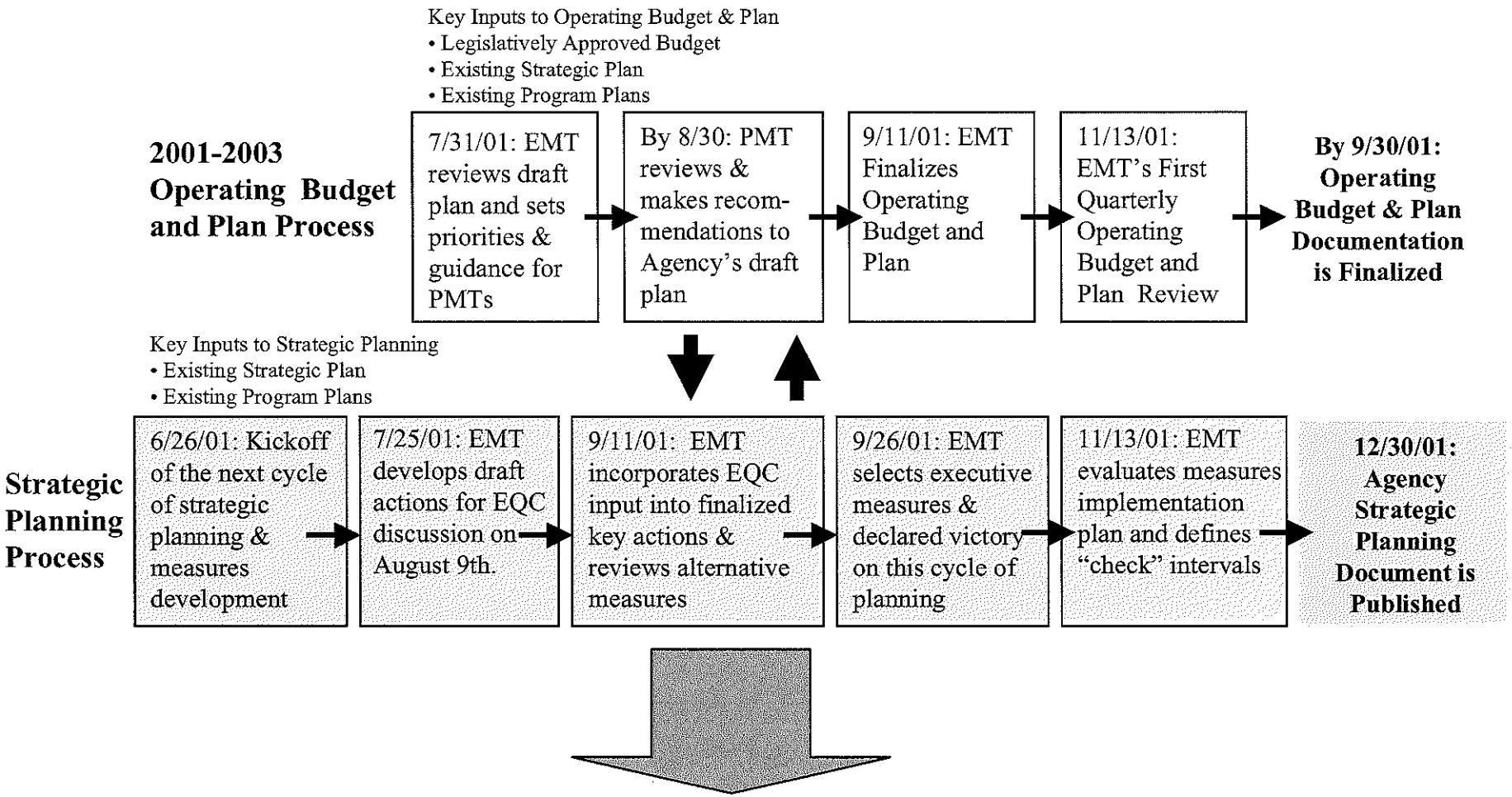
DEQ's Agency Strategic Plan



Get the "Right" Things Done

Improved alignment between Planning & Doing

Planning & Budgeting Process Roadmap



Starting in January 2002:

- **2003-2005 Legislative Concept Development**
- **2003-2005 Budget Development**
- **2002-2004 PPA Development**

Strategic Planning Discussion Document
Environmental Quality Commission Meeting
August 9th, 2001

Strategic Priority: Increasing opportunities for Oregonians to participate locally to prevent and solve environmental problems

Definition & Justification:

This priority surfaced in response to a core belief that citizens want to take action to improve their own communities. Further, environmental protection is more effective if it is based where there is the greatest concern, which supports our emphasis on community based environmental actions. DEQ's vision is to "work cooperatively with all Oregonians for a healthy sustainable environment." Given this, DEQ should prioritize efforts that give citizens and communities the tools, information and assistance they need to succeed.

Proposed Actions:

1. Create and carry out initiatives that promote personal behavior changes that help to protect the environment.

2. Develop and implement community initiatives that solve specific local environmental problems.

3. Provide more environmental information to Oregonians.

Strategic Planning Discussion Document
Environmental Quality Commission Meeting
August 9th, 2001

Strategic Priority: Protecting Oregon's Water

Definition & Justification:

Historically water pollution control has been directed at industry and municipal discharges, but this work is not sufficient to protect Oregon's water. We need to work on other sources of pollution, repair riparian damage for healthy aquatic life and engage Oregonians in changing individual behaviors. In July, the EMT expanded this priority from "rivers and streams" to "Oregon's water" to include groundwater and underground injection control regulation.

This priority presents a special challenge in determining where to draw the line between program priorities and the bigger picture Agency strategic direction. It is the only priority aligned with a specific program. With the new scope of this priority, protecting all water uses & sources, the EMT's initial discussion led to a broad list of proposed actions.

Proposed Actions:

1. Promote clean rivers & streams through continuing to adopt a watershed approach.

2. Keeping clean water clean and maintaining water quality at required beneficial uses.

3. Proactively partner with other agencies and interested stakeholders to improve integration of concurrent water quality management efforts.

Strategic Planning Discussion Document
Environmental Quality Commission Meeting
August 9th, 2001

Strategic Priority: Protecting people's health from toxics

Definition & Justification:

Human exposure to toxic chemicals is of increasing concern in Oregon today. People are exposed to toxics through many sources such as chemical emissions from cars, trucks, and industrial plants; or through the food chain where persistent and bio-accumulative toxics (PBTs) can appear. There is information available on some known types of persistent toxics, but there is a need for more accurate, credible, and user-friendly information so Oregonians might be better informed about the potential health impacts.

Toxics are a Governor's priority and an Executive Order on PBTs was signed last year. DEQ has assigned resources to the development and implementation of the Order. Further, all DEQ programs have begun developing strategies for preventing and reducing toxic emissions.

Proposed Actions:

1. Prevent continued exposure to persistent bioaccumulative toxics (PBTs) through education and the elimination of specific PBTs such as mercury.

2. Reduce sources of hazardous air pollutants by developing a state hazardous air pollutants program.

3. Clean up toxics from past practices.

Strategic Planning Discussion Document
Environmental Quality Commission Meeting
August 9th, 2001

Proposed Strategic Priority: Excellence in Performance and Product

Definition & Justification:

Stephanie Hallock proposed the addition of a new strategic priority that addresses the need for excellence in all that we do. The EMT supports the idea; however, the concept is still in the development stage. This priority provides the opportunity to reinforce the importance of service delivery excellence and high product quality. The actions selected should improve critical internal processes and operations that affect Agency performance.

Proposed Actions:

1. Recognize and support managers in improving their management practices, making "management" a priority at DEQ.

2. Address environmental problems holistically by implementing the ten cross-program management recommendations.

3. Develop our information management systems to support better management decision making, electronic commerce and information accessibility.

4. Institutionalize new business practices characterized by quality customer service, responsiveness and product excellence.

CROSS-PROGRAM MANAGEMENT DIRECTION

Management Action #1: Let's declare victory. Let's recognize the considerable improvements in program implementation that we have accomplished in the past seven years, and build upon the strengths we gained with the 1993 reorganization. Status: Done.

Management Action #2: Rely more on environmental outcomes as measures of our success. Tracking environmental outcomes will help us keep us focused on our overall mission, be more creative, and look beyond program boundaries to solve problems. DA Lead: Mary Abrams

Management Action #3: Integrate geographic priorities into the next round of Strategic Planning. This was a missing piece in our previous strategic planning, and will help ensure that we address problems that may not fall neatly into one program. DA Lead: Neil Mullane

Management Action #4: Account for Cross-Program and other "homeless" activities as part of workload planning. Let's acknowledge the importance and priority of these activities by including a percentage of each employee's work plan for those activities. DA Lead: Kerri Nelson

Management Action #5: Provide more budget flexibility for Regional Administrators to address local problems and issues. Whether it is for unanticipated problems, or cross-program geographic initiatives, we need to provide the ability for Regional Administrators to mobilize resources in their regions. DA Lead: Mike Llewelyn

Management Action #6: Designate the EMT as the central forum for addressing cross-program issues, with the Regional Management Teams designated as the cross-program forum for each region. Provide clear expectations, procedures, and accountability for ad hoc cross-program teams that are then assigned to address these cross-program issues. DA Lead: Paul Slyman

Management Action #7: Incorporate collaboration and teamwork skills as an integral part of our hiring, performance evaluation, and training practices. Changing the agency culture and our way of doing business requires a different skill set than we have relied upon in the past. DA Leads: Sally Puent and Joni Hammond

Management Action #8: Develop and invest in the technology to help the Department utilize information in an integrated fashion. We recommend that the Department vastly improve integration of data storage and access, development of GIS systems, and expanded use of the internet and intranet. DA Lead: Helen Lottridge

Management Action #9: Implement integrated inspection and technical assistance programs targeted at small businesses. Consolidating or "bundling" some of the education and assistance efforts will not only make these efforts more effective, but also save resources. DA Lead: Anne Price

Management Action #10: Assign a task force to look at possible efficiencies from consolidating various administrative functions at Headquarters. Each program at Headquarters has its own procedures and systems for billing, reporting, and tracking. We should be looking at opportunities to increase our efficiency in these areas. DA Lead: Andy Ginsburg

Here are my suggestions for "headline grabbing" (ok, a bit too dramatic) goals.

1. "No more wastewater" - By 2020, all municipal treatment plants in Oregon will treat at least 50% of their wastewater flows to levels that allow for direct "plumbing" into non-potable water supply infrastructure to provide supplemental water supply.

(Short term "objectives" would need to start this biennium with advisory committee, redrafting of rules, guidelines, and policies to eliminate any current real or perceived barriers. As the years go by we would facilitate through SRF eligibility, preferential interest rates etc. the process of working with communities to a more sustainable and "co-managed" water quality/quantity intrafrastructure)

2. Eliminate the discharge of PBT's from regulated industrial and municipal treatment plants by 2010.

This objective would line up with the Governor's PBT EO, our theme of protecting Oregon's water quality as well as protecting Oregonian's health. This would provide a tangible goal that would result in new water quality criteria, new permit limits, higher eligibility ratings for SRF loans (i.e. if a muni is going to develop a treatment process to remove or otherwise manage PBTs to "zero discharge", the "points" for SRF go up) as well as revisions to pretreatment regulations.

These two strategic goals would have a profound effect on the administration of the Water Quality Program and would result in tremendous benefit to Oregonian's.

Mil

State of Oregon

Department of Environmental Quality — Memorandum

To: Environmental Quality Commission **Date:** July 24, 2001

From: Mikell O'Mealy

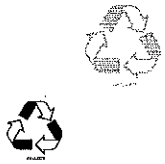
Subject: August 9-10 EQC Meeting

Hello. Enclosed are your materials for the upcoming August 9-10 EQC meeting in Enterprise, including an itinerary with travel and meeting details.

Also enclosed, is a recent article from the Science section of The Oregonian on monitoring aquatic insect populations to assess stream health. The article features the work of Rick Hafle, DEQ Biomonitoring Coordinator, and new stream survey efforts launched as part of the Oregon Plan for Salmon and Watersheds. During our year 2002 EQC meetings, I'm hoping to plan a tour of DEQ's biomonitoring work to give you an opportunity to learn more about these efforts. Mary Abrams, DEQ Laboratory Administrator, will be available to talk with you about this at our Enterprise meeting.

Within about one week, I'll send materials for our August 9 strategic planning work session that reflect the latest work of DEQ's Executive Management Team. We're looking forward to your involvement in this exciting exercise.

Please feel free to contact me with questions at any time: 503-229-5301 or o'mealy.mikell@deq.state.or.us. I look forward to seeing you soon!



Commission Itinerary
August 9-10, 2001 EQC Meeting

Commissioner Travel Plans

- Melinda plans to meet the group in Joseph on Thursday, August 9 for the Wallowa Lake Tramway tour.
- Didi is staying in Pendleton on Wednesday, August 8, and plans to join the DEQ van at the Pendleton Airport at 8:00 a.m. on Thursday, August 9 to travel to Joseph.
- Mark plans to travel with DEQ staff from Portland to Joseph on Thursday, August 9
- Tony plans to connect to Friday's meeting via conference call.
- Harvey is on vacation!

Thursday, August 9

6:35 - 8:05	Mark and DEQ staff fly from Portland to Pendleton, Alaska Flight 2094 (electronic tickets will be provided at the Alaska Airline check-in counter). Meet DEQ van and Didi at Pendleton Airport.
8:30 - 11:30	DEQ van travels to Joseph, meets Melinda at Wallowa Lake Tramway, 59919 Wallowa Lake Hwy, Joseph
11:30 - 1:30	**Guided Wallowa Lake Tramway tour**. Lunch at Tram station restaurant.
1:30 - 1:45	DEQ van travels to Wallowa County Courthouse, 101 S. River St., Enterprise
2:00 - 4:30	**EQC/DEQ Strategic Planning Work Session**
4:30 – 4:45	DEQ van travels to Eagle Cap Chalet
4:45 – 5:15	Check-in at Eagle Cap Chalet, 59879 Wallowa Lake Hwy, Joseph, 541-432-4704
5:15 – 5:30	DEQ van travels to Outlaw Restaurant
5:30 - 7:30	**Dinner with local officials** at Outlaw Restaurant, 108 N Main, Joseph Dinner will feature discussion of challenges and opportunities associated with local economic and environmental sustainability issues.

Friday, August 10

7:00 – 7:15	Check out of Chalet, take van to Cheyenne Café in Joseph
7:15 – 8:15	Breakfast for EQC and DEQ staff
8:15 - 8:30	DEQ van travels to Wallowa County Courthouse in Enterprise
8:30 – 9:00	**EQC Executive Session**. Tony plans to connect via conference call.
9:00 – noon	**EQC Meeting**. Tony plans to connect via conference call.
noon - 1:00	Lunch
1:00 - 5:00	**Air Quality Monitoring Visit** during DEQ van drive from Enterprise to Pendleton Airport We plan to stop for a short visit to see one of five Forest Health air quality monitoring sites near Enterprise. This joint DEQ/USFS network has operated for five years to monitor the impact of USFS controlled burns. The instrument that is used is a nephelometer, which measures light scattering as an indicator of the amount of fine particulates in the air. The Forest Health program is just one of several air quality monitoring networks that DEQ uses to track air quality statewide. Mary Abrams will describe the site in the context of other DEQ monitoring work.
5:40 - 7:10	Mark and DEQ Administrators fly from Pendleton to Portland, Alaska Flight 2212

Science

Around the globe: A severe drought in the Middle East raises political tensions over the allocation of the region's scarce water supplies.
EARTHWEEK, Page B11

ESEARCH OTEBOOK

Lincoln took for may have poisoned him

Linc ce reached over p a y the coat collar m "until his teeth chatln stopped only when oke his grip. A new study mercury poisoning might oln's bizarre behavior. outburst at one of the 1858 glas debates is a far cry ent, thoughtful image. A summer issue of Perspecogy and Medicine reformmon 19th century antirug and shows that it delivered a daily dose of exceeds the Environction Agency's safety nearly 9,000 times. poisoning certainly could oln's known neurological nsomnia, tremor and the " said Dr. Robert G. Feldssor at the Boston Universchool and a study co-auhat is even more impore the behavioral effects of soning may be reversible, ns the composure for s famous during his esident."

as known to have taken a pill containing merntly to treat his persistent a." In 1861, a few months guration, Lincoln g the pill because he notnass made him "cross."

s find staph bacteria ; at swapping genes

eri uickly swap lati turn into virus germs that can cause esist antibiotics, a new

last week in the Proceedtional Academy of Sci l researchers said they chnology to learn that *us aureus*, or staph, could es from nearby bacteria f to a changing environ-

ublesome bacterium variety of illnesses, is a f hospital-acquired in. causes things such as ndrome and systemic ng called sepsis. once controlled the bacins of staph are now redrugs. first time we've been h an extensive genetic f these strains," said Dr. ser, senior author of the d of a bacterial research onal Institute of Allergy s Disease's Rocky Mounies in Hamilton, Mont. Musser and his coled the genes of 36 of the me strains of staph and t virtually any of the bacains could acquire the ne resistant to antibiotics.

thought responsible pider mites all girls

ve tified the first n tirely of females. u d Czech rermined that the false *revipalpus phoenicis* — a uch as coffee, tea, pation fruit in tropical areas nown species whose all "haploid," which t their genes from only

mites from a coffee

How healthy is the stream? Ask an insect

Scientists have found that the quality of a waterway can be determined by monitoring which bugs call it home

By JONATHAN BRINCKMAN
THE OREGONIAN

It's harder than it looks to figure out whether a stream is healthy, with clear, cool, pure water and enough food to support salmon and other sensitive species.

The easiest method is to take water samples and analyze them for pollutants. But that can be misleading if pollutants enter the stream only occasionally, and sampling can miss a problem if it's done after pollutants have washed downstream.

Another approach is to use nets, hooks or electroshock to capture fish and identify the species that live in the stream. That can give a false-negative finding, however, if overfishing, waterfalls or other obstructions have reduced the number of fish in an otherwise healthy waterway.

That's why scientists are turning to a third technique: examining the aquatic insects that live on the rocks, plants, sand and mud at the bottom of every stream in Oregon.

The technique is powerful because:

◆ Most aquatic insects are larval forms of bugs that fly later, during their adult life. That means such insects inhabit even streams that fish can't reach.

◆ Aquatic insects live underwater for months or even years. That makes them a good barometer of stream health, because some die even if water conditions are harmful for only a short time.

◆ Different insect species have different abilities to tolerate pollution. That means an inventory of the types of insects found *in* a stream — not just the number — can provide an accurate gauge of how healthy a stream is and

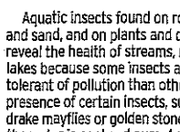
Please see **INSECTS,** Page B10

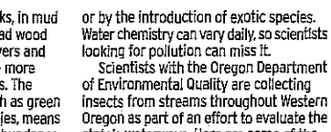
DIVERSITY OF AQUATIC INSECTS PROVIDES CLUES TO HEALTH OF STREAMS

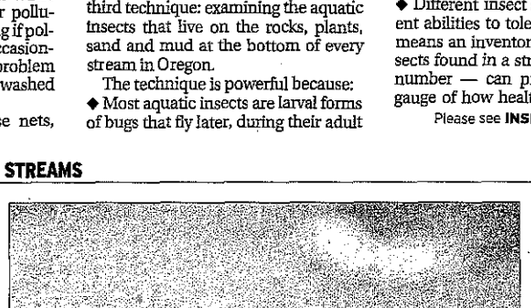
Aquatic insects found on rocks, in mud and sand, and on plants and dead wood reveal the health of streams, rivers and lakes because some insects are more tolerant of pollution than others. The presence of certain insects, such as green drake mayflies or golden stoneflies, means the water is cool and pure. An abundance of other insects, such as midges, indicates warm and polluted water.

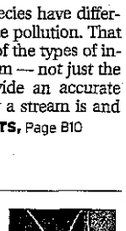
Other indicators are not as reliable: Fish populations can be affected by overfishing or by the introduction of exotic species. Water chemistry can vary daily, so scientists looking for pollution can miss it.

Scientists with the Oregon Department of Environmental Quality are collecting insects from streams throughout Western Oregon as part of an effort to evaluate the state's waterways. Here are some of the insects they find, and what the insects reveal about the health of rivers and streams:









	MOST SENSITIVE			MODERATELY SENSITIVE				LEAST SENSITIVE	
Name	**Green drake mayfly**	**Golden stonefly**	**Spiny crawler mayfly**	**Net-spinning caddis fly**	**Cased caddis fly**	**Speckle-winged quill mayfly**	**Slate-winged mahogany dun mayfly**	**Blood worm midge**	**Water penny**
Habitat	Clings to surface of rocks in moderate to fast-flowing sections of cool rivers and streams.	Crawls over stones in fast-flowing sections of cool rivers and streams with large rock and cobble bottoms.	Found among rocks and mosses in swift currents of cool mountain streams.	Found among cobblestones in moderate to fast currents. Spins a net in front of its shelter to catch food drifting in the current.	Found in calm areas of both warm and cool streams. Builds a case out of sand, pebbles or plant material to protect the soft parts of its body from predators.	Active swimmer found along shorelines of lakes or in slow-moving streams, especially in areas with aquatic plants or woody debris.	Crawls along bottom in wide variety of flowing water habitats, especially plant beds or areas where plant debris accumulates.	Common in all aquatic habitat, from sewage treatment ponds to fast riffles in cool streams.	Clings tightly to the sides and tops of rocks in riffles of moderately warm to warm streams and rivers.
Feeding type	Scraper, eats algae	Predator, eats insects	Collector/gatherer, eats organic matter	Filter feeder, eats organic matter	Collector/gatherer, eats organic matter	Collector/gatherer, eats organic matter	Collector/gatherer, eats organic matter	Collector/gatherer, eats organic matter	Scraper, eats algae
Pollution sensitivity	Very sensitive to heavy metals and warm temperatures.	Very sensitive to temperature and sediments.	Very sensitive to heavy metals and warm temperatures.	Moderately sensitive to sedimentation.	Moderately sensitive to temperature, sedimentation and loss of riparian vegetation that supplies food.	Moderately sensitive to temperature and toxins.	Moderately sensitive to sedimentation; can tolerate low oxygen.	Very tolerant of pollution.	Can tolerate warm temperatures and some nutrient enrichment.

Photo credits: Green drake mayfly, speckle-winged quill mayfly, net spinning caddisfly and golden stonefly by DAVID HUGHES; spiny crawler mayfly, slate-winged mahogany dun mayfly, water penny and midge by JEFF ADAMS; case caddisfly by RICK HAFELE

Sources: Oregon Department of Environmental Quality, Xerces Society

JONATHAN BRINCKMAN, KEVIN HENDRICKSON/THE OREGONIAN

Insects: A good stream may have 300 species

Continued from Page B9

what kinds of pollutants have harmed it.

"Insects are one of the best indicators of stream quality and health," said Kelly Moore, monitoring program manager for the Oregon Plan for Salmon and Watersheds, a state salmon-restoration effort launched in 1997. "They integrate a lot of water-quality factors."

Healthy streams have high levels of dissolved oxygen and cool temperatures. The healthiest streams in Oregon are home to 200 to 300 species of underwater insects, most smaller than a fingernail and each using different strategies to find food, avoid predators and keep from being swept downstream by the current.

Unhealthy streams can contain toxic chemicals from factories, runoff from road surfaces, human sewage or livestock waste.

The most polluted streams might have as few as 15 species of insects.

A diverse and bizarre collection of creatures has found many ways to survive. Scientists divide them into four categories:

◆ Scrapers graze on the thin layer of algae that cover virtually every underwater surface and make rocks feel slimy.

◆ Collector/gatherers specialize in finding decaying organic matter, which they shred, graze or pierce and suck with a wide variety of specialized mouthparts.

◆ Filter feeders position themselves so they are facing the current and capture food in elaborate ways, some with sticky nets they spin and others with hairy legs or mouthparts.

◆ Predators lurk everywhere, snagging unwary prey while trying to avoid being eaten themselves.

Some, such as the slate-winged mahogany dun, a kind of mayfly, have mouthparts with elaborate hairy brushes for gathering food.

Others, such as the spiny crawler mayfly, look like something out of a Steven Spielberg movie, with sharp spines on the head and abdomen and a long, hairy tail.

The water penny, a beetle, has a less alarming appearance and takes a low-key approach to life: It hunkers under its armor and clings tightly to rocks and pebbles while it grazes on algae.

The first step in finding out what's in a stream is collecting specimens.

Investigators wade into the water and place a net in the current, with the opening facing upstream. They dislodge the insects from a 1-foot-square patch directly upstream of the net opening, pluck insects off the bottom and use a vegetable brush to scour them off rocks. Everything that can be dislodged is carried by the current into the net.

Jeff Adams, director of aquatic programs for the Xerces Society, a Portland-based nonprofit group that works to protect invertebrates, is fascinated by the results of a collecting trip. "You take a tray of water and debris, let it sit for a couple of minutes, and all of a sudden the whole thing is alive," he said. "It's a great sight."

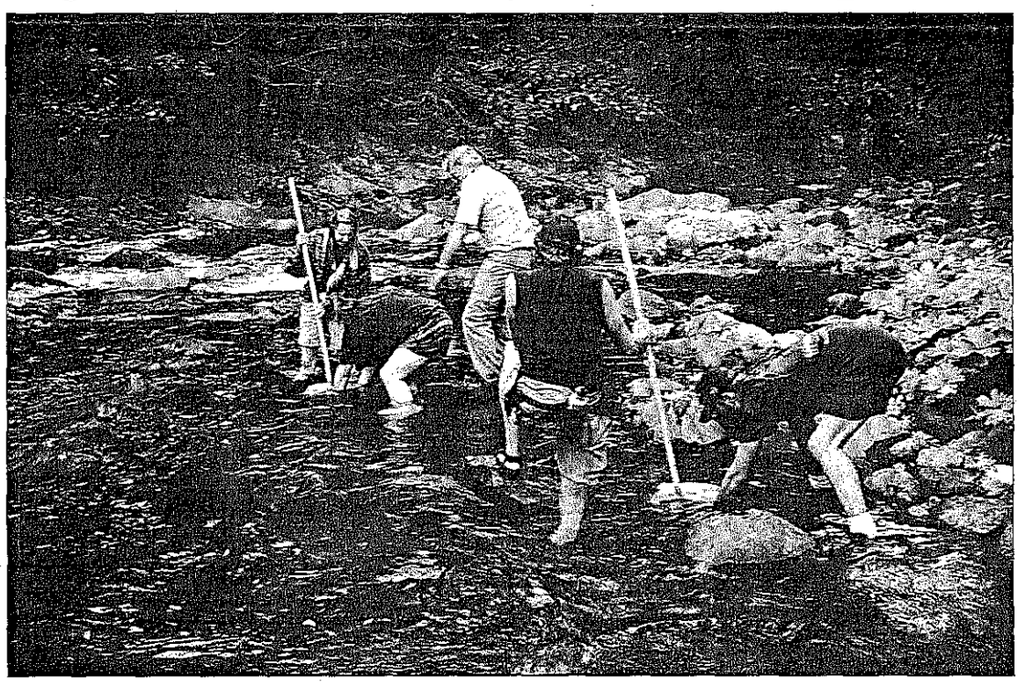


PHOTO COURTESY OREGON TROUT

Oregon Trout volunteers use nets to collect aquatic insects from a stream in Western Oregon.

Then comes the hard part. A typical haul might be 5,000 to 6,000 insects, which the collectors preserve in alcohol. Stream investigators normally identify 500 of them.

Sorting out that many insects could take a beginner as long as four days. An expert aquatic entomologist, using tweezers and a microscope, can do it in two to four hours.

Rick Hafele is one of those experts.

Hafele, who got his master's degree in aquatic entomology at Oregon State University, heads the Oregon Department of Environmental Quality's biomonitoring section. He supervises a staff of nine people who spend most days collecting insects in streams across Oregon and identifying their finds in a laboratory.

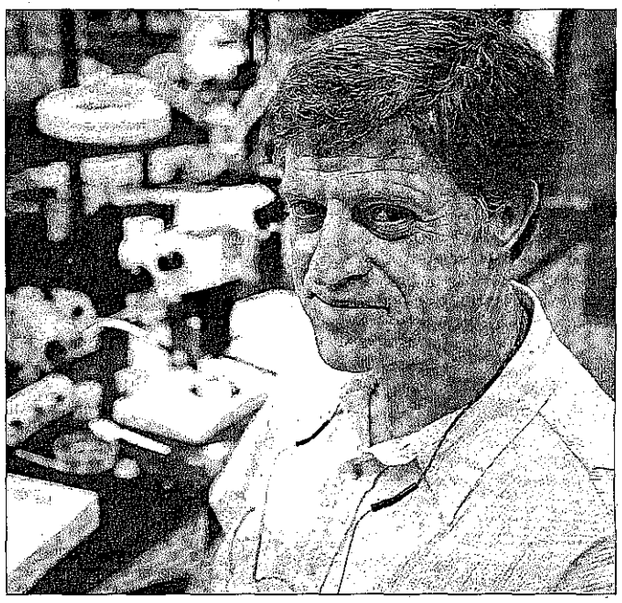
"Aquatic insects are not hard to collect," Hafele said. "It takes a fair bit of expertise to identify them. Once you've identified them, it takes even more knowledge to draw conclusions."

It's easy to recognize pristine streams: They're the ones with the most pollution-sensitive species, such as green drake mayflies, golden stoneflies or spiny crawler mayflies.

Badly polluted streams also are easy to recognize: They're dominated by the most pollution-tolerant species, such as types of midges, water pennies and blackfly larvae.

Recognizing intermediate streams is more difficult. Such streams have complex mixtures of species, including some more tolerant species and many that are moderately tolerant of pollution.

"If you change one parameter in a stream, like dissolved oxygen levels or temperatures, you can give one different species a competitive advantage," Hafele said. "That can change the whole species matrix."



STEVEN NEHL
THE OREGONIAN

Rick Hafele, manager of the state Department of Environmental Quality's biomonitoring section, is an expert at identifying aquatic insects. DEQ scientists rate streams by considering insect diversity.

DEQ scientists use a rating system that considers the diversity of insects, dividing streams into four categories, from the least impaired to the most.

Funding for DEQ's biomonitoring program more than doubled in 1997, to about $750,000 a year, when Oregon's salmon restoration plan made the monitoring of streams a central strategy.

The idea is to use systematic monitoring to constantly evaluate Oregon's streams and rivers to gauge whether efforts to improve waterways, such as regulating logging and keeping livestock from streams, are making a difference.

Norm Anderson, a professor emeritus at Oregon State University, taught aquatic entomology to Hafele in the mid-1970s.

Anderson finds the underwater insects fascinating because, among other things, they are able to find food in seemingly barren mountain streams.

"The real question to me is, 'What are they going to eat?' " Anderson said. "When you look at a pristine stream, there isn't much to chew on."

In fact, much of the food is just hard to see, he said. Single-celled diatoms, a kind of algae, cover rocks in an invisible film. The diatoms, it turns out, have a high fat content.

Researchers also have found that many aquatic insects need trees and plants along stream banks, because leaves and other plant debris are key sources of food.

Anderson is pleased that identifying aquatic insects has become integral to salmon recovery in Oregon.

"I react to biomonitoring with a sense of satisfaction," he said. "The things that we have been doing in an academic setting are now bearing fruit."

◆

You can reach Jonathan Brinckman at 503-221-8190 or by e-mail at jbrinckman@news.oregonian.com.

Lost city: Spires found on undersea mountain trap nut

Environmental Quality Commission Meeting Agenda

August 9-10, 2001

Wallowa County Courthouse
101 South River Street
Enterprise, Oregon 97828

On Thursday, August 9, the Commission will tour the Wallowa Lake Tramway and dine with local officials at the Outlaw Restaurant in Joseph, Oregon.

Thursday, August 9, 2001 Beginning at 2:00 p.m.

A. EQC/DEQ Strategic Planning Work Session

Friday, August 10, 2001 Beginning at 9:00 a.m.

The Commission will hold an executive session at 8:30 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.

B. Approval of Minutes
C. †Rule Adoption: General Air Contaminant Discharge Permits
D. Director's Report
E. Informational Item: Columbia River Gorge Air Quality Project
F. Discussion Item: Development of Performance Appraisal Process for Director
G. Public Forum

†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 Commission or Department on these items at any time during this meeting.

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.

Public Forum: The Commission will break the meeting at approximately 11:30 a.m. on Friday, August 10, 2001 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.

The next Commission meeting is scheduled for September 20-21, 2001, in Ashland, Oregon.

Copies of staff reports for individual agenda items are available by contacting the Director's Office of the Department of Environmental Quality, 811 S. W. Sixth Avenue, Portland, Oregon 97204, telephone 503-229-5301, or toll-free 1-800-452-4011. Please specify the agenda item letter when requesting reports. If special physical, language or other accommodations are needed for this meeting, please advise the Mikell O'Mealy, Director's Office, 503-229-5301 (voice)/503-229-6993 (TTY) as soon as possible but at least 48 hours in advance of the meeting.

Approved_____
Approved with Corrections_____

Minutes are not final until approved by the EQC

Environmental Quality Commission
Minutes of the Two Hundred and Ninety-Sixth Meeting

June 22, 2001
Regular Meeting

On Thursday, June 21, 2001, the Commission toured Lower Willamette River clean-up sites and the Gresham Wastewater Treatment Plant. On Thursday evening, the Commission dined with local officials at McMenamins Edgefield in Troutdale. The following Environmental Quality Commission members were present for the regular meeting:

Melinda Eden, Chair
Mark Reeve, Member
Deirdre Malarkey, Member
Harvey Bennett, Member

Also present were Larry Knudsen, Assistant Attorney General, Oregon Department of Justice (DOJ), Neil Mullane, Acting Deputy Director for the Department of Environmental Quality (DEQ), and DEQ staff.

Note: 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.

The Commission held executive session at 8:00 a.m. on June 22, 2001, 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).

Chair Eden called the meeting to order at approximately 8:45 a.m. Agenda items were taken in the following order.

I. Approval of Minutes

May 3-4, 2001 Minutes: Commissioner Reeve proposed amendments to draft minutes. On page 3, Item C, in the sixth paragraph, the words "and did not support the City's request for Commission reconsideration of the current Order," were deleted from the first sentence and the word "offset" was added to the second sentence. General changes were made to Item C and the Added Discussion of Item C to clarify that the City asked the Commission to provide guidance on the need for an independent review panel. On page 5, Item K, the words "or three" were deleted from the last sentence. Commissioner Bennett moved the Commission approve minutes as amended for May 3-4, 2001. Commissioner Malarkey seconded the motion and it passed with four "yes" votes.

B. Rule Adoption: Title V Permitting Program CPI Fee Increase

Pat Vernon, Air Quality Program coordinator, introduced proposed rule revisions and Scott Manzano, Air Quality Program staff, described key aspects of the rulemaking. The proposed rule increased Title V fees by the 2000 Consumer Price Index (CPI) of 3.3 percent to fund higher Title V program costs caused by salary increases and inflation. The increase was not proposed to fund additional program staff. The Department informed fee payer representatives of the proposed increase during rulemaking development and received no public comment on the proposal.

Commissioner Reeve moved the Commission adopt the proposed rules for the Title V permitting program CPI fee increase. Commissioner Malarkey seconded the motion and it passed with four "yes" votes.

C. Rule Adoption: Underground Injection Control Rules

Ed Woods, Water Quality Program manager, introduced proposed rule revisions and Mark Charles, Water Quality Program staff, presented key aspects of the rulemaking. Proposed revisions updated existing Oregon Underground Injection Control (UIC) rules to incorporate 1999 federal rule changes, added provisions for basic UIC program elements, and clarified existing state regulatory requirements for underground injection. The Department coordinated extensive stakeholder and public involvement during this rulemaking.

Commissioner Malarkey and Commissioner Reeve commended the Department for resolving complex issues associated with this rulemaking. Commissioners discussed technical aspects of the rule, UIC program funding, next steps for rule implementation, and achieving program compliance.

Commissioner Malarkey moved the Commission adopt the proposed UIC rules. Commissioner Reeve seconded the motion and it passed with four "yes" votes. Chair Eden commended the Department and stakeholders for their work.

D. Action Item: Mid County Sewer Project: Final Report by Gresham and Portland

Richard Santner, Northwest Region Water Quality Program staff, presented the final report of the Mid-County Sewer Project from the Cities of Gresham and Portland. Mr. Santner summarized the project and asked the Commission to accept the final report and recognize the Cities for completing the project ahead of schedule and under budget.

Dean Marriott, Director of the Portland Bureau of Environmental Services, and John Dorst, Acting Director of the Gresham Department of Environmental Services, explained challenges and successes associated with the project and thanked the Commission and Department for their support. Commissioners discussed various aspects of the project with Mr. Marriott and Mr. Dorst.

Commissioner Reeve moved the Commission adopt the following motion:

> The EQC hereby accepts the Final Report for the Mid County Sewer Project from the Cities of Gresham and Portland. The Project has provided sanitary sewer service in previously unsewered Mid-Multnomah County and ended the use of cesspools and seepage pits there.
>
> The EQC hereby offers its congratulations and appreciation to Gresham and Portland for having so effectively provided sewer service well in advance of the required completion date. The Commission appreciates the immense effort made to implement this vast project.
>
> The EQC requests that in February 2006, the cities send letters to the Department Director documenting final disposition of the deferrals and delinquencies.

Commissioner Malarkey seconded the motion and it passed with four "yes" votes.

On behalf of the Commission, Chair Eden presented certificates of appreciation to the Cities of Gresham and Portland and key project staff, including Neil Mullane, Michael Huston, Tom Lucas, Harold Sawyer and Richard Santner.

E. Emergency Rule Adoption: Emergency On Site Fee Rules

Ed Woods, Water Quality Program manager, proposed emergency rules to reduce fees for several On-Site program services, to become effective July 1, 2001. Mr. Woods explained that the proposed fee reduction was necessary to comply with potential legislative action included in Senate Bill 5516. The proposed rule would reduce On-Site program revenue by an estimated $352,000 over the next biennium, end development of a certification program for on-site service providers, end development of an on-site operating permit project, and reduce enforcement capability. Larry Knudsen, Assistant Attorney General, asked the Commission to approve a Statement of Need and Justification as Addendum One to the proposed rule.

Commissioners discussed the reasons for and effects of the proposed rule with Mr. Knudsen and Mr. Woods. Mr. Knudsen clarified that if adopted by the Commission, rule effectiveness would be contingent upon Senate Bill 5516 becoming law. Commissioner Bennett moved the Commission adopt proposed emergency On-Site fee rules and approve the Statement of Need and Justification as Addendum One to the rule, contingent upon Senate Bill 5516 becoming law. Commissioner Reeve seconded the motion and it passed with four "yes" votes.

G. Consideration of Tax Credit Requests

Maggie Vandehey, Tax Credit Program coordinator, presented pollution control tax credit applications for Commission action. Ms. Vandehey recommended the Commission approve thirty-nine applications and reject two applications. Application number 5526, from Willamette Industries, Inc., was removed from the agenda as requested by the company. Commissioners discussed the applications and Department recommendations with Ms. Vandehey.

Commissioner Reeve moved the Commission approve thirty-nine applications as recommended by the Department. Commissioner Malarkey seconded the motion and it passed with four "yes" votes. Commissioner Malarkey moved the Commission reject two applications as recommended by the Department. Commissioner Bennett seconded the motion and it passed with four "yes" votes.

F. Director's Report

Neil Mullane, Acting Deputy Director, gave the Director's Report on behalf of Stephanie Hallock, Director. Commissioners discussed recent events and legislative actions, and suggested a future informational presentation to the Commission on the Federal Energy Regulatory Commission relicensing program for major hydroelectric projects.

Public Comment

At approximately 11:30 a.m., Chair Eden asked whether anyone wished to provide public comment. No public comment was provided.

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

Commissioners discussed development of a formal performance appraisal process for the Director, considering an example from another agency and specific information about the DEQ Director's position. Chair Eden asked Commissioner Bennett and Commissioner Van Vliet to review materials and report back to the Commission at the August 10, 2001, Commission meeting.

J. Commissioners' Reports

Chair Eden gave a report on the Chemical Stockpile Emergency Preparedness Program. The Executive Review Panel planned to issue its second report to the Governor in late June and deliver final recommendations in November 2001.

There were no other Commissioner reports.

There being no further business, the meeting was adjourned at approximately 12:30 p.m.

State of Oregon
Department of Environmental Quality Memorandum

Date: July 23, 2001

To: Environmental Quality Commission

From: Stephanie Hallock, Director S. Hallock

Subject: Agenda Item C, Rule Adoption: General Air Contaminant Discharge Permits
August 10, 2001 EQC Meeting

Department Recommendation

The Department recommends the Commission amend OAR 340-216-0060 as presented in Attachment A to adopt eighteen General Air Contaminant Discharge Permits (ACDPs) by rule.

Need for Rulemaking

Adoption of General Permits by rule provides for more formal public participation than the current process for issuing the General ACDPs.

Effect of Rule

- This rule will improve the efficiency of the air quality permitting program by allowing the agency to assign approximately 750 sources to 18 General ACDPs instead of issuing a specific permit to each of the sources.
- Except for dry cleaners, the General ACDPs will be optional. Sources may choose a Simple or Standard source-specific ACDP. For dry cleaners that are not complying with the hazardous waste/air quality work practice and reporting requirements, General ACDPs will be mandatory after June 1, 2002.
- Except for electric power generators, the General ACDPs only include the relevant requirements contained in the Oregon Administrative Rules (OARs). For electric power generators, the General ACDP includes two new requirements; low sulfur fuel (0.05% by weight) and add-on controls for smoke and odors. These additional requirements are necessary to ensure that these sources do not cause nuisance conditions as a result of excessive smoke or odors.

Commission Authority

The Commission has authority to take this action under ORS 468.065 and 468A.040.

Stakeholder Involvement

Workshops were held at six locations throughout the state from May 21 to May 24, 2001. Notice of the workshops was provided to all Air Quality permitted sources, all persons interested in Air Quality rulemakings, and all persons interested in Air Quality permits. Approximately 130 people attended the workshops. The Department provided an overview of the proposed General ACDPs, including the permit content, the effective date, the procedures for assignment to the permits and the fees. The Hearings Officer report is provided

in attachment C.

Public Comment A public comment period extended from May 18, 2001 to June 19, 2001, and included public hearings in Portland, Medford, and Bend. Nine people attended the hearings and three testified. The Department also received eight other written comments during the comment period. Results of public input are provided in Attachment C.

Key Issues Key issues were:

- In response to comments, the Department changed the class of fee for the Crematory and Coffee Roaster General ACDPs from fee class two (currently $900.00 per year) to fee class one (currently $500.00). This rulemaking does not establish the fees for General ACDPs. The fees for all ACDPs were established in the May 2001 rulemaking. Three classes of fees were identified for General ACDPs. In addition to the two classes identified above, a third class was established, which is currently $1,300.00 per year. During this rulemaking, each of the proposed General ACDPs are assigned a fee class based on the relative complexity of the permits and anticipated source surveillance activities. Upon further review of the Crematory and Coffee Roaster General ACDPs, the Department concluded that fee class one is more appropriate than a fee class two.
- In response to public comment, the Department expanded the sawmill/millwork General ACDP to cover other wood products activities such as green veneer and plywood plants.
- In response to comment, the Department changed the effective date of the General ACDPs from January 1, 2001, to the Secretary of State filing date so that new sources and the Department would benefit from the permit streamlining provisions as soon as possible. However, for existing permitted sources, the Department intends to make the shift to General ACDPs effective January 1, 2002, as originally proposed.

Next Steps

The proposed rules and General ACDPs will be effective when filed with the Secretary of State soon after adoption by the Commission. The General ACDPs will have a term of 10 years. On August 10, 2001, the Department will notify affected sources of the availability of General ACDPs and ask sources to select the type of permit to which they want to be issued or assigned. A Rule Implementation Plan is available upon request.

Attachments

A. Proposed Rule Revisions
B. Public Input and Department's Response
C. Presiding Officer's Report on Public Hearings
D. Relationship to Federal Requirements
E. Fiscal and Economic Impact Statement
F. Land Use Evaluation Statement

Available Upon Request

1. Legal Notice of Hearing
2. Cover Memorandum from Public Notice
3. Written Comments Received
4. Rule Implementation Plan
5. List of Potentially Affected Sources

Approved:

Section:

Division:

Report Prepared By: Mark Fisher

Phone(541) 388-6146 x275

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 de minimis 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 (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

ATTACHMENT B
Response to Comments

Commenter	Comment	Response to comment
Scott Stewart, Intel Corporation (oral and written comment presented at the Portland public hearing)	Any regulated source on the site besides the electric generator will prohibit the use of the General ACDP. (condition 1.3)[1]	Permits are issued to individual sources as defined in OAR 340-200-0020. If there is more than one source at a site, each would be issued a type of permit depending on the type of source. In addition to General ACDPs, Basic, Simple, and Standard ACDPs are available. Multiple sources at a site may be included in one permit, but only a Standard ACDP can be used for that purpose. The definition of "source" includes supporting activities. Therefore, supporting activities are not permitted separately. If a source that is already permitted will be using an electric power generator to support the main source activity, then the permittee must modify the existing permit to allow for increased operation of the generator beyond emergency backup purposes. If the source is not currently permitted, or the electric power generator meets the definition of a source, then the permittee may apply for assignment to the General ACDP.
	Source testing is required for Tier 2 or Tier 3 generators. The permittee should be allowed to use manufacturer's certified test data as an alternative to performing additional tests. (condition 3.1.a)	Whenever pollution control equipment is used to comply with a limit, it is the permittee's responsibility to demonstrate that the control equipment is properly installed and operating correctly. Pre-installation data will not ensure that the equipment is functioning properly. Therefore, a source test is required.

[1] The comment refers to the draft permit condition(s) listed in the parenthesis after the comment.

ATTACHMENT B
Response to Comments

Commenter	Comment	Response to comment
Scott Stewart, Intel Corporation (oral and written comment presented at the Portland public hearing)	If one generator is a Tier 1 generator, then all generators must be treated as Tier 1. This unnecessarily limits the hours of operation for Tier 2 and Tier 3 generators. (condition 3.1.d and 13.1.b)	The Generic Plant Site Emission Limit applies to all generators at a site and compliance is ensured by limiting the number of hours of operation based on the generator size and emissions control system (e.g., Tier 1, 2, and 3 controls). Within this scheme, the overall size of multiple generators can be easily determined by adding together the individual size of the units. However, the average effect of the emission controls cannot be determined, so the most conservative assurance of compliance is to treat them all the same as the least controlled system. Remember, general permits are optional and they are designed to cover the most commonly encountered situations (e.g., 1 generator at a site). If the general permit does not work for a particular source, the permittee always has the option to obtain a Simple or Standard ACDP.
	Exhaust emission controls are required for carbon monoxide, particulate matter, and volatile organic compounds. The control requirements are ambiguous and manufacturers are not prepared to offer certified control systems. (condition 3.2)	It is the Department's understanding that the exhaust controls are readily available from the engine manufacturers and there is no need to provide detailed specifications.
	The testing requirements are unclear; especially for visible emissions observations using EPA Method 9. (condition 6.1.b.i)	Many of the requirements for performing a source test are contained in the Department's Source Sampling Manual, which is referenced in the permit. If requested, the Department can provide electronic or hard copies of the specific test methods.

ATTACHMENT B
Response to Comments

Commenter	Comment	Response to comment
Scott Stewart, Intel Corporation (oral and written comment presented at the Portland public hearing)	The requirement for reporting changes made in plant process, production levels, and pollution control equipment that would affect air contaminant emissions is not necessary because general permits are not applicable to facilities which can affect air emissions by changing process or production levels. (condition 8.2.d)	It is true that the permittee cannot make changes that would increase emissions above the Generic Plant Site Emission Limits, but the permittee may make other changes that affect pollutant emissions. For instance, the Department must be notified if the permittee adds controls to change a generator from Tier 1 to Tier 3.
Donald A. Jensen, Bridgetown Coffee and Company (written comment)	What are the annual fees for the Coffee Roaster General ACDP?	Permit fees are identified in Table 2 of OAR 340-216-0020, which was adopted on May 4, 2001 and effective on July 1, 2001. There are three classes of annual fees for General ACDPs (high, medium, and low). The class of fee for a particular General ACDP is identified in the General ACDP. The class of fee is based on the relative complexity of the permit and level of source surveillance activities. For Coffee Roasters, the proposed General ACDP included the medium class fee, which is currently $900.00 per year. However, based on comments and internal review, the Department has determined that the lower fee class (currently $500.00 per year) is more appropriate for Coffee Roasters. The General ACDP has been changed accordingly. There is also an initial permit assignment fee of $1,000.00 but this fee is waived for existing permitted sources. Note that since the May 2001 rulemaking, the legislature approved a 30% increase for ACDP fees. Consequently, the fees will be increased in a separate rulemaking.

ATTACHMENT B
Response to Comments

Commenter	Comment	Response to comment
Donald A. Jensen, Bridgetown Coffee and Company (written comment)	The Department needs to make sure that all coffee roasters who are required to be permitted obtain the necessary permits.	In the public notice, the Department provided a list of coffee roasters that could potentially be assigned to the General ACDP. That list was based on the existing permitted sources. Not all coffee roasters are required to obtain a permit. Therefore, the list does not include all coffee roasters in the state. Coffee roasters that process less than 6 tons of coffee per year are not required to obtain a permit. Coffee roasters that process 6 to 30 tons of coffee per year are required to obtain a Basic ACDP. Coffee roasters that process more than 30 tons of coffee per year must have either a Simple or General ACDP. Only those Coffee Roasters that could be eligible for a General ACDP were included in the notice list. Any source that operates without a required permit is subject to enforcement action.
Bill Terpening, 76 Union (oral testimony presented at the Medford public hearing)	The annual fees for the bulk gasoline plant General ACDP are more than current fees. Increased fees are an economic burden to the businesses.	(1) The General ACDP fees adopted on May 4, 2001 include three classes of fees (low, medium, and high). The bulk gasoline plant General ACDP is assigned to the lowest class of fees ($500.00 per year). (2) All sources listed in Table 1 of OAR 340-216-0020 are required to obtain Basic, General, Simple, or Standard ACDPs. Fees for General ACDPs are less than for Simple or Standard ACDPs. (3) When switching from the old fee structure (based on source type) to the new fee structure (based on permit type) adopted on May 4, 2001, the Department's goal was to remain revenue neutral for the entire permitting program. However, it was anticipated that some sources would pay more or less for their permits. The new fee structure is

Commenter	Comment	Response to comment
		intended to be more equitable because facilities with similar types of permits will now pay the same fee. Under the old structure, two separate sources with the same type of permit might have paid significantly different fees.
Howard C. Misner, Grange Coop (oral testimony presented at the Medford public hearing)	The annual fees for the bulk gasoline plant General ACDP are more than current fees. Increased fees are an economic burden to the businesses.	See previous response.
Penny Rodighiero, Penrod Kennels (written comment)	The proposed annual fees for the crematory General ACDP are more than current fees and do not take into consideration the size of the business. Increased fees are an economic burden to the businesses.	The General ACDP fees adopted on May 4, 2001, include three classes of fees (low, medium, and high). Crematories were assigned to the medium class of fees because these facilities have more complicated requirements. However, based on comments and internal staff discussions, the fee has been changed to the lower class of fees ($500.00 per year) primarily because these sources have complied with the requirements and the source surveillance activities have decreased significantly.
Andy Ginsburg, DEQ (verbal communication)	The proposed rule should not specify who signs the General ACDP, allowing the Department to continue to use the current signature delegation policy.	The proposed rule has been changed by deleting the last sentence in OAR 340-216-0060(1)(c).
Pam Maher (written comment)	This letter was submitted to remain a party of record for the rulemaking process.	No response
Russel Strader, Boise Cascade (written comment)	The source category list for the sawmill/millwork General ACDP should be expanded to include "softwood and hardwood veneer and plywood mills" - SIC codes 2435 and 2436. This would make the proposed permit applicable to green veneer mills.	The source description has been changed to include SIC 2435 and 2436.

ATTACHMENT B
Response to Comments

Commenter	Comment	Response to comment
Russel Strader, Boise Cascade (written comment)	This list of qualifications in Section 1.1 of the proposed permit should be expanded to include veneer peeling and plywood pressing. In addition, the reference to "small veneer dryers" should be deleted and merely listed as "veneer dryers" because there are no criteria for determining whether a veneer dryer is small or large.	The activities covered by the permit have been expanded to include veneer peeling and plywood pressing. Also the reference to "small" veneer dryers has been removed.
	The General ACDP for sawmills/millwork should include the generic PSELs for single and combined hazardous air pollutant (HAP) because hazardous air pollutants are emitted from some of the wood product activities covered by the permit. The generic PSEL will allow the permitted source to stay out of the Title V permitting program.	The Generic PSEL has been added to the permits.
	The sawmill/millwork General ACDP includes several operation and maintenance requirements for unique areas such as the Medford/Ashland AQMA but the permit does not include other requirements for sources within those same unique areas such as opacity limits and veneer dryer emissions limits.	The requirements of OAR 340-240-0120(1) have been added to the permit. The other requirements in 340-240-0120 are covered by general conditions already contained in the permit.
	Some of the emission factors in the sawmill/millwork General ACDP are not appropriate. The Department should use the best available information for establishing emission factors in the permit (VOC and HAP emission factors were enclosed with the comment).	The emission factors have been updated.

ATTACHMENT B
Response to Comments

Commenter	Comment	Response to comment
Kevin Emerick, Woodfold-Marco MFG. (written comment)	In order to create greater participation in this new ACDP Program, a generic PSEL should be established in the sawmill/millwork General ACDP for individual and combined HAPs. Adding the generic PSEL will increase participation because the generic PSEL will allow sources to stay out of the Title V permitting program.	The Generic PSEL has been added to the permit.

ATTACHMENT C

State of Oregon
Department of Environmental Quality **Memorandum**

Date: June 20, 2001

To: Environmental Quality Commission

From: Mark Fisher
Nancy Cardwell
Keith Tong

Subject: Presiding Officer's Report for Rulemaking Hearing
Hearing Date and Time: 3:00 p.m. on June 18, 2001
Hearing Location: Bend City Hall, Portland NWR Office, Medford Lausmann Annex
Title of Proposal: General Air Contaminant Discharge Permits

The rulemaking hearings on the above titled proposal were scheduled to begin at 3:00 p.m at each location. The hearing officers were present at the schedule start time. For Portland and Medford, the hearing officers provided a summary of the rulemaking and answered questions before convening the hearing. As a result, the hearings actually began later than 3:00 p.m., as shown below. No one attended the Bend hearing, but the hearing officer remained at the hearing site until 3:45, at which time the hearing was closed. People were asked to sign registration forms if they wished to present comments. People were also advised that the hearing was being recorded.

Location	Hearing convened	Hearing closed	Number of people in attendance	Number of people signed up to give comments
Bend	see above	3:45	0	0
Portland	3:15	3:30	7	1
Medford	3:45	3:55	2	2

Prior to receiving comments, Keith Tong and Nancy Cardwell briefly explained the specific rulemaking proposal and the procedures to be followed during the hearing.

A summary of written and oral comments and the Department's response to each comment is provided in Attachment B.

ATTACHMENT D

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal
for
General Air Contaminant Discharge Permits

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?

This form is not really applicable to the proposed rules because there is no analogous program at the federal level. The Clean Air Act requires each state to develop and implement a minor new source review program as part of the State Implementation Plan (SIP). The Notice to Construct (OAR Chapter 340, Division 210) and Air Contaminant Discharge Permit (OAR Chapter 340, Division 216) programs have been approved by EPA as satisfying the federal requirements. The proposed General ACDPs are merely another type of permit within the ACDP program.

The proposed General ACDPs that include specific federal requirements are shown below.

General Permit	Source category	Federal Regulation	Pollutant	Emissions Limit
AQGP-001	hard chrome plating	40 CFR Part 63, Subpart N	hexavalent chromium	0.03 mg/dscm (small, existing tanks), 0.015 mg/dscm (all other tanks), and work practices
AQGP-002	decorative chrome plating	40 CFR Part 63, Subpart N	hexavalent chromium	0.01 mg/dscm and work practices
AQGP-003, AQGP-004, AQGP-005	cold batch, batch vapor, and in-line degreasers	40 CFR Part 63, Subpart T	halogenated solvents	30.7 lb/ft^2 (batch vapor), 31.4 lb/ft^2 (existing in-line), 20 lb/ft^2 (new in-line), and work practices
AQGP-006	dry cleaners	40 CFR Part 63, Subpart M	perchloro-ethylene	work practices
AQGP-007	asphalt plant	40 CFR Part 60, Subpart I	particulate matter	0.04 gr/dscf
AQGP-008	rock crushers	40 CFR Part 60, Subpart OOO	particulate matter (PM)	Not applicable because these standards have not been adopted by the Department

General Permit	Source category	Federal Regulation	Pollutant	Emissions Limit
AQGP-010 AQGP-011 AQGP-014	small space heating and process boilers	40 CFR Part 60, Subpart Dc	PM and sulfur dioxide	20% opacity and fuel sulfur content ≤0.5% by weight.
AQGP-014	grain elevators	40 CFR Part 60, Subpart DD		0, 5, 10, 20% opacity and 0.01 gr/dscf

With the exception of the general permit for the electric power generators, the permits will only include the relevant requirements from current regulations, so they will not be more stringent than federal requirements. For the electric power generators, the Department proposes that the sources be subject to two requirements that are not currently required by the existing regulations. The first is to require low sulfur fuel (0.05% by weight) to ensure that sulfur dioxide emissions are minimized and reduce the effects of sulfur dioxide poisoning of emissions control equipment. The second requirement is for exhaust emission control systems to minimize particulate matter, carbon monoxide, and volatile organic compound emissions. If not properly controlled, diesel engines can generate excessive odors and smoke that could lead to a nuisance condition and exposure to toxic air pollution, especially if the electric power generators are located near residences. There are no federal requirements for electric power generators.

The rest of this document addresses only the General ACDP for electric power generators.

2. Are the applicable federal requirements performance based, technology based, or both with the most stringent controlling?

Not applicable. There are no federal requirements for electric power generators.

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?

Not applicable. There are no federal requirements for electric power generators.

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?

Yes. While some minimum level of control is required for all electric power generators, the owner or operator will have some discretion as to the extent of the controls. The level of control will dictate the number of hours of operation allowed by the permit. For sources that will only be operated periodically for short durations, the level of controls can be less than for sources that will be operated for longer periods of time.

5. Is there a timing issue which might justify changing the time frame for implementation of federal requirements?

Not applicable. There are no federal requirements for electric power generators.

6. Will the proposed requirement assist in establishing and maintaining a reasonable margin for accommodation of uncertainty and future growth?

Yes. Exhaust emission control systems may be upgraded in the future to allow for more hours of operation.

7. Does the proposed requirement establish or maintain reasonable equity in the requirements for various sources? (level the playing field)

Yes. All sources assigned to a General ACDP will have the same requirements.

8. Would others face increased costs if a more stringent rule is not enacted?

It is possible that businesses and residences located near an electric power generator may be forced to upgrade air ventilation systems to mitigate the effects of smoke and odors if the engines do not have add-on control systems.

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. There are no federal requirements for electric power generators.

10. Is demonstrated technology available to comply with the proposed requirement?

Yes. Catalytic emission control systems are available for diesel engines used for electric power generation.

11. Will the proposed requirement contribute to the prevention of pollution or address a potential problem and represent a more cost effective environmental gain?

Yes. The Department is concerned that there will be more widespread use of small electric power generators in response to recent changes in electricity supply. In the past, these units have typically only been used in emergency situations. If the units are used more frequently, there is considerable potential for uncontrolled emissions to create nuisance conditions and exposure to toxic air emissions as a result of excessive smoke and odors; especially since these units could be used near residential areas. Putting the requirements in a General ACDP will make them applicable to all

electric power generators assigned to the permit, evening the playing field and eliminating case-by-case pollution control determinations.

ATTACHMENT E

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal
for
General Air Contaminant Discharge Permits

Fiscal and Economic Impact Statement

Introduction

The proposed rule creates eighteen categories of General Air Contaminant Discharge Permits (ACDPs) for sources now required to be permitted on an individual basis. This rule does not establish fees for permits. Permit fees were established as part of the rule package adopted by the EQC on May 4, 2001. As a result of those fee changes, some sources will pay more and some will pay less fees than they are currently paying. Fees associated with the General ACDPs are less than fees for the other types of permits as shown in the following table.

Permit type	Initial permitting/ assignment*	Annual Fees	Specific Activity Fees
General ACDP – Fee Class One	$1,000.00	$500.00	Not applicable
General ACDP – Fee Class Two	$1,000.00	$900.00	Not applicable
General ACDP – Fee Class Three	$1,000.00	$1,300.00	Not applicable
Simple ACDP	$5,000.00	$2,000.00	$300 to $5,000
Standard ACDP	$10,000.00	$4,000.00	$300 to $10,000

Except for the category of electric power generators (AQGP-018), the General ACDPs contain the same requirements included in a Simple or Standard ACDP. Therefore, there should be no additional cost for source compliance.

The electric power generator general ACDP is an optional permit that may be requested for internal combustion engine generators that are currently used for emergency power backup, but may be used for peaking power in the future. Because these generators may be used more extensively, the Department believes that it is necessary to include two requirements that are not otherwise required by Oregon regulations for internal combustion engine generators to prevent nuisance conditions and potential exposure to hazardous air pollutants. These requirements are: 1) low sulfur fuel; and 2) add-on emission controls. Low sulfur fuel is readily available because it is required for on-road vehicles. The differential costs can be variable and is $0.02 per gallon at the present time. This would increase operating costs based on the number of gallons burned. The Department estimates an additional cost to sources for add-on pollution controls as follows:

* The initial permitting/assignment fees do not apply to existing permitted sources during the first round of permitting following the adoption of the Air Quality rule revisions on May 4, 2001.

Initial cost: $10,000 to $20,000 for a 1,400 horse power engine (approximately 0.9 megawatts generating capacity),
Annual costs: $64 to $712 per year.

For an electric generating source that elects to be assigned to this general permit, these additional pollution control costs apply. There is also expected to be a small additional cost associated with demonstrating compliance with the fuel and add-on control requirements. At this time, the Department is not certain how many sources will elect to be on the electric power generation General ACDP because it depends on electricity supply and demand. Currently, several sources have electric power generators for emergency power backup and are not required to obtain a permit for the generators. However, if these sources begin using the generators for more than emergency backup, they would be required to be permitted.

General Public

This rulemaking will have no fiscal and economic impact on the general public.

Small Business

General ACDPs are most likely to be used by small businesses. The proposed rulemaking should reduce the fiscal and economic impact for the following reasons:

- General ACDPs have lower fees than the alternative Simple or Standard ACDPs;
- Permit renewal fees are less frequent because the General ACDP permit duration is 10 years instead of 5 years; and
- Permit modification fees are eliminated because General ACDPs are not modified for specific sources.

Note, one provision of the General ACDP is that sources that existed during the baseline period will have to give up their baseline emission rates if they elect this type of permit. Without a baseline emission rate, if these sources increase their emission above the Generic Plant Site Emission Limits, they could be subject to regulatory requirements that they would not otherwise be subject to if they retained their baseline emissions rate. The requirements could include air quality analysis and additional controls. Again, General ACDPs are optional.

Large Business

The proposed rulemaking is not expected to have an impact on large businesses because they typically do not qualify for assignment to General ACDPs. If a large source does qualify for a General ACDP, the fiscal and economic impact would be the same as for small businesses.

Local Governments

This rulemaking will have no fiscal and economic impact on local governments, unless they are required to have a permit and qualify for a General ACDP. In that case, the fiscal and economic impact would be the same as for small businesses. Some local governments that may be affected include schools or jails that have small boilers.

State Agencies

Department of Environmental Quality: In conjunction with the air permit program rules adopted by the EQC on May 4, 2001, the proposed rules will streamline the permitting process and reduce personnel time, resulting in long term cost savings. The Department expects a large portion of these savings to come from the expanded use of General ACDPs. This proposal will allow the Department to issue one permit for many similar businesses, which will reduce the permit drafting and processing time required for individually permitted sources. The Department does not expect to realize the full effect of savings for several years (i.e., after a complete five year permitting cycle).

Revenue and expense impacts were addressed during the May 4, 2001 rulemaking. The fee schedule was established to be revenue neutral as compared to the previous fee table, based on expected numbers of General, Simple and Standard ACDPs.

Other Agencies: This rulemaking will have no fiscal and economic impact on other agencies unless they are required to have a permit and qualify for a General ACDP. In that case, the fiscal and economic impact would be the same as for small businesses.

Assumptions

It is assumed that regulated sources will elect to be assigned to a General ACDP if they meet the qualifications.

Housing Cost Impact Statement

The Department has determined that this proposed rulemaking will have no effect on the cost of development of a 6,000 square foot parcel and the construction of a 1,200 square foot detached single family dwelling on that parcel.

ATTACHMENT F

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal
for
General Air Contaminant Discharge Permits

Land Use Evaluation Statement

1. **Explain the purpose of the proposed rules.**

In a continuing effort to improve the efficiency of the air quality permitting program, the Department proposes that 18 general source category permits be adopted by rule. Issuing general permits will significantly reduce the amount of work necessary to process and issue permits because more than half of the currently permitted sources are eligible for assignment to the proposed permits. The proposed general permits will also provide regulated sources with more flexibility in their operations while maintaining compliance with state regulations.

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:** Air Contaminate Discharge Permit program (OAR 340, Division 216)

   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): Each stationary source will be required to obtain a land use compatibility statement before being assigned to a General ACDP.

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.

Division Intergovernmental Coordinator 7-13-01
Date

5/10/01 Handout Item C

GENERAL
AIR CONTAMINANT DISCHARGE PERMIT

Department of Environmental Quality
Air Quality Division
811 SW Sixth Avenue
Portland, OR 97204-1390
Telephone: (503) 229-5359

This permit is issued in accordance with the provisions of ORS 468A.040 and incorporated into OAR 340-216-0060 by the Environmental Quality Commission on <insert Secretary of State filing date> for the following source category:

Stationary and portable concrete manufacturing, including ready-mix and Cement Treated Base, and associated material handling activities such as storage piles, conveyors, and vehicle traffic. Other equipment may include electrical generators with internal combustion engines. SIC 3271

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1.0 PERMIT ASSIGNMENT

1.1 Qualifications

All of the following conditions must be met in order to qualify for assignment to this General Air Contaminant Discharge Permit (ACDP):

a. The permittee is performing the concrete manufacturing activities listed on the cover page of this permit, including supporting activities.

b. A Simple or Standard ACDP is not required for the source.

c. The source is not having ongoing, reoccurring or serious compliance problems.

1.2 Assignment

The Department will assign qualifying permittees to this permit that have and maintain a good record of compliance with the Department's Air Quality regulations and that the Department determines would be appropriately regulated by a General ACDP. The Department may rescind assignment if the permittee no longer meets the requirements of OAR 340-216-0060 and the conditions of this permit.

1.3 Permitted Activities

The permittee is allowed to discharge air contaminants from processes and activities related to the air contaminant source(s) listed on the first page of this permit until this permit expires, is modified, revoked or rescinded as long as conditions of this permit are complied with. If there are other emissions activities occurring at the site besides those listed on the cover page of this permit, the permittee may be required to obtain a Standard Permit or additional General ACDPs, if applicable.

1.4 Relation to local land use laws

This permit is not valid in Lane County, or at any location where the operation of the permittee's processes, activities, and insignificant activities would be in violation of any local land use or zoning laws. For operation in Lane County, contact Lane Regional Air Pollution Authority for any necessary permits at (541) 736-1056. It is the permittee's sole responsibility to obtain local land use approvals as, or where, applicable before operating this facility at any location.

2.0 GENERAL EMISSION STANDARDS AND LIMITS

2.1 Visible Emissions The permittee must comply with the following visible emission limits, as applicable:

a. In Clackamas, Columbia, Multnomah, or Washington Counties, emissions from fuel burning equipment must not exceed an opacity equal to or greater than 20% for a period aggregating more than 3 minutes in any one hour.

b. In Clackamas, Columbia, Multnomah, or Washington Counties, emissions from any air contaminant source other than fuel burning equipment must not equal or exceed 20% opacity for a period aggregating more than 30 seconds in any one hour.

c. In all other areas of the state, emissions from any air contaminant source must not equal or exceed 20% opacity for a period aggregating more than 3 minutes in any one hour.

2.2 Fugitive Emissions The permittee must control fugitive dust emissions by:

a. Controlling vehicle speeds on unpaved roadways.

b. Treating vehicular traffic areas of the plant site under the control of the permittee.

c. Operating all air contaminant-generating processes so that fugitive type dust associated with the operation will be adequately controlled at all times.

d. Treating storage piles, as necessary.

e. Prompt removal of "tracked-out" material from paved areas.

f. Storing collected materials from air pollution control equipment in a covered container or other method equally effective in preventing the material from becoming airborne during storage and transfer.

2.3 Particulate Matter Fallout The permittee must not cause or permit the emission of any particulate matter larger than 250 microns in size at sufficient duration or quantity, as to create an observable deposition upon the real property of another person. The Department will verify that the deposition exists and will notify the permittee that the deposition must be controlled.

2.4 Nuisance and Odors The permittee must not cause or allow air contaminants from any source to cause a nuisance. Nuisance conditions will be verified by Department personnel.

2.5 Fuels and Fuel Sulfur Content

The permittee must not use any fuel other than natural gas, propane, butane, ASTM grade fuel oils, or on-specification used oil.

a. Fuel oils must not contain more than:

i. 0.3% sulfur by weight for ASTM Grade 1 distillate oil;

ii. 0.5% sulfur by weight for ASTM Grade 2 distillate oil;

iii. 1.75% sulfur by weight for residual oil;

b. The permittee is allowed to use on-specification used oil that contains no more than 0.5% sulfur by weight. The permittee must obtain analyses from the marketer or, if generated on site, have the used oil analyzed, so that it can be demonstrated that each shipment of oil does not exceed the used oil specifications contained in 40 CFR Part 279.11, Table 1.

3.0 OPERATION AND MAINTENANCE REQUIREMENTS

3.1 Work practices

The permittee must employ bag filters on the silo(s) and water sprays on the truck loader to minimize fugitive dust emissions.

3.2 Fugitive Emissions Control Plan

While operating in the Medford-Ashland AQMA, the permittee must prepare and implement site-specific plans for the control of fugitive emissions in accordance with OAR 340-240-0180. While operating in the Lakeview Urban Growth Area (UGA), the permittee must prepare and implement site-specific plans for the control of fugitive emissions in accordance with OAR 340-240-0410.

3.3 O&M plan

While operating in the Medford-Ashland AQMA, the permittee must prepare and implement an operation and maintenance (O&M) plan in accordance with OAR 340-240-0190. While operating in the Lakeview UGA, the permittee must prepare and implement an O&M plan in accordance with OAR 340-240-0420.

4.0 PLANT SITE EMISSION LIMITS

4.1 Plant Site Emission Limits (PSEL)

Plant site emissions must not exceed the following:

Pollutant	Limit	Units
PM	24	tons per year
PM_{10}	14	tons per year
SO_2	39	tons per year
NO_X	39	tons per year
CO	99	tons per year
VOC	39	tons per year

4.2 PM_{10} PSEL for Medford-Ashland AQMA

For sources operating in the Medford-Ashland AQMA, plant site emissions of PM_{10} must not exceed the following:

Pollutant	Limit	Units
PM_{10}	4.5	tons per year
	49	pounds per day

4.3 Annual Period

The annual plant site emissions limits apply to any 12-consecutive calendar month period.

5.0 COMPLIANCE DEMONSTRATION

5.1 Fuel Sulfur Monitoring

If fuel oil is burned, the permittee must either obtain a certificate from the vendor stating that the fuel sulfur content complies with the limits in Condition 2.5, or have a sample of the fuel analyzed in accordance with the appropriate ASTM analytical procedures. If the permittee has samples analyzed for sulfur, a sample must be collected from the holding tank just after each shipment of oil is added to the tank.

5.2 PSEL Compliance Monitoring

Compliance with the PSEL is determined for each 12-consecutive calendar month period based on the following calculation for each pollutant:

$$E = \Sigma(EF \times P)/2000$$

where,

E = pollutant emissions (ton/yr);

EF = pollutant emission factor (see below);
P = process production (cubic yards of concrete and gallons of fuel burned for the generators)

5.3 Emission Factors The emission factors for determining compliance with the PSEL are as follows:

Emissions device or activity	Pollutant	Emission Factor (EF)	Emission factor units
Concrete Production	PM/PM_{10}	0.02	lb/cubic yard of concrete
Generator(s) (oil-fired)	PM/PM_{10}	42.5	lb/1000 gallon of fuel burned
	SO_2	39.7	lb/1000 gallon of fuel burned
	NO_X	604	lb/1000 gallon of fuel burned
	CO	130	lb/1000 gallon of fuel burned
	VOC	49.3	lb/1000 gallon of fuel burned
Generator(s) (natural gas, propane, and butane -fired)	PM/PM_{10}	10	lb/million cubic feet of NG burned
	SO_2	0.6	lb/million cubic feet of NG burned
	NO_X	2840	lb/million cubic feet of NG burned
	CO	399	lb/million cubic feet of NG burned
	VOC	116	lb/million cubic feet of NG burned

5.4 Medford/Ashland AQMA If the source operates in the Medford/Ashland AQMA, the permittee must also maintain records of daily concrete production and calculate the daily maximum emissions for the reporting period.

6.0 RECORDKEEPING REQUIREMENTS

6.1 Operation and Maintenance

The permittee must maintain the following records related to the operation and maintenance of the plant and associated air contaminant control devices:

a. Concrete produced in Oregon on a monthly basis for each site of operation;

b. Concrete produced in PM_{10} Nonattainment Areas in Oregon on a daily basis for each site of operation;

c. Types and quantities of fuels burned in the generator(s) in Oregon on a monthly basis for each site of operation;

d. Types and quantities of fuel burned in the generator(s) in PM_{10} Nonattainment Areas in Oregon on a daily basis for each site of operation;

e. Sulfur content from vendor certification of each shipment of fuel oil, if used at the plant; and

f. If used oil is used, the permittee must obtain analyses from the marketer or, if generated on site, have the used oil analyzed, so that it can be demonstrated that each shipment of oil does not exceed the used oil specifications contained in 40 CFR Part 279.11, Table 1.

6.2 Excess Emissions

The permittee must maintain records of excess emissions as defined in OAR 340-214-0300 through 340-214-0340 (recorded on occurrence). Typically, excess emissions are caused by process upsets, startups, shutdowns, or scheduled maintenance. In many cases, excess emissions are evident when visible emissions are greater than 20% opacity for 3 minutes or more in any 60-minute period.

6.3 Complaint Log

The permittee must maintain a log of all written complaints and complaints received via telephone that specifically refer to air pollution concerns associated to the permitted facility. The log must include a record of the permittee's actions to investigate the validity of each complaint and a record of actions taken for complaint resolution.

6.4 Retention of Records

Unless otherwise specified, all records must be maintained on site for a period of two (2) years and made available to the Department upon request.

7.0 REPORTING REQUIREMENTS

7.1 Excess Emissions The permittee must notify the Department by telephone or in person of any excess emissions which are of a nature that could endanger public health.

a. Such notice must be provided as soon as possible, but never more than one hour after becoming aware of the problem. Notice must be made to the regional office identified in Condition 8.3.

b. If the excess emissions occur during non-business hours, the permittee must notify the Department by calling the Oregon Emergency Response System (OERS). The current number is 1-800-452-0311.

c. The permittee must also submit follow-up reports when required by the Department.

7.2 Annual Report The permittee must submit to the Department by **February 15** of each year this permit is in effect, two (2) copies of the following information for the preceding calendar year:

a. Operating parameters:

i. Amount of concrete produced in Oregon on an annual basis (cubic feet).

ii. Types and quantities of fuels burned in the generator in Oregon on an annual basis.

iii. A list of and dates and times of operation in all PM_{10} nonattainment areas; including annual and maximum daily concrete production and annual and maximum daily fuel usage in the generator(s) in these areas.

b. Records of all planned and unplanned excess emissions events.

c. Summary of complaints related to air quality received by permittee.

d. List permanent changes made in plant process, production levels, and pollution control equipment which affected air contaminant emissions.

e. List major maintenance performed on pollution control equipment.

7.3 Initial Startup Notice

The permittee must notify the Department in writing of the date a new facility is started up. The notification must be submitted no later than seven (7) days after startup.

7.4 Relocation Notice

The permittee must not install or operate the facility or any portion of the facility at any new site without first providing written notice to the Permit Coordinator in the appropriate regional office. The written notice must include the date of the proposed move, approximate dates of operation, a detailed map showing access to the new site, and a description of the air pollution controls and procedures to be installed, operated, and practiced at the new site. Additional permits may be required if the permittee operates individual components of the facility at more than one site at a time.

7.5 Notice of Change of Ownership or Company Name

The permittee must notify the Department in writing using a Departmental "Permit Application Form" within 60 days of the following:

a. Legal change of the name of the company as registered with the Corporations Division of the State of Oregon; or

b. Sale or exchange of the activity or facility.

7.6 Construction or Modification Notices

The permittee must notify the Department in writing using a Departmental "Notice of Construction Form," or "Permit Application Form," and obtain approval in accordance with OAR 340-210-0205 through 340-210-0250 before:

a. Constructing or installing any new source of air contaminant emissions, including air pollution control equipment;

b. Modifying or altering an existing source that may significantly affect the emission of air contaminants;

c. Making any physical change which increases emissions; or

d. Changing the method of operation, the process, or the fuel use, or increasing the normal hours of operation that result in increased emissions.

7.7 Where to Send Reports and Notices

Reports and notices, with the permit number prominently displayed, must be sent to the Permit Coordinator for the regional office where the source is located as identified in Condition 8.2. For portables, reports and notices should be sent to the DEQ regional office nearest the company's office of record.

8.0 ADMINISTRATIVE REQUIREMENTS

8.1 Reassignment to the General ACDP

A complete application for reassignment to this permit is due within 60 days after the permit is reissued. The Department will notify the permittee when the permit is reissued. The application must be sent to the appropriate regional office.

a. If the Department is delinquent in renewing the permit, the existing permit will remain in effect and the permittee must comply with the conditions of the permit until such time that the permit is reissued and the source is reassigned to the permit.

b. The permittee may submit an application for either a Simple or Standard ACDP at any time, but the permittee must continue to comply with the General ACDP until the Department takes final action on the permit application.

c. If a complete application for reassignment to the General ACDP or Simple or Standard ACDP is filed with the Department in a timely manner, the permit will not be deemed to expire until final action has been taken on the application.

8.2 Permit Coordinator Addresses

All reports, notices, and applications should be directed to the Permit Coordinator for the area where the source is located. The Permit Coordinator addresses are as follows:

Counties	Permit Coordinator Address and Telephone
Clackamas, Clatsop, Columbia, Multnomah, Tillamook, and Washington	Department of Environmental Quality Northwest Region 2020 SW 4th Avenue, Suite 400 Portland, OR 97201-4987 Telephone: (503) 229-5582
Benton, Coos, Curry, Douglas, Jackson, Josephine, Lincoln, Linn, Marion, Polk, and Yamhill	Department of Environmental Quality Western Region 750 Front Street NE, Suite 120 Salem, OR 97301-1039 Telephone: (503) 378-8240 ext. 225
Baker, Crook, Deschutes, Gilliam, Grant, Harney, Hood River, Jefferson, Klamath, Lake, Malheur, Morrow, Sherman, Umatilla, Union, Wallowa, Wasco, Wheeler	Department of Environmental Quality Eastern Region 2146 NE 4th Street, Suite 104 Bend, OR 97701-3647 Telephone: (541) 388-6146 ext. 223

8.3 Department Contacts

Information about air quality permits and the Department's regulations may be obtained from the DEQ web page at www.deq.state.or.us. All inquiries about this permit should be directed to the regional office for the area where the source is located. The Department's regional offices are as follows:

Counties	Office Address and Telephone
Clackamas, Clatsop, Columbia, Multnomah, Tillamook, and Washington	Department of Environmental Quality Portland Office 2020 SW 4th Avenue, Suite 400 Portland, OR 97201-4987 Telephone: (503) 229-5554
Benton, Lincoln, Linn, Marion, Polk, and Yamhill	Department of Environmental Quality Salem Office 750 Front Street NE, Suite 120 Salem, OR 97301-1039 Telephone: (503) 378-8240
Coos, Curry, Western Douglas	Department of Environmental Quality Coos Bay Office 340 N Front Street Coos Bay, OR 97420-2325 Telephone: (541) 269-2721
Eastern Douglas, Jackson, and Josephine	Department of Environmental Quality Medford Office 201 W Main Street, Suite 2-D Medford, OR 97501-2744 Telephone: (541) 776-6010
Crook, Deschutes, Harney, Hood River, Jefferson, Sherman, Wasco, and Wheeler	Department of Environmental Quality Bend Office 2146 NE 4th Street, Suite 104 Bend, OR 97701-3647 Telephone: (541) 388-6146
Baker, Gilliam, Grant, Malheur, Morrow, Umatilla, Union, and Wallowa	Department of Environmental Quality Pendleton Office 700 SE Emigrant Avenue, Suite 330 Pendleton, OR 97801-2597 Telephone: (541) 276-4063
Klamath and Lake	Department of Environmental Quality Klamath Falls Office 700 Main Street, Suite 202 Klamath Falls, OR 97601-6010 Telephone: (541) 883-5603

9.0 FEES

9.1	**Annual Compliance Fee**	The Annual Compliance Determination Fee specified in OAR 340-216-0090, Table 2, Part 2(c) for a Class One General ACDP is due on **December 1** of each year this permit is in effect. An invoice indicating the amount, as determined by Department regulations, will be mailed prior to the above date.
9.2	**Change of Ownership or Company Name Fee**	The non-technical permit modification fee specified in OAR 340-216-0090, Table 2, Part 3(a) is due with an application for changing the ownership or the name of the company of a source assigned to this permit.
9.3	**Where to Submit Fees**	Fees must be submitted to: Department of Environmental Quality Business Office 811 SW Sixth Avenue Portland, Oregon 97204-1390

10.0 GENERAL CONDITIONS AND DISCLAIMERS

10.1	**Other Regulations**	In addition to the specific requirements listed in this permit, the permittee must comply with all other legal requirements enforceable by the Department.
10.2	**Conflicting Conditions**	In any instance in which there is an apparent conflict relative to conditions in this permit, the most stringent conditions apply.
10.3	**Masking of Emissions**	The permittee must not cause or permit the installation of any device or use any means designed to mask the emissions of an air contaminant that causes or is likely to cause detriment to health, safety, or welfare of any person or otherwise violate any other regulation or requirement.
10.4	**Department Access**	The permittee must allow the Department's representatives access to the plant site and pertinent records at all reasonable times for the purposes of performing inspections, surveys, collecting samples, obtaining data, reviewing and copying air contaminant emissions discharge records and conducting all necessary functions related to this permit in accordance with ORS 468-095.
10.5	**Permit Availability**	The permittee must have a copy of the permit available at the facility at all times.
10.6	**Open Burning**	The permittee may not conduct any open burning except as allowed by OAR 340 Division 264.

10.7	**Asbestos**	The permittee must comply with the asbestos abatement requirements in OAR 340, Division 248 for all activities involving asbestos-containing materials, including, but not limit to, demolition, renovation, repair, construction, and maintenance.
10.8	**Property Rights**	The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.
10.9	**Termination, Revocation, or Modification**	The Commission may modify or revoke this permit pursuant to OAR 340-216-0060(3) and (4).

11.0 ABBREVIATIONS, ACRONYMS, AND DEFINITIONS

ACDP	Air Contaminant Discharge Permit
ASTM	American Society for Testing and Materials
AQMA	Air Quality Maintenance Area
bbl	barrel (42 gal)
calendar year	The 12-month period beginning January 1st and ending December 31st
CFR	Code of Federal Regulations
CO	carbon monoxide
date	mm/dd/yy
DEQ	Oregon Department of Environmental Quality
dscf	dry standard cubic foot
EPA	US Environmental Protection Agency
FCAA	Federal Clean Air Act
gal	gallon(s)
gr/dscf	grains per dry standard cubic foot
HAP	Hazardous Air Pollutant as defined by OAR 340-244-0040
ID	identification number
I&M	inspection and maintenance
lb	pound(s)
MMBtu	million British thermal units
NA	not applicable
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NO_X	nitrogen oxides
NSPS	New Source Performance Standard
NSR	New Source Review
O_2	oxygen
OAR	Oregon Administrative Rules
ORS	Oregon Revised Statutes
O&M	operation and maintenance
Pb	lead
PCD	pollution control device
PM	particulate matter
PM_{10}	particulate matter less than 10 microns in size
ppm	part per million
ppmv	part per million by volume
PSD	Prevention of Significant Deterioration
PSEL	Plant Site Emission Limit
PTE	Potential to Emit
RACT	Reasonably Available Control Technology
scf	standard cubic foot
SER	Significant Emission Rate
SERP	Source Emission Reduction Plan
SIC	Standard Industrial Code
SIP	State Implementation Plan
SO_2	sulfur dioxide
Special Control Area	as defined in OAR 340-204-0070
VE	visible emissions
VOC	volatile organic compound
year	A period consisting of any 12 consecutive calendar months

Department of Environmental Quality
Air Quality Program

GENERAL

AIR CONTAMINANT DISCHARGE PERMIT ASSESSMENT REPORT

READY MIX AND CTB CONCRETE MANUFACTURING PLANTS

SOURCE DESCRIPTION AND QUALIFICATION

1. This General Permit is designed to regulate air contaminant emissions from stationary and portable concrete manufacturing, including ready mix and CTB plants.

2. The facilities assigned to this General Permit have no other air pollution sources which require regulation beyond that specified in this permit, or have other pollution sources that also qualify for General Permits. Facilities eligible for assignment to this permit have not experienced recurring or serious compliance problems.

ASSESSMENT OF EMISSIONS

3. Facilities assigned to this General Permit are sources of PM and PM_{10} emissions. Some facilities are portable and may operate generators to produce the energy necessary for the production processes. Generators are also sources of PM and PM_{10}, as will as SO_2, CO, NO_X, and VOC emissions.

4. Potential nuisances originating from this type of operation could include fugitive dust associated with material handling operations and vehicular traffic. The permit includes requirements to control fugitive dust emissions.

5. The Department has assessed the level of emissions of all air pollutants from these facilities and determined that facilities complying with the operational limits and monitoring requirements of this permit have emission levels below the established levels of concern stated in Tables 2 and 3 of OAR 340-200-0020.

SPECIFIC AIR PROGRAM APPLICABILITY

6. Facilities assigned to this General Permit are subject to the general visible emissions standards, nuisance requirements (control of fugitive dust and odors), and fuel sulfur limits in OAR Chapter 340, Divisions 208 and 228. The permit contains requirements and limitations to ensure compliance with these standards. The particulate matter emission limits in OAR Chapter 340, Division 226 are not applicable to these facilities

because the emissions are fugitives, which cannot be measured using standard test methods.

COMPLIANCE ASSURANCE

7. Permittees are required to maintain records of production and upset conditions. These items are reported to the Department annually.

8. Department staff members perform site inspections of the permitted facilities on a routine basis, and more frequently if complaints are received.

REVOCATION OF ASSIGNMENT

9. Any facility that fails to demonstrate compliance, generates complaints, or fails to conform to the requirements and limitations contained in the permit may have its assignment to the General Permit revoked. The facility would then be subject to a higher, more stringent level of permitting.

PUBLIC NOTICE

10. General Air Contaminant Discharge Permits are incorporated into the Oregon Administrative Rules by reference and are part of the State Implementation Plan. As part of the rulemaking process, the public will be provided at least 30 days to submit written comments or may provide oral testimony at a public hearing that will be held at the end of the comment period in different locations throughout the state. Notice of when and where the hearings will be held will be provided at least 30 days in advance of the hearings. The Department will review any comments and may modify the permits in response to the comments. The final permits will be issued after approval by the Environmental Quality Commission.

State of Oregon
Department of Environmental Quality Memorandum

To: Environmental Quality Commission **Date:** August 4, 2001

From: Stephanie Hallock, Director

Subject: Director's Report

Reunification of Waste Management and Cleanup
Under Lang Marsh's tenure, DEQ split the Waste Management and Cleanup Division into two Divisions - Environmental Cleanup and Waste Prevention and Management. DEQ requested an additional Division Administrator (DA) position in the budget. We did not get approval for that position, and I have "reunified" those Divisions under the leadership of Paul Slyman as the new DA. Paul had been the Acting Administrator of the Cleanup Division. The reunification has gone well, with participation in the planning by staff and support from Sally Puent, who was the Acting Administrator of the Prevention side. At her request, Sally will ultimately move to Northwest Region as a Solid Waste Manager. Both Sally and Paul did a great job in their acting capacities, particularly during the legislative session.

Federal Delay of TMDL Revisions
In July, EPA Administrator Christine Todd Whitman announced EPA will delay implementation of a proposed revision to TMDL regulations that govern how states develop and implement TMDLs, as well as proposed revisions to the 303(d) listing of impaired waterbodies. EPA developed the proposed regulations in response to numerous lawsuits nationwide. The revisions have been extremely controversial, however, and EPA has since been sued by both the environmental community and "user groups" such as the American Farm Bureau. It is likely that EPA will now completely revisit the TMDL program. This action should not affect Oregon's approach and ten year schedule for completing TMDLs for all streams on the 1998 303(d). Few states are as advanced and committed to working in with citizens and stakeholders on TMDL implementation as Oregon.

2002 EQC Meeting Dates
Dates for 2002 EQC meetings are shown below. We are now beginning to plan meeting locations, tour opportunities and joint meetings with the Oregon Water Resources Commission and Land Conservation and Development Commission. Please let us know your ideas throughout the year.

- January 24 – 25
- March 7 – 8
- April 25 – 26
- June 6 – 7
- July 25 – 26
- September 19 – 20
- November 7 – 8

2001-2003 DEQ Budget
Attachment A provides and overview of development of the 2001-03 operating budget.

2001 Legislative Session Summary
Attachment B provides a detailed summary of the 2001 legislative session. Lauri Aunan, DEQ's Legislative Coordinator, was instrumental in working with Division Administrators, staff, legislators and stakeholders for effective DEQ involvement throughout the session.

Pollution Control Tax Credit Update
Helen Lottridge will give a brief, high level overview of the new pollution control tax credit legislation.

Operating Budget Development Process

July 31 – Executive Management Team reviewed basic program operating budgets

- Subprograms as listed in the attached
- Updates the LAB Budget for:
  - ✓ Estimated Pay Raises
  - ✓ Estimated Benefits Increase
  - ✓ Program Revenue Updates
- Will Show Net Surplus/Deficits for Operating Subprograms

Features of the New Operating Budget Format

- Provides three basic types of information
  - *Budget* – Legislative Approved Budget
  - *Planning* – Operating Budget
  - *Execution* - Forecast

- Provides variance analysis of forecast vs. operating budget

- For each subprogram:
  - Direct Program Expenditures, by category
  - Indirect
  - Laboratory expenditures
  - Enforcement expenditures

- Separate Detailed Laboratory/Enforcement budgets

- Three segments for operating budget development only:
  - Budgeted Prorate Differential
  - Off Budget Allocations
  - Off Budget Direct

After July 31, the PMT tasks, under EMT guidelines:

- Fine Tune Assumptions and Breakout to Subprograms
- Allocate Pro-rates and Off-budget items into Budgets
- Provide Recommendations to Balance Operating Budgets
- EMT decisions, and/or
- Return to PMT for another round
- Define Operating Plan Deliverables
- Cross check with Development of Strategic Plan &Executive Measures

AQ Sub-programs

- ACDP
- Title V
- Point-Non-Permitted
- Area, Mobile, Toxics
- Asbestos
- Gasoline Programs
- Special Projects & Payments
- Vehicle Inspection

WQ Sub-programs

- Wastewater Permitting
- Storm Water Phase II
- Operator Certification
- Underground Injection Control
- 401 Certification
- On-Site Sewage
- Nonpoint Source
- Groundwater
- Steelhead Supplement
- TMDL/Oregon Plan
- Standards & Assessments
- WQ Monitoring
- WQ SRF Administration
- EPOC
- SDWA Drinking Water Protection
- Receipts Authority
- WQ Program Support
- WQ Management/Clerical
- Other Federal Grants
- Pollution Prevention
- Columbia River Basin
- WQ Legislative Coordinator
- Miscellaneous Enforcement

Preliminary Summary of State Legislation for the Oregon Department of Environmental Quality 71st Oregon Legislative Session, 2001

August 1, 2001

This summary includes a description of bills passed by the Legislature that relate to DEQ's work. This summary will be revised and finalized in September 2001.

A complete list of legislation that affects state agencies generally is not included in this summary. For more complete information on legislation affecting all state agencies, contact the Department of Administrative Services.

For more detailed information on bills listed in this summary, visit the Oregon Legislature website at www.leg.state.or.us.

Overview

The 2001 Legislative session opened on January 8, 2001, and adjourned at 5:15 a.m. on July 7, 2001. 3,106 bills were introduced – a new record for the Oregon Legislature (the previous record was 3,103 in 1999). House members introduced 2,067 bills. The Senate introduced 1,039, the fewest since 1985. 1,005 bills have reached the Governor's desk. As of August 1, 2001, he had vetoed 5 bills. The Governor has until August 17 to sign or reject bills.

Status of Legislation Introduced by DEQ

3 out of 4 DEQ bills passed.

Passed: HB 2150, Oregon spill preparedness. This bill: (1) increases Oil Spill Prevention Fees charged by DEQ for certain vessels and facilities; (2) clarifies that DEQ serves as the state agency responsible for overall management of spills or releases of oil and hazardous substances; and (3) creates a task force to evaluate needs and issues related to spill planning, preparedness and response and report to the Legislature by January 31, 2003. **Governor signed; effective date July 1, 2001.**

Passed: HB 2264, underground storage tank leak prevention. The bill increases underground storage tank permit fees so DEQ has adequate staffing to receive underground storage tank program delegation from the federal EPA. Specifically, the bill sets the annual tank permit fee at $85, with a $20 surcharge the first year. Operator training and a pilot program for quick imposition of non-compliance penalties are also part of HB 2264. The bill requires DEQ to apply for federal program delegation by January 31, 2003. **Governor signed; effective July 6, 2001.**

Passed: HB 2883, homeowner heating oil tank program fees. This bill was introduced at the

request of DEQ and the Oregon Petroleum Marketers Association. The bill increases the filing fee from $50 to $125 for a person requesting certification of a heating oil tank cleanup. The certification is critical for persons selling properties with heating oil tanks. The fee increase is necessary to replace General Funds that partially supported DEQ heating oil tank work in 1999-2001, but are not available for 2001-2003. **Governor signed; effective July 6, 2001.**
Did Not Pass: HB 2149, help finance landowner projects to protect salmon and water quality. The Clean Water State Revolving Fund currently provides direct loans to public entities for sewage treatment and stormwater control improvements. The bill would have provided a mechanism for low-interest loans to private landowners for non-point source pollution control projects.

Agency Wide

HB 3536, amends Oregon's environmental audit privilege law to meet concerns raised by EPA. The bill was narrowly targeted to remove the privilege only for criminal investigations. This means a company may not claim the privilege for self-audit documents in a criminal proceeding, but could claim the privilege in an administrative, tort, or other civil proceeding. **Governor signed; effective January 1, 2002.**

SB 957, requires DEQ, Division of State Lands, Water Resources Department, State Forestry Department, Department of Agriculture, Department of Fish and Wildlife, and Department of Transportation to offer permit applicants a document specifying the criteria and procedures for the agencies' evaluation of the permit application; document in writing the basis for permit denials; ensure certain officers or staff sign any permit denial; and report to the 2003 Legislature the actions the agency has taken to improve services and increase applicant understanding of the permit process. SB 957 addresses concerns over how agencies communicate permit requirements and permit denials. **Governor signed; effective June 14, 2001.**

Air Quality

HB 2132, authorizes Department of Motor Vehicles to issue initial four-year registration to new vehicles. This is being coordinated with DEQ, because it affects DEQ's Vehicle Inspection Program emissions testing requirements in Portland and Medford. **Governor signed; effective January 1, 2002.**

HB 2154, allows Department of Agriculture to develop alternatives to field burning under memorandum of understanding with EQC to operate field burning program. **Governor signed; effective January 1, 2002.**

HB 2178, allows Oregon Department of Transportation to reduce ability to obtain multiple trip permits, which have been used to avoid vehicle registration and emissions testing. **Governor signed; effective January 1, 2002.**

HB 2200, establishes program for creating forestry carbon offsets for nonfederal forestlands. DEQ is a member of the Department of Forestry advisory committee on carbon offsets

established in this legislation. **Governor signed; effective January 1, 2002.**

HB 3788, adopts policy and measures to reduce use of nonrenewable energy resources in construction and renovation of state agency facilities; creates expedited siting process for certain energy facilities. DEQ will be involved in issuing air and water permits for facilities that desire expedited siting to meet energy needs. **Governor signed; effective June 28, 2001.**
SB 948, allows individual counties to create and administer a community bank for air emissions credits. This will allow credits to be centralized and may assist in promoting economic development. The bill's proponents hope this community banking will help recruit new businesses to communities where mills have recently shut down. DEQ worked with the sponsors to ensure that the bill does not violate DEQ or EPA clean air laws. **Governor signed; effective January 1, 2002.**

Water Quality

HB 2156, strengthens authority of the Oregon Department of Agriculture to regulate confined animal feeding operations under the Clean Water Act. **Governor signed; effective July 1, 2001.**

HB 2978, section 6 clarifies that DEQ is authorized to issue a permit for a community subsurface sewage disposal system operated by an incorporated city, county, sanitary authority, county service district, sanitary district, metropolitan service district, or other special district authorized to construct water pollution control facilities. The Department of Justice had advised DEQ that the courts could interpret the current law, ORS 454.655(4), to prohibit DEQ from issuing such a permit if service is already available from an existing community or area-wide system. **Governor signed; effective January 1, 2002.**

HB 3788, adopts policy and measures to reduce use of nonrenewable energy resources in construction and renovation of state agency facilities; creates expedited siting process for certain energy facilities. DEQ will be involved in issuing air and water permits for facilities that desire expedited siting to meet energy needs. **Governor signed; effective June 28, 2001.**

HB 3956, water pollutant trading bill. This bill directs DEQ to seek federal funding for effluent trading with an emphasis on the Willamette Basin, with a goal of net reduction in pollution as a result of a successful trade. **Governor signed; effective July 6, 2001.**

SB 51, modifies statutes on agricultural water quality management plans. Requires Department of Agriculture to consult with Department of Justice regarding access to private property and notify landowners about water quality management plans before initiating inspections in the plan area. Prohibits civil penalty for a first violation unless the person has first been notified in writing that a violation has occurred, and has been given at least 30 days to correct the violation. **Governor signed; effective date January 1, 2002.**

SB 172, amends removal and fill statutes and directs the Division of State Lands to seek assumption of federal dredge and fill permitting program under the Federal Water Pollution Control Act. **Governor signed.**

SB 208, modifies statutes on agricultural water quality management plans. Requires Department of Agriculture plans and rules to be based upon scientific information. Provides that rules to implement water quality management plans "shall constitute the only enforceable aspect of a water quality management plan." **Governor signed.**

SB 212, clarifies how Oregon's land use laws relate to the practice of applying reclaimed water, agricultural or industrial process water, or biosolids as irrigation water or fertilizer to grow crops on land zoned for exclusive farm use. While such "land application" has been approved in Oregon for decades, recent legal challenges showed that existing land use law was potentially unclear whether this practice is a farm use that is allowed outright, a utility facility, or some other type of use. Requires report to the 2003 Legislature describing status of land application in Oregon. **Governor signed; effective July 21, 2001.**

SB 945, requires Oregon Watershed Enhancement Board to coordinate Oregon Plan for Salmon and Watersheds reports to Governor and appropriate legislative committees. Creates state policy on Oregon Plan for Salmon and Watersheds and references Oregon Plan in certain statutes of state agencies. **Governor signed.**

SB 946, directs Oregon Watershed Enhancement Board to coordinate information and data of natural resource agencies with State Service Center for Geographic Information Systems as part of its watershed enhancement program. **Governor signed.**

Waste Management and Cleanup

HB 2698, sets the state fees to be charged from July 1, 2001 to January 1, 2004, on hazardous waste treated or disposed at the state's only hazardous waste landfill near Arlington.
HB 2698 makes one significant change to the existing fee structure. Under the bill, the fee on disposal of more than 2500 tons of cleanup waste from a single generator is lowered from $20/ton to $10/ton. During the past biennium, the facility did not receive any cleanup waste from this category of generators. It is hoped that by reducing the fee, significant amounts of cleanup waste will be removed from the environment and disposed of at the site.
Governor signed; effective date July 6, 2001.

HB 3007, phases out mercury in fever thermometers, thermostats, automobile light switches, and novelty products. DEQ's responsibilities: (1) when we learn there is a novelty item for sale with encapsulated mercury, we notify the seller that it's prohibited; (2) coordinate with other agencies to provide technical assistance on removing mercury light switches to businesses that crush cars; (3) encourage repair shops to offer mercury switch removal from cars; and (4) rulemaking to determine labeling to notify consumers about mercury in thermostats. **Governor will sign on August 8.**

HB 3744, establishes new statewide waste recovery goals of 45% for 2005 and 50% for 2009. (Existing law had set the 50% recovery goal for the year 2000 and that goal was not met.) It also sets local wasteshed recovery goals for 2005 and 2009 that, if met, will result in the state meeting its goals. Each local wasteshed shall prepare a plan identifying the policies and programs it will use to achieve the required recovery goals. The bill also makes minor adjustments to how the

recovery rates are calculated. **Governor signed; effective June 21, 2001.**

HB 3815, regulates the sale of fertilizer and related products, including labeling. The Department of Agriculture is the lead. DEQ will be involved as ODA undertakes rulemaking. **On Governor's desk.**
HB 3909, tire recovery task force. DEQ will be one member of a task force to make recommendations on how to increase recovery of used tires. **Governor signed; effective June 27, 2001.**

SB 463, amends the existing state dry cleaner law adopted in 1995. The law created a unique program where dry cleaners are relieved of cleanup liability but are responsible for providing revenue to clean up these contaminated sites. SB 463 clarifies eligibility for liability protection under the law; clarifies waste minimization requirements of dry cleaners; modifies the existing fee structure that raises revenue for the program; and sunsets the fees and liability protection for dry cleaners on January 1, 2006. **Governor signed.**

SB 895, ballast water regulation. The bill generally prohibits discharge of ballast water into waters of the state, and requires vessels to report ballast water information at least 24 hours before entering waters of the state. DEQ will receive these reports, and will establish a task force to study and recommend to the next Legislature improvements to ballast water management. **Governor signed; effective January 1, 2002.**

Management and Budget

HB 2656, requires state agency to report to appropriate legislative committee when agency makes substantive changes in programs after Legislature has approved agency budget. Department of Administrative Services to adopt rules defining "substantive change." **Governor signed; effective January 1, 2002.**

HB 3224, requires state agencies to report positions vacant for 6 months to Department of Administrative Services. **Governor signed.**

HB 3997, establishes limitations on appropriations for state government. **On Governor's desk.**

SB 5516, bill to ratify fees adopted by EQC after June, 1999. On-site septic system fee increase not ratified but rolled back to previous levels; certain air permit fees ratified. **Governor signed.**

SB 5517, DEQ's 2001-2003 budget bill. **Governor signed; effective July 17, 2001.**

SB 764 continues the pollution control tax credit with some changes to provide higher level of credits for controls beyond what is required by law. The bill also creates a task force to make recommendations to the 2003 legislature. **On Governor's desk.**

<u>Bills that did not pass</u>
Some of the bills that did not make it to the Governor's desk include:

HB 2010, proposal to establish and fund a Portland Harbor environmental cleanup district. **Passed the House, died in Senate Rules Committee.**

HB 3091, ban disposal of certain contaminated sediments in Ross Island. **Passed the House, died in Senate Rules Committee.**

HB 3828, require the EQC to develop a list of "hazardous" substances currently discharged into waters in the Willamette River Basin. Once this list is developed, (1) require facilities to monitor discharges on the list; and (2) prohibit any discharge four years after the list was developed, unless the EQC determines that "no reasonable available technology exists" to treat to zero discharge. **One hearing in House Stream Restoration and Species Recovery Committee, then died; Democrats attempted to substitute this bill for HB 2010 on the House floor; that failed.**

Dozens of bills to weaken the "SB 1010" agricultural water quality planning laws, administered by the Department of Agriculture and part of the Oregon Plan for Salmon and Watersheds. **Had one hearing in Senate Agriculture, Natural Resources, Salmon and Water Committee, then died.**

SB 52, before describing land within an agricultural water quality management plan, Department of Agriculture must obtain information from EQC that shows "a statistically valid scientific basis for concluding that the condition of the land contributes to a water quality impairment that exceeds, or is likely to exceed, applicable water quality standards." **Passed Senate Agriculture, Natural Resources, Salmon and Water Committee to Ways & Means; died in Ways & Means.**

Fact Sheet

8/10/01 Handout Item D

Pollution Control Facilities Tax Credit and the 2001 Law

State of Oregon
Department of Environmental Quality

Management Services Division
Tax Credit Program
811 SW 6th Avenue
Portland, OR 97204
Phone: (503) 229-6878
(800) 452-4011
Fax: (503) 229-6730
Contact: Maggie Vandehey
www.deq.state.or.us

Program extended
The Seventy-first Legislative Assembly extended the Pollution Control Facilities Tax Credit for another six years.

Application filing period changes
The period for filing an application changes from two years to one year after construction of the facility is completed.

No tax credits for violators
A tax credit is not available to any taxpayer convicted of a felony related to a certified pollution control facility.

Task Force
The Governor will appoint a task force to study the pollution control tax credit.

Reduced maximum tax credit percentage
Tax credit values are a percent of the facility cost; the maximum percentage will be reduced according to these conditions:

50% Applies to any facility
- ❑ Certified under the 1999 Edition of ORS 468.155 to 468.190; or
- ❑ If construction commenced before 1/1/01 and completed before 1/1/04.

The reduced maximum tax credit percentages apply to applications filed on or after 1/1/02 if the facility does not qualify for the 50% maximum tax credit.

35% Applies if any one of the following conditions is true.
a) Certified facility cost does not exceed $200,000.
b) Construction or installation of the facility is voluntary.
c) The applicant
   - ❑ is ISO 14001 certified; or
   - ❑ uses an environmental management system at the facility.
d) A Green Permit applies to the facility.
e) The facility is used for one of the following purposes:
   - ❑ nonpoint source pollution control;
   - ❑ confined animal feeding operation;
   - ❑ material recovery or recycling; or
   - ❑ energy recovery in an agricultural or forest products operation.

If the facility or applicant does not qualify for the 35% maximum tax credit then the following percentages apply .

25% If construction commenced 1/1/01 through 12/ 31/03;
15% If construction commenced 1/1/04 through 12/31/05; or
0% If construction commenced after 12/31/05.

8/10/01 Handout Item D

DEQ 2001-2003 Budget Summary
Results of 2001 Legislative Session

Air Quality

- Approval of 30% fee increase in Air Contaminant Discharge Permit Program (ACDP), plus addition of $170K of General Fund, which covers all except 3.5 FTE in the program
- Permission to shift of 3.5 FTE from ACDP to focus on work on pollution from area and mobile sources
- Continuation of 8 monitoring positions for PM2.5, including conversion of 4 positions to permanent positions
- Authorization of 75 Limited Duration Vehicle Inspector positions, plus a training position and a safety position for VIP; included a budget note to investigate privatization
- Authorization of 2 air toxics positions; an additional position can be requested through Eboard once funding is secured
- Did not receive the open burning position, but if EQC raises open burning fees we can request the position from Eboard if we can demonstrate we have sufficient revenues
- Received 2 Limited Duration positions to expedite energy facility permitting
- Authorization to implement the automobile dealer testing program for VIP

Water Quality

- Approval of 20% fee increase to restore existing positions in wastewater permitting program; additional fee increase to expand program by 12 FTE not approved; included a budget note required us to report on efficiency improvements and reduction in the backlog
- Continuation of Limited Duration positions to continue work on the Willamette Total Maximum Daily Load (TMDL); included a budget note to continue reporting to Legislative Fiscal about progress
- Authorization for 6 Limited Duration positions to implement approved TMDLs; included a budget note to report to Legislative Fiscal about the federal grant details
- Continuation of Limited Duration positions for the final phase of Drinking Water Source Protection work
- Continuation of Limited Duration positions for the LaPine On-Site project
- Funding for 2 positions in the Environmental Partnerships for Oregon Communities by shifting funding from Hazardous Waste
- Approval of a fee increase in Operator Certification to restore 1 position
- Approval to shift General Fund from Hazardous Waste to do start-up work related to Stormwater Phase II; we will go to Eboard for ongoing implementation positions
- Did not receive funding to complete toxics monitoring work in the Willamette

Waste Management and Cleanup

- Approval of a fee increase to fund restoration of 5 Underground Storage Tank positions
- Approval of a fee increase to fund restoration of 1 Heating Oil Tank position
- Approval of a fee increase for marine spill protection and 1.25 FTE
- Approval for $4M bond sale for orphan site cleanups, including debt service
- A budget note to review the landfill orphan site account for revenue projections and possible other uses for this account
- Did not receive approval for additional DA position or new NWR manager position; we will merge EC and WPM and move one manager position to NWR

Agency Management and Cross Media

- Approval of 4 Community Solutions Team positions
- Approval of new MSD and OD positions for time accounting, organization improvement, budget, accounting, web management and data integration
- Pollution Control Tax Credit extended; new fee schedule to be implemented and new position requested from Eboard once we can demonstrate sufficient revenues
- Accepted base budget cuts of the Librarian and Rules coordinator positions
- A budget note instructing us to investigate ways to use information systems resources more efficiently
- A budget note instructing us to conduct customer service surveys

State of Oregon

Department of Environmental Quality Memorandum

Date: July 23, 2001

To: Environmental Quality Commission

From: Stephanie Hallock, Director S. Hallock

Subject: Agenda Item E, Informational Item: Columbia River Gorge Air Quality Project: Work Plan
August 10, 2001 EQC Meeting

Purpose of Item

Oregon and Washington environmental agencies have proposed a draft work plan describing a multi-year effort to create a clean-air strategy for the Columbia River Gorge National Scenic Area (NSA). The strategy would protect and enhance air quality and support economic development in the Gorge.

Next Steps

The public comment period on the draft work plan closed July 17, 2001. Key comments include:

- concern over a funding strategy
- achieving an equitable balance of interests on the Advisory Committee
- the role of science in supporting policy decisions
- the perceived need for interim emission reduction measures as the technical study proceeds.

The inter-agency project team evaluated public comment and revised the work plan where appropriate. The final proposed work plan will be presented for approval to the Columbia River Gorge Commission on August 14, 2001.

EQC Involvement

No action by the EQC is required. This agenda item is intended to update the EQC on agency activities involving the Columbia River Gorge Commission, and Gorge Air Quality Project.

Attachments

Attachment A: Briefing paper on Columbia River Gorge Air Quality Project.
Attachment B: Draft Project Work Plan.

Available Upon Request

Technical Appendix supporting draft work plan.

Approved:

Section:

Division:

Report Prepared By: David Collier

Phone: (503) 229-5177
Collier.david@deq.state.or.us

Attachment A

State of Oregon
Department of Environmental Quality Memorandum

To: Environmental Quality Commission Date: July 23, 2001

From: Andrew Ginsburg: Air Quality Division
Annette Liebe, David Collier, Air Quality Planning Section

Subject: Columbia River Gorge Air Quality Project

Background

Preliminary research indicates that haze (air pollution) is noticeable in the Columbia River Gorge National Scenic Area (NSA) 90 percent of the time and is severe 15 percent of the time. Researchers also have found signs that air pollution-borne acid is affecting Gorge vegetation.

In May 2000, the Columbia River Gorge Commission directed the states of Oregon and Washington to develop a work plan for creating an air quality strategy to protect and enhance the scenic, cultural, recreational, and natural resources of the NSA as well as, protect and support the economy of the Columbia River Gorge area consistent with the first purpose.

Over the past year, DEQ has been working with a bi-state interagency team to develop the work plan called for by the Gorge Commission. This team has included technical and policy staff from DEQ, the Washington Department of Ecology (ODE), Southwest Clean Air Agency (SWCAA), U.S. Forest Service, the six Gorge area counties, and the Oregon and Washington state economic development agencies. Two public workshops (November 2000 and June 2001) have provided public and stakeholder input into the final draft project work plan.

Highlights of the Work Plan include the following:

- The work plan imposes no regulations and recommends no strategies. It lays out a plan for conducting an air quality assessment, and proposes an Advisory Committee decision making process for developing a recommended air quality strategy. This process relies heavily on public participation in the development of the recommended strategy.

- The work plan describes a technical study program to evaluate contributing emission sources located **both inside and outside** the National Scenic Area.

- The strategy development process is designed to meet both the purposes of the National Scenic Area Act. Air quality strategy development will include both air quality and economic analysis.

- Strategy development will rely on an advisory committee that reflects the many interests influencing the Scenic Area. The Committee will make recommendations by consensus; where the Committee fails to reach consensus, the issue will be documented and passed to the DEQ, Department of Ecology, and Southwest Clean Air Agency for resolution.

- DEQ, DOE, and SWCAA will not serve as Committee members but will provide staffing and technical support to the Committee.

- The Advisory Committee will develop several strategy options to protect and enhance air quality. The public and stakeholder groups will assist the Committee to evaluate cost-benefit information associated with each option and to develop a strategy they believe best meets the purposes of the Scenic Area Act.

- The Advisory Committee will recommend a preferred strategy to the DEQ, Washington DOE, and the Southwest Clean Air Agency. The states, together with the Southwest Clean Air Agency, will make an initial assessment as to whether the recommendation meets the purposes of the National Scenic Area Act. The Columbia River Gorge Commission has responsibility under the Scenic Area Management Plan to protect natural, scenic, recreational, and cultural resources within the National Scenic Area. It is recognized that the Commission does not have expertise in air quality planning and that they will rely on the three air quality agencies to develop an air quality strategy for the NSA. However, as the regional policy-making body for the Scenic Area the Gorge Commission has an important role in reviewing and concurring with any proposed air quality strategy to ensure that it meets the purposes of the Scenic Area Act.

Challenging Issues

Funding: Estimated costs for this project are significant. A technical study program is needed to characterize air quality in the Gorge, identify contributing emission sources, and develop analysis tools needed for strategy development. The technical study program is using a phased approach. Phase-1 (Technical Foundation Study) is projected to cost approximately $1.5 million. The states have secured approximately $400,000 from EPA and must seek additional funding. Results of the Foundation Study will be used to design the Second-Phase study. This second study will support strategy development, and is expected to cost several million dollars.

A critical early role for the Advisory Committee will be to work with the states to evaluate funding sources, and how to proceed if full funding does not become available. The states and Advisory Committee will have to weigh many important issues regarding funding, science, and

the efficient use of limited resources. It is important to develop science and technical tools that are sufficient to make informed decisions about air quality in the Gorge. It will also be important to invest limited resources as efficiently and wisely as possible.

Once approved, the work plan will serve as a fund raising tool to use in developing specific funding strategies. The states and Advisory Committee will work with the Oregon and Washington state legislatures and governor's offices, as well as with other state and federal agencies, Congress and the Gorge Commission to pursue the necessary resources.

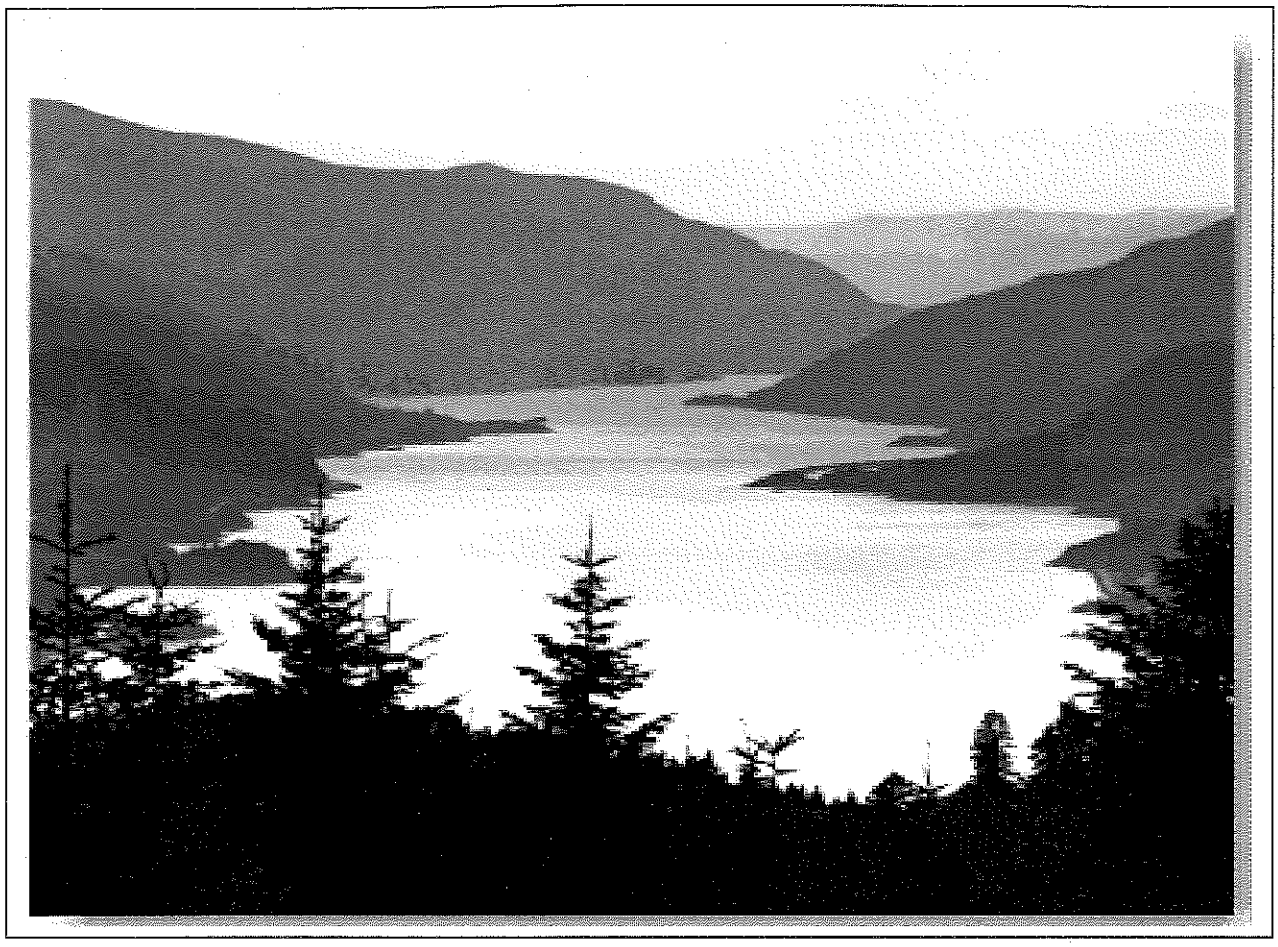
Timing: The technical study program will take between two and five years to complete (assuming available funding). Given the time needed for the Advisory Committee to review results and develop strategy options, regulatory action (if needed) may not occur for many years. Through the public comment process, many stakeholders have expressed the position that action should be taken now to reduce emission sources influencing the Gorge, and that a more comprehensive strategy should be developed after the technical study program is completed. Other stakeholders have expressed opposition to interim regulation, and support taking no regulatory action until the technical studies are concluded. The current draft work plan establishes the Advisory Committee in 2002. One of their first tasks will be to consider the potential for voluntary pollution prevention measures while the technical program proceeds.

Summary

No action is needed by the EQC at this time. This memorandum is meant to provide an update on the status of the Columbia River Gorge Air Quality Project. The department believes that the proposed work plan establishes a fair and public process for developing an equitable air quality strategy that will meet the purposes of the National Scenic Area Act. Funding issues will need additional work by DEQ and other partners. The work plan will be presented to the Columbia River Gorge Commission for approval at their August 14, 2001 meeting.

Attachments:

- Initial draft project work plan (June 14, 2001). The revised work plan (based on public comment) will be available on July 30th.



Columbia River Gorge Air Quality Project

Work Plan

Draft

June 14, 2001

Regional Air Quality Strategy for the Columbia River Gorge National Scenic Area

Principal Writers

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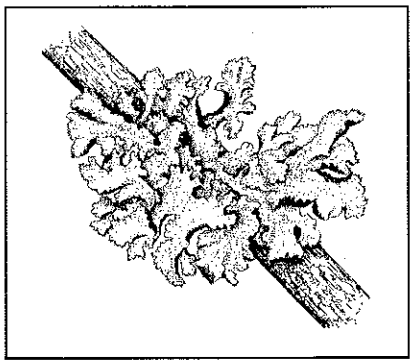
Special Thanks To

- *Alexander Mikulin* for his drawings of Pacific Northwest Lichen species. Lichen are an important indicator species. They are susceptible to impacts from air pollution, and their study can provide a valuable early warning of unwanted ecosystem impacts and a decline in other natural resources. Alexander's drawings are used several times in this document.

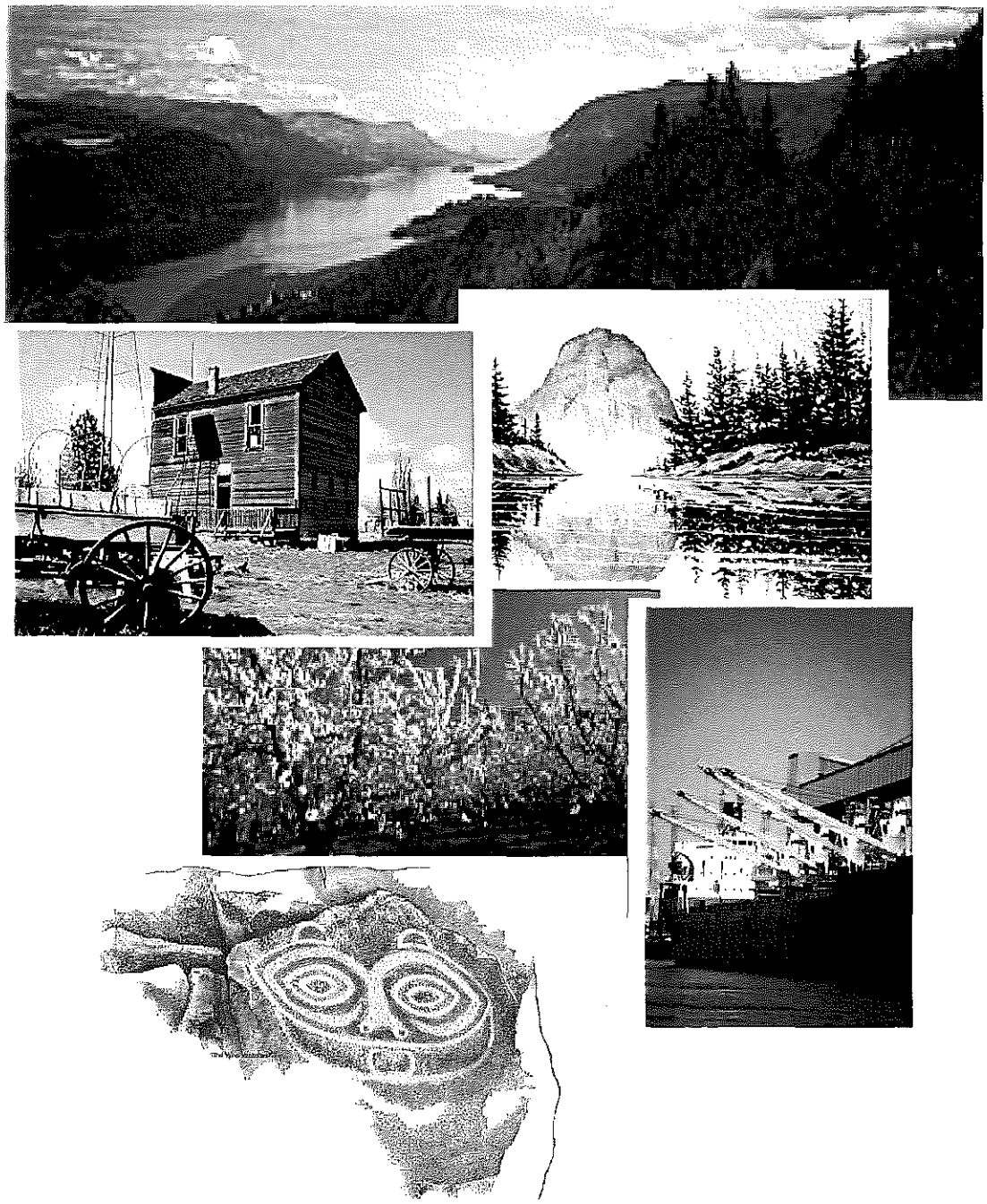


- *The Dalles Mural Society:* The mural "Where Wheat is King" by Robert Thomas is used on page 10 of this document.

- *Vicky Vance*: Local artist in the Columbia River Gorge Area. Vicky's paintings are used several times in this document.

- Colorado State University: For excerpts from their publication, "Introduction To Visibility", William C. Malm, May 1999.

Columbia River Gorge National Scenic Area



Columbia River Gorge Air Quality Project

Work Plan

Regional Air Quality Strategy for the Columbia River Gorge National Scenic Area

Volume 1

June 2001

PROJECT MANAGEMENT TEAM MEMBERS

Project Coordination Team

Annette Liebe *Oregon Department of Environmental Quality*	Myron Saikewicz *Washington Department of Ecology*
Dana Peck *Klickitat County*	Heather O'Donnell *Skamania County*
Craig Pridemore, Commissioner *Clark County*	Chuck Thomsen, Commissioner *Hood River County*
Dan Ericksen, Commissioner *Wasco County*	Susan Muir *Multnomah County*
Bob Elliott, Executive Director *Southwest Clean Air Agency*	Bob Bachman *U.S.D.A Forest Service*
Virginia Kelly *U.S.D.A Forest Service*	Dara Fredericksen *Washington Office of Trade and Economic Development*
Patrick Allen *Oregon Economic and Community Development Department*	The Yakama, Umatilla, Warm Springs, and Nez Perce Indian Nations have also been invited to participate on the Coordination Team.

Principal Contributors to the Project Coordination Team

David Collier *Oregon Dept. of Environmental Quality*	Sue Billings *Washington Department of Ecology*
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Nancy Jerrick, Counterpoint Consulting, Portland Oregon

For their contributions to this work

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Advisors to the Technical Team Include:

- Mark Green, *Desert Research Institute*

The Technical Team wishes to express its gratitude to those local and national experts in air science who contributed to the technical study plan.

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Preface

The Columbia River Gorge is an area of astounding beauty and diversity. It is also an area that over 70,000 residents of Oregon and Washington call home. The National Scenic Area Act of 1986 lays out a unique challenge. Namely, to protect and enhance the scenic, natural, cultural, and recreational resources of this National Scenic Area while at the same time supporting the local economies so vital to the area's future prosperity. Meeting these two goals is not always an easy task.

Achieving the goals of the Scenic Area Act will require us to look both locally and regionally at sources influencing air quality in the Gorge, and to develop an air quality strategy that closely involves stakeholders and the public. It is vital to our work that those who care deeply about this area have a voice in making these choices.

We are at the very beginning of this work. There is much we have yet to discover about air quality in the Gorge. We must evaluate its current condition; and identify sources of pollution (both inside and outside the Gorge) that affect air quality. We are still taking our first steps in answering these questions. We must also understand the economic conditions that support so many Gorge communities. Both environmental and economic information will be vital to making informed and equitable decisions about Gorge air quality.

Our first step is to develop this work plan. It is essentially a "road map" that lays out how we will answer important questions about air quality in the Gorge and establishes an open and fair process for decision-making. The work plan does not recommend strategies now. The work plan does lay out a multi-step process for increasing our scientific understanding of air quality in the Gorge and for engaging the public in the development of a regional air quality strategy. This work plan lays out the "Big Picture" view of how we will do this work. Ultimately, the Columbia Gorge Commission will be asked to decide if the strategy options developed through this collaborative process meet the objectives of the Gorge Management Plan and the National Scenic Area Act.

With your help today and in the future, decision-makers will develop an air quality strategy based on sound science that reflects a truly collaborative approach to making decisions about the future of air quality in the Gorge.

Thank You.

Andy Ginsburg
Air Quality Division Administrator
Oregon Department of
Environmental Quality

Mary Burg
Air Program Manager
Washington Department
of Ecology

History of the National Scenic Area Act

The 292,500 acre Columbia River Gorge National Scenic Area (NSA) was created by act of Congress in 1986 (PL92-663, 1986). The purposes of the Act are –

(1) to establish a national scenic area to protect and provide for the enhancement of the scenic, cultural, recreational, and natural resources of the Columbia River Gorge; and
(2) to protect and support the economy of the Columbia River Gorge area by encouraging growth to occur in existing urban areas and by allowing future economic development in a manner that is consistent with paragraph (1).

The special beauty and value of the Columbia River Gorge has been recognized for centuries. Efforts to provide some special protection for this area began as early as 1937 and continued throughout the following decades. In 1986, President Ronald Reagan signed the Columbia River Gorge National Scenic Area Act, establishing this nation's only National Scenic Area.

Other national legislation such as the Clean Air Act complement the Columbia River Gorge National Scenic Area Act in that emission reduction strategies adopted to protect public health can have the secondary benefit of improving other valued resources. However, the Columbia River Gorge National Scenic Area Act calls for an independent effort to protect and enhance key resources in the Gorge NSA while supporting local economies.

To achieve its purposes, the National Scenic Area Act called for a new partnership between the USDA Forest Service, a bi-state regional planning agency (the Columbia River Gorge Commission), the states of Oregon and Washington, the Southwest Clean Air Agency (SWCAA), and the six counties with land in the Scenic Area. The Act also calls for interagency and tribal cooperation and coordination. The regional air quality strategy process described in this work plan is designed to meet the purposes of the Columbia River Gorge National Scenic Area Act.

Columbia River Gorge Commission

The Columbia River Gorge Commission was authorized by the 1986 Columbia River Gorge National Scenic Area Act (Act) and created through a bi-state compact between Oregon and Washington in 1987. The Commission was established to develop and enforce policies and programs that carry out the purposes of the Act.

The Commission works in partnership with a number of entities to develop and implement a regional Management Plan. Partners include the states of Oregon and Washington, the Southwest Clean Air Agency, the USDA Forest Service, four treaty Indian Tribes -- the Nez Perce, Umatilla, Warm Springs, and Yakama Indian Nations,

Clark, Klickitat, and Skamania counties in Washington, and Hood River, Multnomah, and Wasco counties in Oregon.

Regional Air Quality Strategy

In May 2000, the Gorge Commission approved an air quality amendment to the National Scenic Area Management Plan. The amendment language states that:

"Air quality shall be protected and enhanced, consistent with the purposes of the Scenic Area Act. The States of Oregon and Washington shall: (1) continue to monitor air pollution and visibility levels in the Gorge; (2) conduct an analysis of monitoring and emissions data to identify all sources, both inside and outside the Scenic Area that significantly contribute to air pollution. Based on this analysis, the States shall develop and implement a regional air quality strategy to carry out the purposes of the Scenic Area Act, with the U.S. Forest Service, the Southwest Air Pollution Control Authority [now the Southwest Clean Air Agency] and in consultation with affected stakeholders.

The States and the Forest Service together shall provide annual reports to the Commission on progress made regarding implementation of this policy. The first report shall include a work plan and timeline for gathering/analyzing data and developing and implementing the strategy. The work plan and strategy shall be submitted to the Commission for approval. [1]

Work Plan Development Process

This work plan has been developed over many months through the collaborative efforts of the states of Oregon and Washington; the Southwest Clean Air Agency; Klickitat, Wasco, Skamania, Hood River, Multnomah, and Clark Counties; the U.S Forest Service; local and national experts in the fields of air science; interested stakeholder groups and the public. The inter-agency project coordination team has relied heavily on stakeholder and public input in developing the work plan. The work plan reflects, to the greatest extent possible, the values, priorities, and preferences of these groups for a fair and equitable process leading to a regional air quality strategy that satisfies the dual purposes of the Scenic Area Act. The work plan will be submitted to the Columbia Gorge Commission for their approval in August 2001.

Funding Strategy

Funding to develop this work plan has been provided by the states of Oregon and Washington. The U.S. Environmental Protection Agency has also generously provided initial grant funding to begin the scientific study of Gorge air quality. The U.S. Forest Service will continue to provide $150,000 to $200,000 per year to support on-going air monitoring.

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[1] Management plan amendment language adopted by the Columbia River Gorge Commission on May 9, 2000. SMA Natural Resources Policy 12[pages I-123]

Significant additional funding will be required for the various elements described in this work plan. In the short-term, funding will be necessary to continue the initial study of Gorge air quality and characterization of emission sources. The Technical Foundation Study described in this work plan is the first in a series of studies to characterize the physical and chemical processes influencing air quality in the Gorge. The Foundation Study will lay important groundwork for future phases of the technical study program, and will require approximately one million dollars in funding over the next two years. The states, in cooperation with the Southwest Clean Air Agency, the U.S Forest Service, and other partners such as the U.S Environmental Protection Agency will work to secure funding for the Foundation Study as soon as possible.

Later technical phases will also require significant funding. These phases will provide a more refined and detailed study of chemistry and physical processes in the NSA, including refinement of source apportionment. Later phases will also lead to the development of predictive modeling tools to be used in strategy development. Over the next one-two years, the results of the Technical Foundation Study will be evaluated and a second-phase technical study designed. At that time, we will have a clearer picture of the funding level needed to support the full technical study program.

Additional funding will also be needed to perform econometric analysis as part of the cost-benefit evaluation of strategy options, and to support the overall stakeholder advisory committee and public and stakeholder outreach process. The funding levels described in this work plan reflect an estimated range of costs for economic analysis and for supporting the decision-making process. Costs for economic analysis will vary depending on the number of air quality strategy options evaluated. An initial estimate for economic analysis ranges from $60,000 to $150,000. Securing funding for this work is a vital part of the projects overall fund raising effort.

Funding for this project will likely come from a variety of sources. Once the work plan has been approved by the Columbia Gorge Commission, the air quality agencies will work in consultation with their legislatures, Governors' offices, and Congressional delegations to pursue additional resources.

Profile of the Columbia Gorge National Scenic Area

The Columbia River Gorge National Scenic Area (CRGNSA) is a unique area in which resource-dependant communities exist within an area of great natural beauty. The Columbia River Gorge is a spectacular river canyon, 80 miles long and up to 4,000 feet deep. The Scenic Area is one of the most unique natural systems in the world and includes parts of Clark, Skamania, and Klickitat Counties on the Washington side, and Multmonah, Hood River, and Wasco Counties on the Oregon side (a map of the Scenic Area can be found on page 6). Carved over 40 million years, the Columbia River Gorge cuts the only sea level route through the Cascade Mountain Range. It is more than a natural wonder; the Gorge is a critical transportation corridor and is home to diverse communities, businesses, and farms.

Approximately 75,000[2] people live in communities within in the National Scenic Area. These communities, in the aggregate, have less diversified and more vulnerable economies than many other communities of Washington and Oregon. The metropolitan areas of Portland, Oregon and Vancouver Washington (combined 1999 population of approximately 1.8 million) lie just outside the western entrance to the Scenic Area.

The south rim of the Gorge rises to over 3,000 feet above the Columbia River and boasts several majestic waterfalls. The area affords spectacular views for miles, and harbors the second highest year-round waterfall in the United States.

Climate, geology, soils and other environmental factors combine to create a unique diversity of plant and animal life. A rich and diverse array of cultural resources, some up to 10,000 years old, exist in the National Scenic Area.

Extraordinary recreational opportunities abound in the Scenic Area, including fishing, boating, and hiking. The Columbia River Gorge is also considered the windsurfing capital of the world.

[2] Projection for year 2000. Columbia Gorge Economic Development Association

Located in the Columbia River Gorge National Scenic Area 40 miles east of Portland, Oregon, Bonneville Lock and Dam spans the Columbia and links the two states. Since 1938, hydropower from Bonneville Dam has supplied the northwest region and beyond.

Three deep-water ports lie within the Scenic Area supporting regional industries and international trade. The Gorge area holds over thirty major employers (100+ employees) with combined annual sales of about 0.5 billion dollars.

The diverse character of the Columbia Gorge makes the Columbia River Gorge National Scenic Area one of the most unique areas of the country. This blend of natural beauty and fragile community economies requires a comprehensive and collaborative approach to protecting and enhancing both the scenic resources and economic well being of the area.

Cities Within the Columbia River Gorge National Scenic Area

Population in 1999/2000

OREGON		WASHINGTON	
Cascade Locks	1,085	North Bonneville	513
Hood River	5,135	Stevenson	1,165
Mosier	360	Carson	2,116*
The Dalles	11,880	Home Valley	No Data
		White Salmon	1,913
		Bingen	659
		Lyle	530*
		Dallesport	1,185*
		Wishram/Wishram Heights	324*

Note: just outside the western boundary of the Columbia River Gorge National Scenic Area lay the Oregon cities of Portland, Gresham, Fairview, Wood Village and Troutdale; and the Washington cities of Vancouver, Camas, and Washougal.

* Estimated from 2000 census.

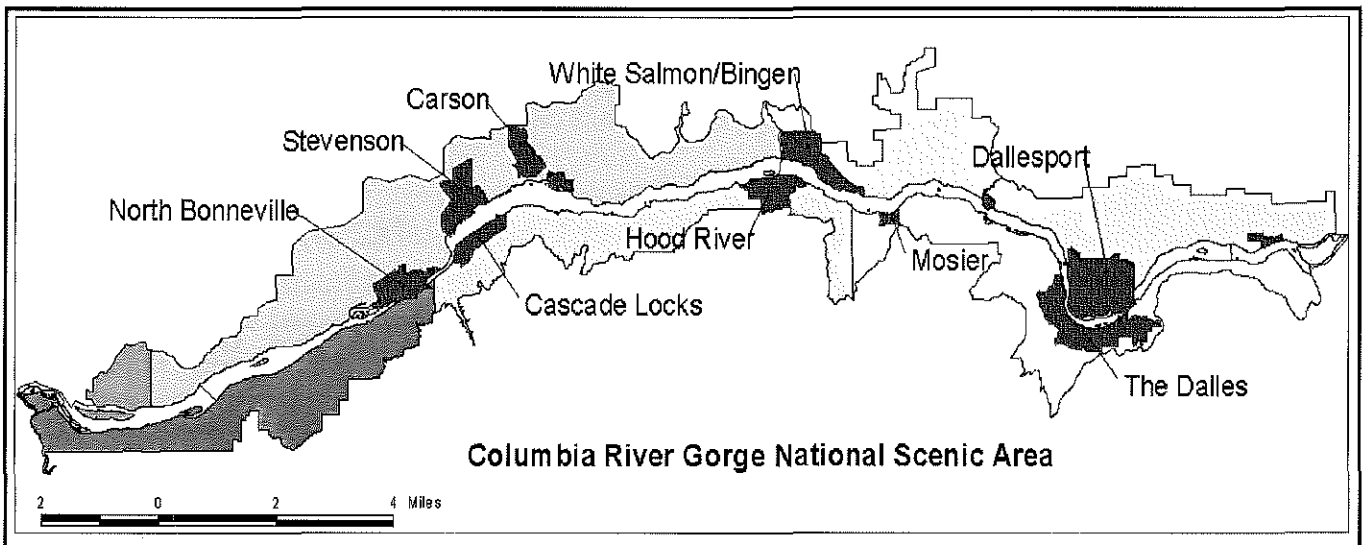
Counties Within the Columbia River Gorge National Scenic Area

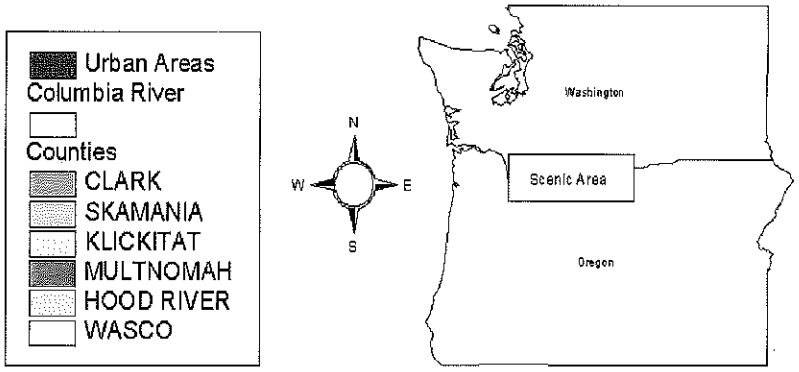
Population in 1999/2000

OREGON		WASHINGTON	
Hood River	20,411	Skamania	9,831
Wasco	23,791	Klickitat	19,530
Multnomah*	660,486	Clark*	336,268

* Multnomah and Clark Counties have a portion of their populations within the Columbia River Gorge National Scenic Area, however the majority of Multnomah and Clark County residents live in urban areas outside the NSA. Approximately 1,700 Multnomah County residents and about 260 Clark County residents live within the National Scenic Area boundaries.

Map of Columbia River National Scenic Area

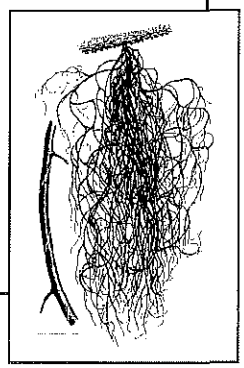




The Columbia River Gorge National Scenic Area cannot assure the reliability or suitability of this information for a particular purpose. Original data was compile from various sources. Spatial information may not meet National Map Accuracy Standards.

Original Data can be downloaded from www.fs.fed.us/r6/columbia/

R.Robles/April 25, 2001/ Columbia Gorge Commission



Northwest Lichen Species

Resources to be Protected Under the Scenic Area Act

Scenic

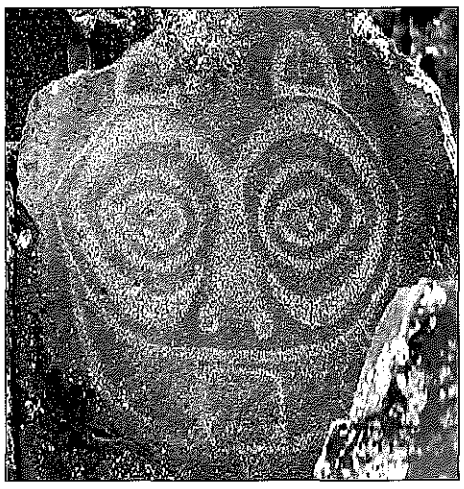
Protecting the future of scenic vistas within the Gorge is at the heart of the regional air quality strategy. The majestic views encountered throughout the National Scenic Area provide residents and visitors alike a special opportunity to appreciate nature's grandeur and to be inspired by scenes of great beauty. The scenic resources of the Gorge are highly valued in many ways. Enhancing air quality by reducing visibility impairing air pollutants such as ammonium sulfate, ammonium nitrate, as well as organic and elemental carbon, would help protect these scenic resources.

Natural

Because of the wide range of elevation and precipitation in the Gorge, a diverse collection of wildflowers and native plants thrive from the temperate rain forest at Oneonta Gorge to the grasslands at Celilo. The Gorge area boasts fourteen unique species of wildflowers, hundreds of native plant species, and forests. Enhancing air quality by reducing air pollutants such as ozone and acidic aerosols that damage plants and forests would help protect the natural resources and ecosystem diversity that are so important to the Scenic Area.

Cultural

For thousands of years, the Columbia River Gorge has supported flourishing civilizations. Evidence of the Folsom and Marmes people, who crossed the Great Continental Divide from Asia, have been found in local archaeological digs. Excavations at Five Mile Rapids, a few miles east of The Dalles, show that humans have occupied this ideal salmon fishing site for more than 10,000 years. Ancestors of today's Yakama, Warm Springs, Umatilla, and Nez Perce Indian nations as well as many other Native American peoples lived and fished along the river's banks. Evidence of their life and creativity along the river exists today in the ancient petroglyphs and rock art found within the Scenic Area. These important cultural resources can be protected by reducing air acidic aerosols that erode rock surfaces.



Ancient Native American Rock Art in the Gorge, Tsgagalal- "She Who Watches"

Recreational

The Columbia River Gorge is a world class location for hiking, windsurfing, bicycling, sightseeing, climbing, horseback riding, boating, fishing, and more. By protecting scenic, natural, and cultural resources in the NSA the regional air quality strategy will also preserve the recreational appeal and value of the National Scenic Area.

Economic Resources

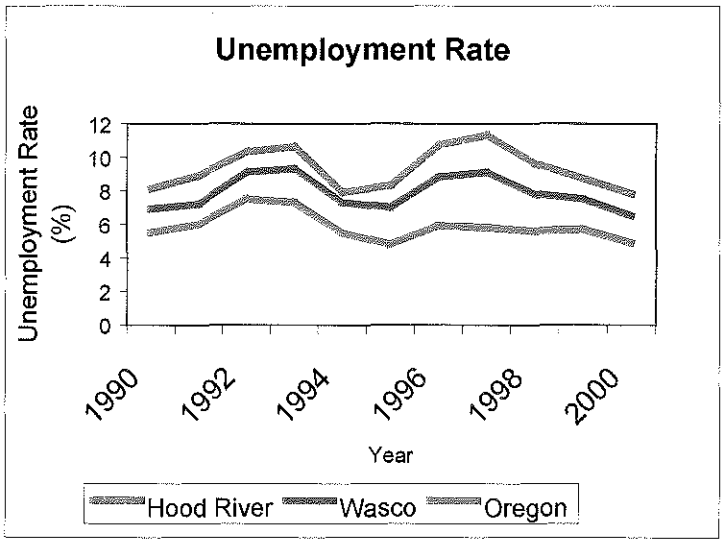
The Columbia River passing through the National Scenic Area is a major transportation route through the Cascade Mountain Range. Improved infrastructure has led to development of largely resource-based industries throughout this corridor. Lumber, aluminum, wool, and flourmills, as well as fish and fruit canneries contribute to local, regional, and international trade. The river continues to carry grain, livestock, lumber, fruit and vegetables grown and processed in the Columbia Basin.

Columbia Gorge Economies-Oregon

The 2000 Census shows total population in Hood River County to be 20,411 persons and 23,791 for Wasco County. This was a strong 20.8% increase in population for Hood River since the 1990 Census, and a slower 9.7% growth rate for Wasco.

	1990 Census	2000 Census	% Change
Oregon	2,842,321	3,421,399	20.4%
Hood River	16,903	20,411	20.8%
Wasco	21,683	23,791	9.7%

Over the 1990 to 1999 period **Hood River** and **Wasco** county total employment grew 22.0% and 24.8% respectively, both, both below the statewide rate of 27.6%. Similarly, wage and income levels in the region lag statewide averages. The 1999 average annual covered wage for Hood River and Wasco counties are $20,643 and $23,382 respectively, compared to a state average wage of $30,867. Hood River County's average wage is the second lowest in Oregon, and Wasco County's is 12th lowest. Agricultural crop production is a large part of the regional economies and, in 1999, was the largest employing sector in both Hood River and Wasco counties. Employment growth in agricultural crops over the 90-99 period was 60.7% and 52.9% for Hood River and Wasco counties, respectively. The unemployment rate in both counties has fallen in recent years, but still remains above the state average. While the general, long-term economic outlook for the region should be positive due to its proximity to Portland, its attractiveness as a tourist destination, and its access to both



Interstate 84 and the Columbia River, several troubling trends are evident. The recent, power supply-induce shutdown of Northwest Aluminum plants in The Dalles, Oregon and in Goldendale, Washington appears to be intermediate-to long-term, and impacts some of the highest-wage jobs in the region. Similarly, global competition in the tree fruit industry is putting extreme price pressure on growers in the region, a trend which appears likely to persist. However, some risks to the economies do exist including the potential impact from lost tourist dollars related to drought, and price pressures on agricultural products grown in the region.

Tourism sectors employed 3,570 people in the Gorge area in 1999, or one employee for every 16 area residents. This ratio is very high compared to other tourism areas in the state. Total tourism industry payroll was $50.3 million and local and state tax receipts were $5.6 million and $2.7 million, respectively.

The Oregon tourism Commission defines the Mt. Hood/Gorge Tourism Region as the **Eastern parts of Clackamas and Multnomah** Counties, Hood River County and North Wasco County. Leaving out East Clackamas County figures, the Oregon side of the Columbia Gorge Scenic Area generated $208.8 million in destination travel spending in 1998. This total includes spending on such activities as accommodations, eating & drinking, food purchases, and ground transport, recreation and retail sales. **Multnomah and Clark Counties** comprise only small portion of the National Scenic Area. The full economic profile of these two counties is not discussed in detail here so as not to unfairly influence the economic picture of the NSA.

About 1,700 of **Multnomah County's** 660,486-person population (about 0.25%) live in the National Scenic Area (2000 Census). In 1990, median household income in this area was 43% higher than the rest of Multnomah County and 41% higher than the State of Oregon. According to the1990 census, over 60% of the workers in this part of the county commute over 20 minutes to work, presumably to the Portland/Vancouver Metro area. Most of the county's land base in the National Scenic Area is National Forest. Private land in the National Scenic Area is a mix of farms, forest, rural residences, and the community of Corbett.

Columbia Gorge Economies-Washington

Skamania County's economy is heavily influenced by land ownership. About 90% of the county is owned by the public—roughly 80% falls within the Gifford Pinchot National Forest, and another 10% is state timberland. Most of the privately-owned acreage is in the southerly strip of land bordering the Columbia River, and so falls under the development rules of the National Scenic Area Act.

With most of the county being timberland, it is no surprise that timber has dominated Skamania County's employment. For years, the majority of jobs in the county were in logging, lumber and wood products, and through the Forest Service. Timber harvests, which topped 350 million board feet through most of the 1980s, began declining in 1989 and bottomed out at 29 million in 1996. Timber-related employment began to deteriorate

in the late 1980's, culminating in the closure of the county's largest private-sector employer, Stevenson Co-Ply, in early 1992, and the subsequent closure of the Forest Service tree nursery later in the decade. A year after Co-Ply closed, the Skamania Lodge opened with about the same number of jobs at considerably lower wages

In 2000, the county had a population of 9,900, a labor force of 4,030, including 2,070 nonfarm jobs, and an unemployment rate of 9.2 percent. As of March 2001, the Skamania County labor force is 3,870, with 460 unemployed—a rate of 11.9 percent compared to the statewide average unemployment rate of 6.1 percent. This means 30 out of 39 Washington counties have lower unemployment rates than Skamania County. About half of the county's labor force migrates out of Skamania County to work in neighboring counties. Half of Skamania County's earned income comes from employment outside of the county. Of the almost $50 million in payroll generated by employers in the county in 1999, almost half came from the public sector. Another 19% came from manufacturing (11% from logging and lumber) and about 15% from other services. The average wage of $24,839 was far below the state average, and per capita income was 79% of the U.S. average and 74% of the state average.

Klickitat County's economy is somewhat more diverse than Skamania's, due in part to more diverse land ownership as well as geography. Klickitat's plateaus have proven suitable for wheat farming and ranching, and its valleys are devoted to fruit orchards. The county also has timberland, with harvests averaging around 100 million board feet per year. The John Day Dam on the Columbia explains in part the presence of the Goldendale Aluminum Smelter, while the dry climate accounts for the landfill in Roosevelt, the second largest municipal solid waste landfill in the nation.

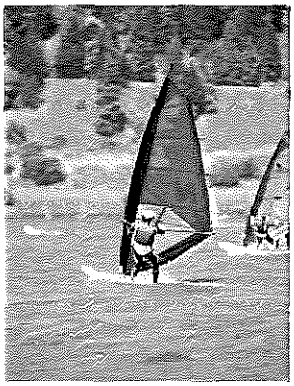
In 2000, Klickitat County had 19,200 residents and a labor force of 8,710. The unemployment rate in Klickitat County for 2000 was 10.4%. Of 1,370 manufacturing jobs, 520 were in logging and lumber and wood products (down from 700 in 1990 and more than double that in 1980), and most of the rest were at the smelter. Total payrolls approached $150 million in 1999. Of that amount, 29% came from the public sector, 10% from timber, and 25% from other manufacturing. The overall average annual wage was $25,586. The unemployment rate for Klickitat County as of March 2001 is 19.4 percent. As with Skamania County, per capita income is far below the state average. Farm income provided 2.5% of total personal income vs. 0.9% for the state as a whole.

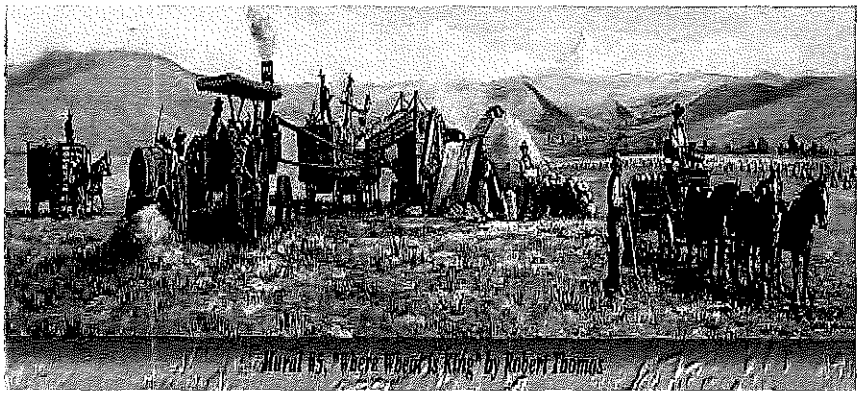
At the beginning of 2001, the Goldendale smelter was partially curtailed due to high energy prices from the Bonneville Power Administration (BPA). Currently the company is selling power back to BPA and paying its workers to do facility maintenance so that a labor force is available to re-start production. When production will resume remains unclear.

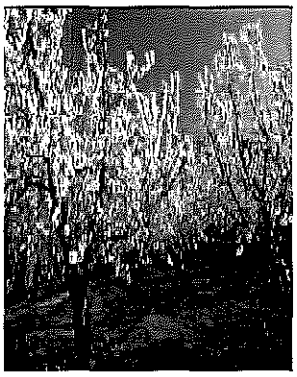
About 260 of **Clark County's** 336,268-person population live in the National Scenic Area (2000 Census). Most of the county's land base in the National Scenic Area is private farmland and rural residences. The U.S. Fish and Wildlife Service owns one large wildlife refuge, and the Forest Service holds a number of conservation easements.

Connections between Resource Protection and Economic Strength.

The goals to protect important resources in the Gorge while also supporting local economies are connected in many complex ways. Businesses such as Skamania Lodge and many others rely on the National Scenic Area as a tourist destination. One benefit of enhancing scenic resources would be to protect the tourist appeal of the Gorge. But increased human activity, such as high motor vehicle travel during peak tourist seasons can also degrade air quality. Reducing air pollution to protect natural resources such as native plants and forests will also benefit local farmers and orchardists whose crops can be harmed by air pollution. Many of these complex relationships will be examined by decision-makers as they develop an air quality strategy for the Scenic Area.

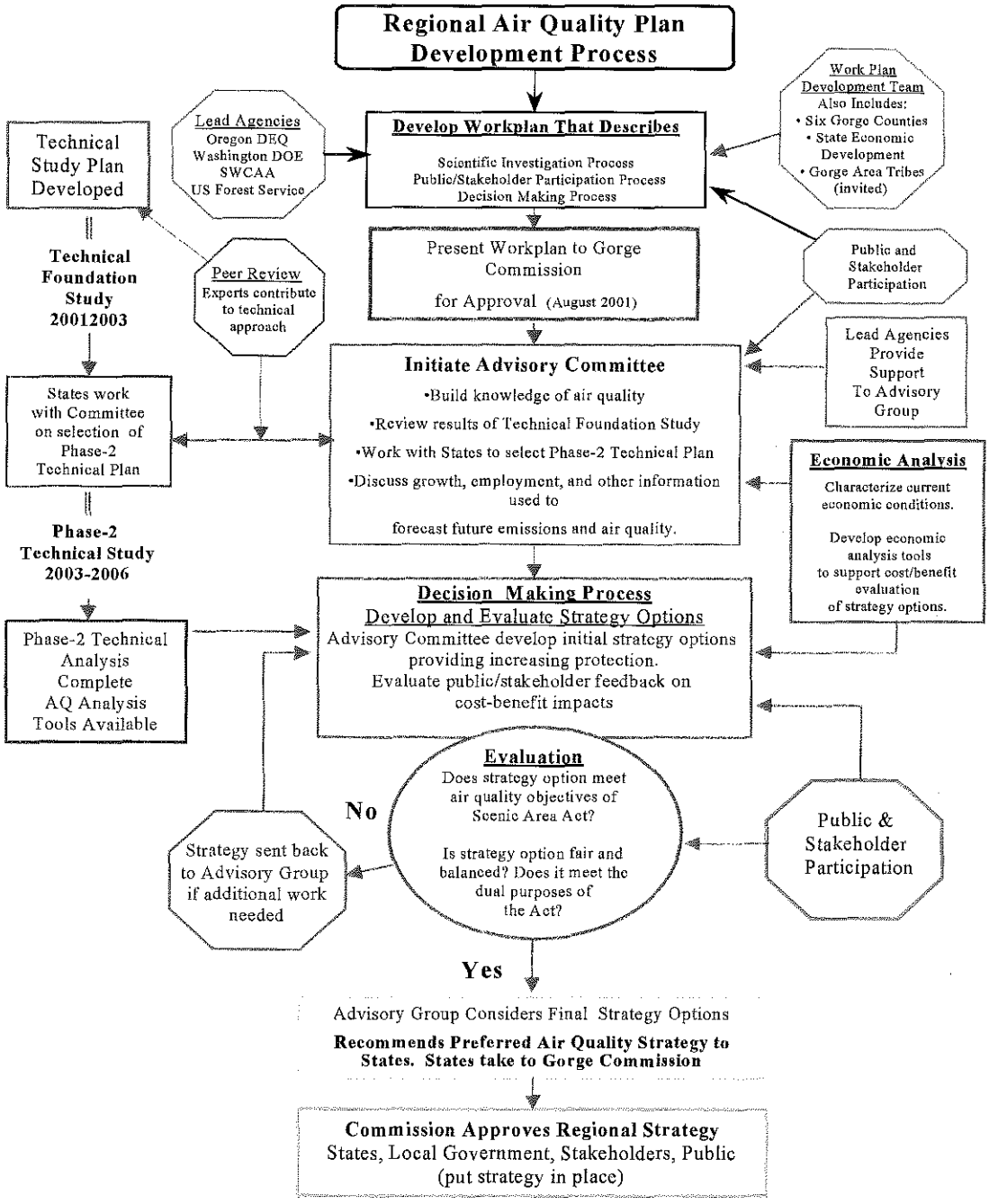






Process for Developing a Regional Air Quality Strategy

Throughout its many stages the Columbia River Gorge Air Quality Project will require the participation and dedication of many state and federal agencies, local governments, tribes, business, environmental and civic organizations, as well as the general public. The main effort to study and characterize air quality in the Gorge will take place over the next several years. Completing this technical assessment will give decision-makers and the public the information and tools necessary to make good choices about the future of air quality in the Gorge. The following chart shows the process to be used in developing an air quality strategy. This work plan provides a "road map" for all subsequent steps in the project.



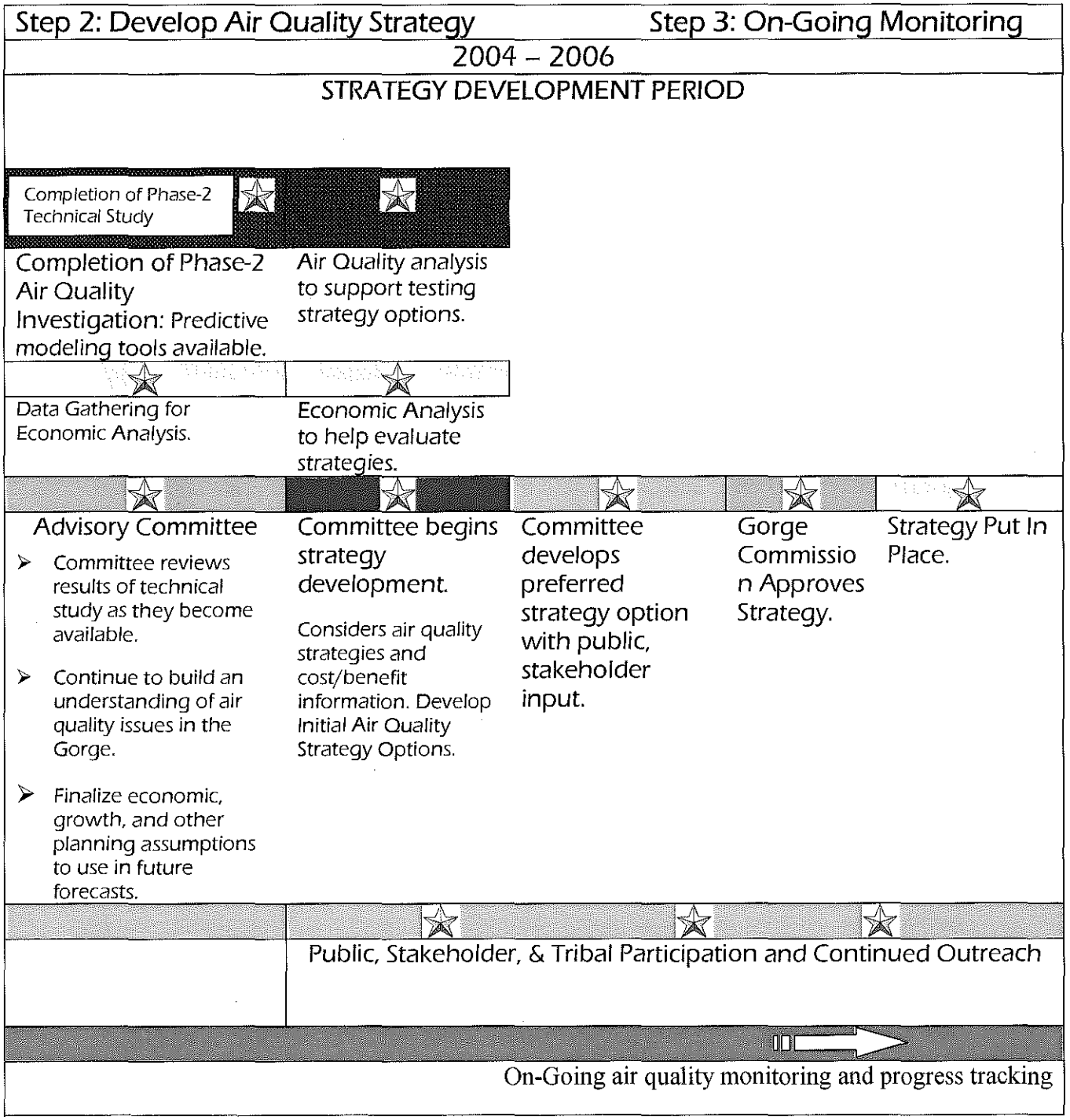
THREE-STEP APPROACH TO AIR QUALITY PROJECT

PHASE	PURPOSE/CONTEXT	TIMELINE
Step-1: Technical Studies Multi-Phased Technical Study Program to Characterize Air Quality and current (baseline) conditions of local Gorge economies	1. Phased, multi-year technical study program to evaluate air quality processes in the Gorge and gather information necessary to characterize air quality and areas of influence. Identify emission sources both inside and outside the Gorge that contribute to air quality in the National Scenic Area. 2. Characterize baseline economic conditions of local Gorge economies. 3. Initiate Stakeholder Advisory Committee: Build understanding of air quality issues, review results of the Foundation Study, work with states and SWCAA to develop second phase of technical study, discuss economic, growth, and other important planning assumptions, discuss potential for voluntary pollution prevention. **Final Products Expected From This Work** 1) Modeling and other tools to support the development of a regional air quality strategy. 2) Thorough understanding of baseline economic conditions.	Some air quality assessment work has already been completed. Further investigation is planned from now, through about 2005-2006.
Step-2: Develop a Comprehensive Air Quality Strategy.	Continue Committee work and stakeholder and tribal involvement process. Citizens/Stakeholder Advisory Group will: 1. **Evaluate results of air quality analysis** and characterization of contributing emission sources. 2. **Develop several strategy options** that protect and enhance air quality, consistent with the purposes of the National Scenic Area Act. Several options may be developed that provide increasing levels of air quality protection. (This process will develop the air quality benefit information needed for a cost/benefit evaluation). 3. **Perform economic analysis** to evaluate the potential impact of strategy options on local economies. (This process will develop the cost information needed for a cost/benefit evaluation). 4. With input from the public, stakeholders, and tribes, **weigh air quality benefits and costs of strategy options and develop a preferred approach** to meeting Management Plan and Scenic Act objectives. Recommend preferred strategy to states. States take recommendation to Gorge Commission. **5. Columbia Gorge Commission approves air quality strategy.** **Final Product Expected From This Work** A regional air quality strategy that meets the dual purposes of the National Scenic Area Act.	The strategy development phase begins when the air quality study is complete (approximately 2005-2006). It is anticipated that strategy development would take approximately 1 year.
Step-3: Implement the Strategy.	State air quality agencies and local governments as necessary put strategy in place. **Final Products Expected From This Work** 1. State and/or federal rules as needed. Local ordinances or other agreements as necessary.	When the strategy development is complete.

CHRONOLOGY OF PROJECT ACTIVITIES

	Step 1: Technical Studies, Initiate Advisory Committee
Aug. 2001	2001-2003
Gorge Commission Approves Work Plan	
	Fund Raising ⇨
	INITIAL TECHNICAL STUDY PERIOD
	Technical Foundation Study ⇨
	<u>Foundation Study</u> *lays ground work to characterize air quality in the Gorge. Air Monitoring, Emission Inventory, and Model Development.*
	Phase-2 Technical Study ⇨
	<u>Phase-2 Technical Study</u> *completes characterization of air quality and develops strategy analysis tools.*
	☆ Initiate Advisory Committee during Foundation Study (2002)
	➢ States work with Committee on fund raising issues. ➢ Work to build a common understanding of air quality issues in the Gorge. ➢ Committee reviews results of Technical Foundation Study. ➢ States begin work with Committee on the selection of the Phase-2 Technical Study. ➢ Evaluate potential for voluntary pollution prevention measures. ➢ Lay groundwork for future economic and air quality discussions. Discusses growth and other planning assumptions to use in future forecasts.
	⇨ ⇨
	On-Going Public and Stakeholder Outreach: *Provide information on key Gorge issues and initial study results as they become available.*

ESTIMATED CHRONOLOGY OF PROJECT ACTIVITIES



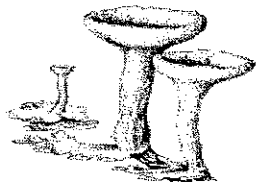
Public Outreach and Involvement

Multiple Audiences and Diverse Cultures

People of diverse backgrounds and cultures live, work, and play in the National Scenic Area. Each have their own values, priorities, and needs. To ensure success in developing a balanced strategy it is vital that all groups feel well represented and have frequent and regular opportunities to participate in decision-making. Bringing all these interests together requires a thoughtful approach to public outreach and participation. It also requires a willingness on the part of the public and stakeholder groups to participate constructively in the process.

People are busy, with many competing personal and professional commitments. It is a challenge to devise public outreach approaches that accommodate these conflicts and encourage participation. A variety of approaches, tools, and techniques will be used to inform and engage the public and stakeholders about air quality and other resource issues in the Gorge. Public understanding and participation will be key to weighing questions of environmental choices and cost-benefit tradeoffs as different options are considered for the regional air quality strategy. Our primary tools and techniques for communicating with the public and stakeholder groups include: *working with local and regional media, special publications, public workshops, town meetings, constituent and public focus groups, surveys, individual meetings with stakeholder groups, discussions with civic organizations, and the project Internet site.* The public and stakeholder outreach work will focus on providing the basic information needed to make informed decisions about the Gorge.

"Hot Button" Issues: There are issues of special importance to Gorge area residents regarding the development of a regional air quality strategy. One such issue can be described as "geographic fairness". Our outreach work will help clarify that the regional strategy will evaluate emission sources from both inside and outside the Gorge, and will not disproportionately or unfairly burden local Gorge communities while allowing significant air quality impacts to continue from sources located outside the National Scenic Area. Another hot button issue is the potential impact that an air quality strategy might have on local economies. Our outreach efforts will describe how economic analysis will be used as part of the strategy development process to evaluate questions of cost-benefit tradeoffs. The public outreach efforts will be strongly oriented towards building trust and strengthening long-term relationships among stakeholders and the public.



Northwest Lichen Species

Target Audiences: An important part of the collaborative approach is to identify the various target audiences, along with their interests, concerns, and information needs. These audiences have various points of view and frames of reference related to managing natural resources in the Gorge. Their voices and perspectives are very important in creating a regional air quality strategy that respects and reflects the diversity of the area.

Native American Tribes: Four federated tribes have treaty rights and cultural ties to the Columbia Gorge National Scenic Area: the Nez Perce Tribe, the Confederated Tribes and Bands of the Yakama Indian Nation, the Confederated Tribes of the Umatilla Indian Reservation, and the Confederated Tribes of the Warm Springs Reservation of Oregon. The tribes are sovereign nations and have a special place in the development of the regional air quality strategy. The process described in this work plan is designed to encourage tribal participation. We will also continue the special government-to-government consultation process established between the federal and state governments and the tribes. Throughout this process we will continue to seek the Native American perspective on protecting the scenic, natural, recreational, and cultural resources of the Gorge.

The target audience for public outreach and involvement include:

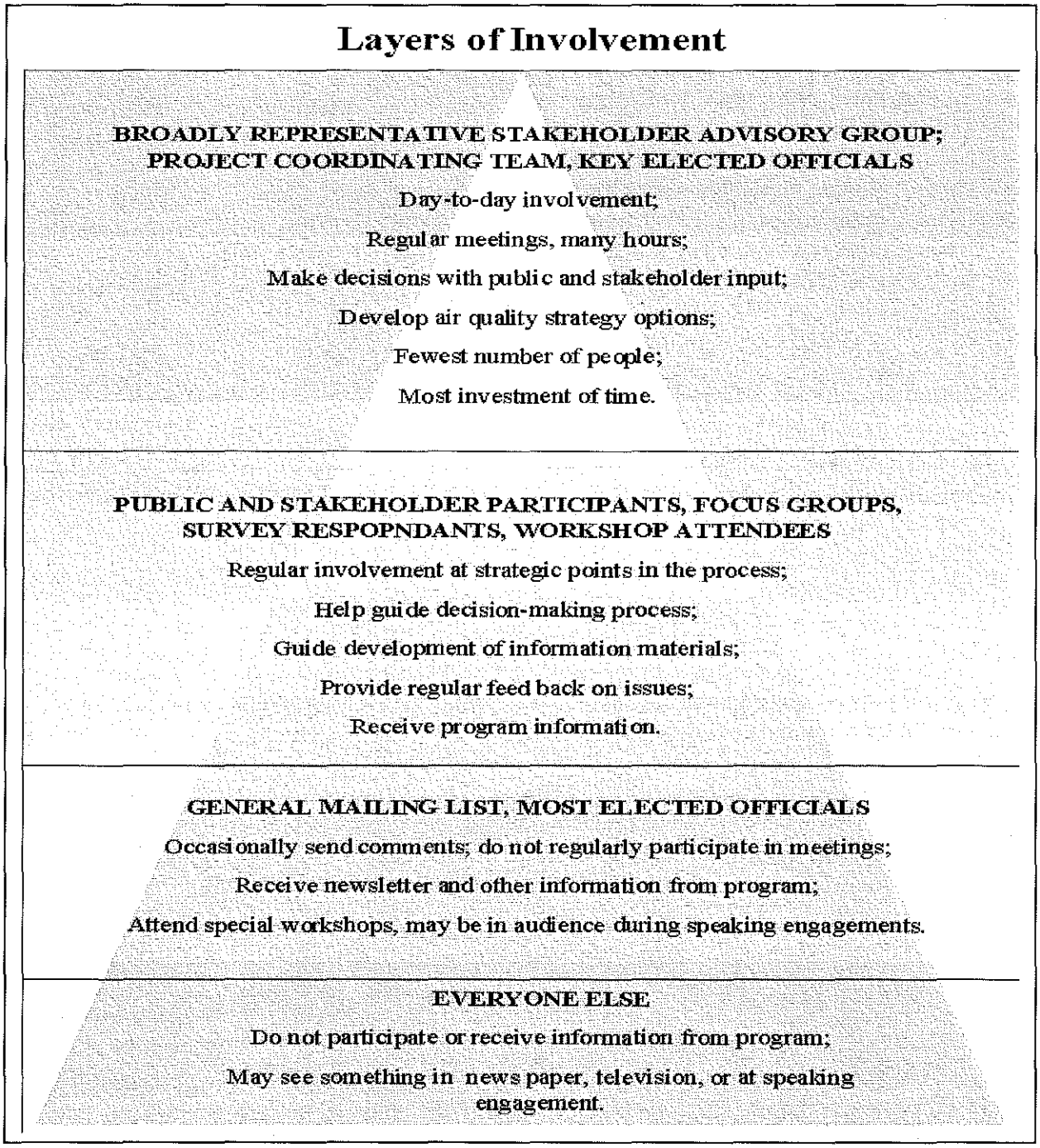
- General public of all ages
- Elected Officials
- Local, state, and federal officials
- Technical/scientific community
- Educators
- Native American tribes
- Environmental groups
- Community groups
- Civic organizations
- Industries
- Ports
- Agricultural interests
- Labor
- Recreational users
- Media

Perceptions/Misperceptions: Our outreach efforts also provide an opportunity to increase the public's knowledge about Gorge issues and to clarify any misperceptions shared by the public or stakeholder groups.

Baseline Scientific Understanding: There is a need to provide the public and stakeholder groups with a basic understanding of the science behind air quality impacts in the Scenic Area. It will be an important part of the outreach work to build this common level of knowledge about air quality and other resources issues in the NSA.

Layers of Involvement

It must be recognized that in any process such as this, different segments of a community participate in different ways and at different levels. To meet differing needs the public outreach and participation effort will include a variety of tools and methods to provide opportunities for all citizens to have a voice in the process. The multiple layers of involvement are summarized here.

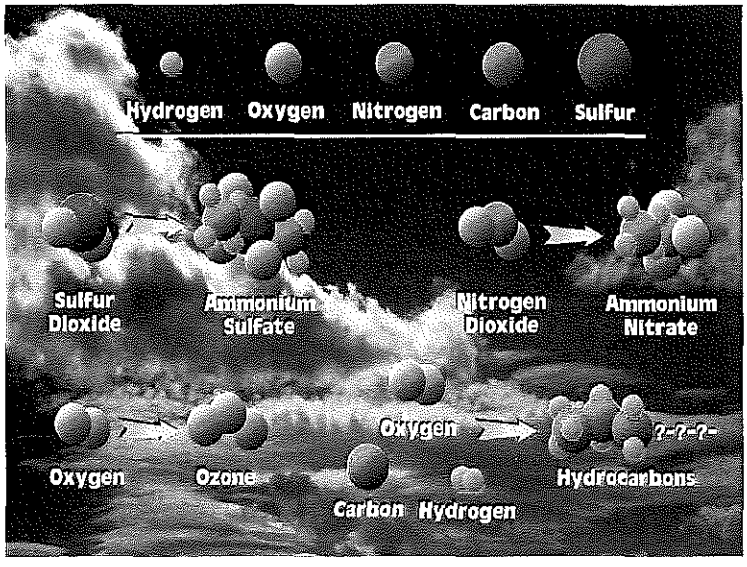


SCIENCE AND AIR QUALITY IN THE COLUMBIA RIVER GORGE NATIONAL SCENIC AREA

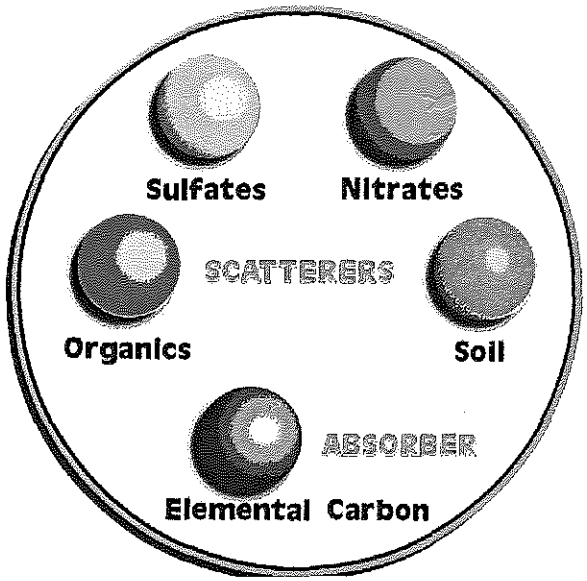
To protect and enhance the scenic, natural, recreational, and cultural resources of the NSA we must first come to understand the air pollution characteristics and impacts that may threaten those resources. Scenic resources relate to "visibility", or our ability to view scenic vistas within the Gorge. These vistas are naturally limited during certain times of the year by normal weather conditions (clouds, fog, rain, etc.), and also by other natural processes such as pollen, smoke from wildfires, and by the normal scattering of light by molecules in our atmosphere. However, during many parts of the year, scenic resources are degraded by human-caused air pollution, reducing the scenic and natural beauty of the Gorge, and degrading the recreational appeal of the Scenic Area on which much of the local tourism economy depends.

Air pollution that impairs visibility may also have unwanted affects on natural resources such as local forests, and on cultural resources such as ancient Native American rock art. Air pollution that impairs visibility may also have adverse impacts on local agricultural commodities, which in turn affects the local economy. The foundation of the Columbia River Gorge Air Quality Project is the study and characterization of air quality in the Gorge, and the identification of air pollution sources, both inside and outside the Gorge, that significantly impact the National Scenic Area. Protecting "air quality" goes beyond just visibility impairing pollutants to include other air pollutants such as ground-level ozone that can also damage ecosystems and natural resources.

Air pollution aerosols, whether they are man-made or natural, are said to be either *primary* or *secondary* in nature. Primary refers to gases or particles emitted from a source directly, while secondary aerosols refer to gases or particles that are formed in the atmosphere through a series of complex reactions. Primary particles include smoke from fires, soot from diesels, fly ash from the burning of coal, and wind blown dust. Primary gaseous emissions of concern include sulfur dioxides and nitrogen oxides that result from any type of combustion. Secondary aerosols include Sulfates and Nitrates, such as ammonium sulfate and ammonium nitrate formed in the atmosphere when sulfur dioxide and nitrogen dioxide gases combine with ammonia.



There are five atoms that play significant roles in the air quality chemistry that affects visibility: hydrogen (H), oxygen (O), nitrogen (N), Carbon (C), and Sulfur (S). Through complex sets of chemical reactions, gases are formed that react to form particles that reduce visibility, impact human health, affect ecosystems, or cause deterioration of materials such as metals or rock art. Sulfur dioxide reacts to form ammonium sulfate; nitrogen oxide forms ammonium nitrate; oxygen is converted to ozone; and carbon, hydrogen, and oxygen form a variety of hydrocarbon particles.



Your ability to see a scenic vista depends on the amount of light reaching your eye. Sunlight carries the image of a scenic view through the atmosphere to the person observing. Pollutants reduce the ability to see detail in a scenic vista by ***scattering*** and ***absorbing*** light. Nitrates and Sulfates are very efficient light scatterers. Organic compounds and fine soil also scatter light, and elemental carbon is a light absorber. The greater the concentration of these particles in the atmosphere the more light is scattered and absorbed, and the more the ability to see a scenic vista is impaired. There are many natural processes that also scatter light. Air molecules in pure air scatter light. Light reflected from the ground or from clouds can also impair an observer's view. Man-made pollutants add to this effect by further degrading visibility.

The study of air quality in the Gorge will focus on the role of these five main visibility-impairing aerosols. We will study daily, monthly, and seasonal changes of these particles, the meteorology that affects aerosol formation, and identify the geographic regions and emission source types that contribute these pollutants to the NSA.

The study will also evaluate ozone impacts within the Gorge. Ground-level ozone forms though a complex set of chemical reactions when volatile organic compounds and oxides of nitrogen react in the presence of strong sunlight. Ozone impacts can damage forests and other ecosystem resources as well as agricultural crops.

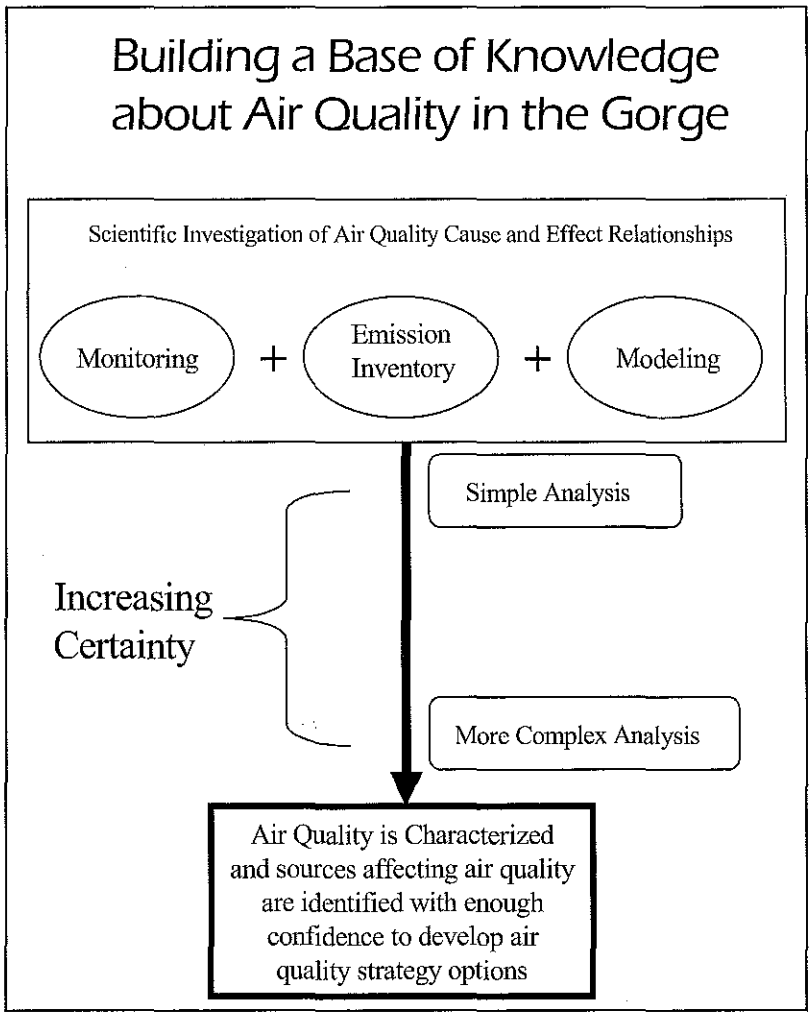
Building a Base of Knowledge about Air Quality

There are three related areas of scientific investigation that work in concert to provide answers about air quality: **Monitoring, Emission Inventory, and Modeling.**

- **Monitoring** – measures what's actually in the air, and provides information about which pollutants are impacting a specific location during a specific period. Monitoring provides information on the physical and chemical processes influencing air quality and also provides important information about meteorology.

- **Emission Inventory** – gives us information about the sources of air pollution, the type of pollutants they emit, where sources are located geographically, when pollution is being emitted and how much pollution is being emitted.

- **Modeling** – allows us to combine the emission information with meteorology and other factors to simulate actual measured air quality in the Gorge, and to test hypothetical emission reduction strategies for the future. Modeling and emission inventory techniques will be key analysis tools used to support the development of air quality strategy options.



To build certainty in our knowledge about sources affecting air quality, several forms of analysis will be employed – from simple to complex. The more complex the analysis, the more detail and refinement is required in the areas of monitoring, emission inventory, and modeling.

At each step in the analysis we will learn more about the emission sources, both inside and outside the Scenic Area. If each type of analysis produces the same or similar results, then our confidence in the results increases. Although each step in the analysis may give us information about cause and effect relationships, very often, especially in the early stages, an analysis may elicit additional questions.

Eventually we will reach a point in the analysis where reasonable conclusions can be made about contributing emission sources.

Summary of Existing Air Quality Knowledge: What we know

Monitoring of visibility, air quality, and ecosystem conditions has been ongoing in the Scenic Area since 1993. Visibility has been monitored at two sites, one near the west end (Mt. Zion, since 1996) and another near the east end (Wishram, since 1993). Monitoring of ozone and acid deposition (through lichen sampling) has also occurred since 1993. We have much more to learn about air quality and it's cause and effect relationships: such as understanding the complex meteorology, the physical and chemical processes, and the major source types and source regions that affect the Scenic Area. The following are some highlights of what we know so far.

Visibility in the west end of the Scenic Area: very small particles of sulfate in the air are the most significant contributors to visibility impairment, followed by organic carbon and nitrate. On average, visibility is worse in the summer and early fall and better in the winter, excluding natural causes such as rain, clouds and fog. Poor summer visibility can be mostly attributed to significantly high sulfate levels. Visibility on average is worse in the west end than the east end. Much of this difference is due to the fact that the types of pollutants present in the west end, such as sulfate particles, are more efficient at impairing visibility under the higher relative humidity found there. Geographic source regions of pollutant-laden air reaching the west end in summer are generally the industrialized and populated areas west of the Cascades from Vancouver B.C. southward to Eugene, internal sources, and in rare instances, pollutant impacts from as far away as Asia have been identified.

Visibility in the east end of the Scenic Area: very small particles of sulfate are a significant source of visibility impairment, but are not as large a contributor to impairment as in the west end. Organic carbon and nitrate are also significant contributors to impairment. On average, visibility is worse in the late fall and winter and better in the summer, excluding natural causes such as rain, clouds and fog. This is the opposite of observed conditions at the west end of the NSA. Poor winter visibility levels can mostly be attributed to a relative increase in nitrate. Visibility on average is better in the eastern Gorge than the west end largely because of lower relative humidity.

Although we have not identified specific sources that contribute to visibility impairment in the Scenic Area, we do know the types of sources on a regional basis that emit pollutants that have the *potential* to impair visibility. These are:

- sulfate – from combustion of fuels containing sulfur, such as coal-fired power plants, and any form of diesel fuel and oil fired combustion.
- nitrate – from any high temperature fuel combustion, mostly motor vehicles, also industrial boilers.
- organic carbon – from wood burning, motor vehicles, industrial processes, restaurants, and natural sources.
- elemental carbon – soot from wood burning and diesel engines.
- soil – windblown dust, road dust, agricultural and construction activities.

Emission inventories of these pollutants are being completed and refined in each state. These inventories will support the initial air quality study, and later the development of air quality strategy options.

From the monitoring and analysis of lichen species in the Scenic Area, we know that air pollution is likely causing some level of ecosystem disturbance. Lichen species that are sensitive to sulfur pollution are largely absent in the Scenic Area and those that thrive in high nitrogen polluted conditions are abundant. This is an indicator of unnatural environmental conditions for the NSA ecosystem.

Ozone (smog) in the eastern portion of the Scenic Area has been measured at levels that are known to harm vegetation.

Meteorology and climate

The meteorology and climatic conditions in the Scenic Area and surrounding source regions are in general terms well known. However, the specific structure of the horizontal and vertical winds, associated turbulent air motions, moisture, and temperatures, as well as the structure in side canyons and entry points, has not been well studied or documented. This detailed understanding is crucial to the success of computer modeling simulations that would be used to identify sources and their relative contribution to air quality in the Scenic Area.

Of particular note are the predominantly west, and often strong, winds through the Gorge in the summer and the transition seasons. In a few months during the winter the pattern reverses with moist easterly, and often strong winds bringing Columbia Basin air through the Gorge toward the west. In very general terms these wind and weather regimes are controlled by high pressure over the Pacific in the summer with relatively lower pressure in the Columbia Basin. This pattern reverses in winter with relatively lower pressure to the west and high pressure over the Columbia Basin. Winds tend to blow away from areas of higher pressure – this combined with the channeling effects of the Gorge is a significant contributor to the unique climate in the Gorge.

The meteorological parameters of most interest in the proposed technical studies are the 3-dimemsional wind components, including the turbulent intensities, and the 3 dimensional moisture fields (relative humidity). The wind fields determine the transport and dispersion of air pollutants, while the moisture fields affect gas-to-particle conversion, particle growth, and deposition. Available meteorological information in or near the Scenic Area currently consists mainly of a few surface monitoring sites.

What We Don't Know: Physical and chemical processes in the Gorge

There is much that we do not know about the physical and chemical process of air pollution within the NSA. The topography, meteorological conditions, emission sources, and chemical transformations in and around the Scenic Area are very complex. A better understanding of these processes is necessary in order to evaluate cause-and-effect relationships between emissions and air pollution in the Gorge. Some of the key questions that need further study include better defining the contribution of emission sources from areas west and east of the NSA as well as the contribution from sources within the Gorge.

Other sources of air quality information

More detailed discussion of existing air quality knowledge and assessment needs is in Appendix A: "Columbia River Gorge Visibility and Air Quality Study, Working Draft: Existing Knowledge and Additional Recommended Scientific Assessment to Consider, June 2001."

Meteorology and other factors influencing chemical transformation within the Gorge must be better understood. It is important to better understand seasonal changes in air pollution, and to better identify the key geographic areas in the region that significantly contribute to air pollution in the Gorge. It is also necessary to better define and understand the characteristics of sulfates, nitrates, ammonia, organic and elemental carbon in the formation of visibility impairing pollutants, and the impacts from ground-level ozone within the NSA.

Improving our Understanding of Gorge Air Quality-Building Tools Needed For Strategy Development

Earlier this year the project technical team consulted several national experts in air science to help develop an initial approach for studying air quality in the Scenic Area. These independent experts helped the technical team evaluate existing knowledge of air quality in the NSA, and assisted the team in identifying areas where additional study is needed.

In March 2001, this initial technical assessment was presented to a work group of over 50 local, national, and international air science experts to get their ideas. This peer review workshop provided a forum for attendees to share their experience and expertise with our technical team. Attendees offered useful insight into our draft study plan, each drawing from their field of expertise in air monitoring, modeling, and chemistry. The technical team has drawn from all the suggestions offered at the workshop to develop a **phased approach** for improving our understanding of Gorge Air Quality and for building the analytical tools needed for strategy development. Monitoring, modeling and emission inventory work necessary to meet the study objectives and goals are proposed to occur in each of three distinct phases of study.

The first phase of technical work, called the **Foundation Study**, will begin to better characterize the physical and chemical processes influencing air quality in the Gorge. The Foundation Study will lay the ground work for identifying emission sources, both

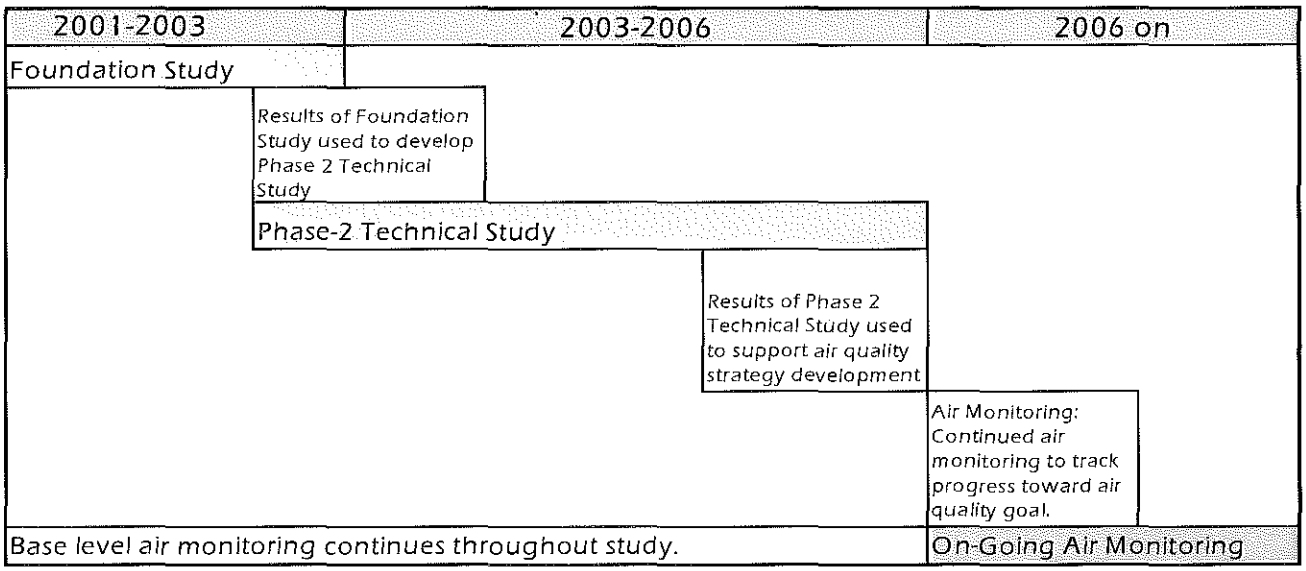
inside and outside the Scenic Area, that significantly contribute to air pollution in the Gorge. The Foundation Study is not sufficient by itself to support the development of air quality strategies, but will allow decision-makers to make more informed choices about the next phase of scientific study.

Results of the Foundation Study will be used to develop the **second phase technical study**. The second phase study will be designed to refine and verify our understanding of the physical and chemical processes influencing air quality in the Gorge. The Phase-2 technical program will provide for the identification of contributing emission sources and source areas, and for the final development, testing, validation, and selection of air quality predictive models to be used by decision-makers in strategy development.

Once an air quality strategy has been developed, on-going air quality monitoring will be needed to track and evaluate progress in meeting air quality goals. This on-going monitoring is phase-3 of the technical study plan. Basic air monitoring at the west and east entrances of the NSA has existed for several years and will continue throughout the upcoming study phases. Depending on the final air quality strategy, it may be necessary to expand the monitoring network to better evaluate air quality trends in the NSA.

The technical study program for the Columbia River Gorge Air Quality Project will not evaluate all air pollutant concerns, but will focus primarily on visibility and ozone. Separate state and federal programs exist that address air toxics and public health-based air quality standards.

General Chronology of Phased Technical Study Approach.



Funding Strategy: Funding for technical study and on-going monitoring. Chronology assumes availability of funding.

Summary of Scientific Investigation

Phase 1-Foundation Study: The focus of the Foundation Study is to characterize the physical, meteorological and chemical processes governing air quality and visibility within the Scenic Area. The results of the study will guide the final development and recommendation of the Phase-2 study plan. Development of the Phase-2 technical study plan will begin as the Foundation Study nears completion.

The Foundation Study will:

- evaluate air quality information from both inside and outside the NSA.
- make gaseous, particulate, and visibility measurements to help define the role of various pollutants in air quality and visibility impairment and to resolve potential discrepancies between measured and reconstructed haze levels.
- expand monitoring to areas outside the NSA.
- make meteorological measurements within the Scenic Area to define meteorological features currently not well understood (e.g., wind flow over the rim, through the Gorge and side canyons).
- develop an initial conceptual framework of the physical and chemical processes governing air quality in the Scenic Area.
- refine emission inventories in areas and times that are important to the physical and chemical processes and important for supporting modeling work.
- conduct survey level source attribution modeling to give us an initial idea of *potential* source regions and *potential* source types (inside and outside the NSA) responsible for air pollution in the Scenic Area.
- evaluate the strengths and weaknesses of predictive model candidates.
- identify the key chemical and physical processes that must be emphasized to obtain adequate predictive modeling capabilities.
- identify modeling and measurement approaches for use in Phase-2.

The Foundation Study will not:

- result in the final selection of a model capable of predicting air quality under various emission management scenarios.
- identify specific sources that contribute to air pollution in the Scenic Area.
- provide sufficient information from which to develop air quality strategies.

Completion of the Foundation Study is anticipated to occur 18 to 24 months from date of funding.

Estimated Cost of the Foundation Study

Ambient monitoring -	$ 845,000
Meteorological monitoring -	$ 200,000
Emission inventory refinement -	$ 50,000
Model evaluation and survey modeling -	$ 210,000
Data - QA, analysis & management -	$ 125,000
Project management -	$ 75,000
Total:	$1,505,000
Already funded:	$ 450,000
Estimated additional funding needed:	**$1,055,000**

Phase 2- Next Steps After Foundation Study

The Foundation Study will take approximately 18 to 24 months to complete. Results will guide development of the second phase technical study program. The Phase-2 Technical Study will provide the information and analysis tools needed for decision-makers to develop an air quality strategy for the Scenic Area.

The states will work with the Stakeholder Advisory Committee (established in subsequent sections of this work plan) to evaluate and select the Phase-2 study plan. The states will also seek comment on the Phase-2 study plan from independent technical experts, stakeholder groups, tribes, and the public. A recommended Phase-2 study program will be submitted to the Columbia Gorge Commission for approval as an amendment to this work plan. Given the time needed for fundraising and to initiate and complete the Foundation Study, it is anticipated that the Phase-2 study program would be developed in the 2002-2003 time frame.

A range of technical study issues for Phase-2 has been investigated and is discussed in detail in Appendix A: "Columbia River Gorge Visibility and Air Quality Study – Working Draft: Existing Knowledge and Additional Recommended Scientific Assessment to Consider", June 2001, Green et al. The final recommended Phase-2 study plan will depend on the results of the Foundation Study and the sophistication needed to develop strategy alternatives. Completion of the Phase-2 technical work is anticipated to occur 24 to 36 months after completion of the Foundation Study.

Summary of Key Program Elements: Monitoring, Emissions Inventory and Modeling

Each phase of technical study will improve our knowledge in all three key areas needed for air quality analysis: Monitoring, Emissions Inventory, and Modeling. A general overview of these three programs is provided below, followed by a summary of the Technical Foundation Study. A detailed description of the Technical Foundation Study, together with a detailed discussion of overall technical issues is included in Appendix A.

Monitoring Program

A monitoring program is proposed that will lead to understanding the physical and chemical processes occurring in the Scenic Area (i.e., a conceptual framework). This will help us identify emission sources that are contributing to impacts on visibility, cultural resources, agricultural health, ecosystem disturbance, and ozone effects on vegetation and humans. The monitoring will also help evaluate: 1) the chemical and physical processes that quantitative air quality predictive models must simulate, 2) provide information for input to these models, and 3) help evaluate the accuracy of the models. The monitoring will also help with the evaluation and development of the emission estimates for sources.

Many of the measurements in the monitoring program will be conducted within the Scenic Area and regions nearby. Because the Scenic Area is the receptor of pollutants emanating from many regions, it is important to measure air quality impacts and meteorological conditions inside the Scenic Area to better understand what, when, and where the pollutants come from.

The initial monitoring work and analysis of monitoring results is anticipated to be completed 18 months from date of commencement. The Phase-2 technical study will expand air monitoring to include greater refinement of air chemistry, and may involve one to two month summer and winter intensive studies. After the initial study is complete, a continuous long-term trends monitoring program will be needed to track the progress of any implemented strategy. All proposed monitoring is in addition to the routine long-term monitoring currently being conducted in the Scenic Area at the Mt. Zion (west end) and Wishram (east end) sites. Monitoring at these sites is cooperatively funded and operated by the USFS, WDOE, and ODEQ. It is anticipated that these sites will continue to operate for the long-term.

Emission Inventory Program

A good emissions inventory is a necessary component to understand air quality, identify contributing sources, and evaluate alternative emissions scenarios. An emissions inventory including SO2, NO_X, NH3, speciated VOC, and speciated primary PM is needed. This includes emissions from all potential source types affecting the Scenic Area – industry, mobile sources (e.g. vehicles, ships, trains, aircraft), area sources (e.g. woodstoves, outdoor burning, solvent use, agriculture), and biogenics (e.g. natural emissions from vegetation). Efforts are underway, as described below, to produce a more refined inventory for the Pacific Northwest; however, verification with measurements will be necessary to evaluate the accuracy of the inventory.

Oregon and Washington have been involved in emissions inventory preparation for many years. Inventories have been prepared in response to federal and state requirements for point source reporting, State Implementation Plans (SIPs) for visibility and individual criteria air pollutants, and various special studies. With the increased emphasis on

regional issues such as ozone and haze, Idaho, Oregon, Washington and other agencies and institutions initiated the formation of the Northwest Regional Technical Center (NWRTC), and an initial demonstration project to test an applicable air quality model is in progress. An important part of this project will be the preparation and testing of an accurate emissions inventory.

The states have identified emission categories needing additional data or refinement. Some areas in need of additional work include residential woodstoves, residential outdoor burning, commercial marine vessels, railroads, and biogenics. The states have requested and received special funding to complete these inventories. In addition to the regional inventory projects that were funded, Oregon received special funding to obtain stack parameters for point sources, inventory emissions from aircraft, evaluate ammonia emission factors, and other work as resources allowed. Results from the funded work are expected during the summer of 2001.

The emission inventory will be modified and enhanced as needed to support further air quality assessment and strategy development for the NSA.

Air Quality Modeling Program

Air quality "models" use mathematical equations to estimate the contributions made to air quality from a variety of emission sources throughout a geographic area. Air quality models use current emissions and other factors such as meteorology, chemical transformation, and emissions transport characteristics to estimate ambient air quality impacts. Air quality models can also be used with a forecast of future emissions to estimate air quality conditions in the future.

Air quality models will provide the tools, together with the monitoring program, for 1) source apportionment (determining the source of emissions that impact the Scenic Area), and 2) prediction of future impacts needed to evaluate control strategy alternatives.

Source apportionment of current emissions.

Models can be used to help verify and describe the cause-and-effect relationships suggested by monitored data. When there is reasonable agreement between monitored values and modeled estimates, then there is good confidence that the physical and chemical processes influencing air quality are reasonably understood. A source attribution model is a mathematical model that tells us how much of an impact we can attribute to a source or type of sources. There are several types of attribution models. Some work in a forward manner from emission sources to receptors (locations in the Scenic Area). These models work by taking a known mix of emissions, transporting them by and through meteorological conditions, chemically transforming the pollutants, and finally depositing the resulting chemical species in the air or on the ground in locations of interest (receptors).

Other models work in the reverse. In this process, monitored data is analyzed for its chemical constituents, and an attempt is made to match that composition with what we know about the chemical profiles from a variety of emission sources. Essentially, each source category has a unique "finger print" that can suggest whether or not the source was responsible for all or part of the impact. Used alone, however, reverse attribution models in general can only identify types of sources (e.g. pulp mills versus diesel vehicles versus coal fired boilers) rather than specific individual sources.

Prediction of impacts from future emissions.

A major goal of the study is the development and application of a model or models that can be used to assess changes in air quality within the Scenic Area due to changes in emissions in source areas. (That is, the development of air quality models that can predict future impacts from changes in emission rates.) These types of models are known generally as air quality predictive models, and they are necessary for the development of control strategies. These models will generally be the same as the source attribution models, but instead of identifying current sources impacting the Scenic Area (and trying to reproduce the monitored impacts), they will be used to predict future air quality impacts from a variety of emission scenarios.

Types and refinement of models

Several different types of modeling are proposed to coincide with each phase of study. Modeling costs vary in part based on the number of air quality cases or episodes evaluated, and how finely resolved the inputs are (such as terrain and wind fields). Currently, it is reasonable to run models with a relatively coarse resolution, with inputs such as meteorology, terrain, land-use, and emissions allocated to 12 kilometer grids. A model using inputs at this resolution can adequately evaluate the transport of pollutants from regions outside of the Scenic Area to the entrances of the Scenic Area.

Because the terrain within the Scenic Area is complex, narrow and deep, models with inputs gridded at a much finer resolution are need to accurately see what happens to pollutants once they enter the Scenic Area. Higher resolution modeling sufficient to accurately capture the terrain, and other characteristics of the Scenic Area is being developed. The costs to run fine resolution models are high because of the added cost to refine the inputs to the model (including the emissions inventory), and the increase in computing needs and time. Both coarse and fine resolution modeling will be needed to accurately characterize chemical and physical processes in the Scenic Area.

Regional Haze modeling.

In response to the Federal Regional Haze Rule, predictive air quality models are being developed through the Western Regional Air Partnership (WRAP). The Regional Haze modeling is designed for large regional-scale transport at a coarse resolution (36 km). As part of the this effort, Idaho, Oregon and Washington have initiated the formation of the Northwest Regional Technical Center (NWRTC). This proposal is tasked with the

analysis of the transport, dispersion, and chemical transformation of airborne emissions throughout the Pacific Northwest with a focus on the development of Regional Haze Plans. Although, the products resulting from NWRTC efforts will be useful to the analysis of impact in the Scenic Area, such regional models will not provide the finer resolution (1 – 12 km) necessary to understand transport near and within the Scenic Area. Developing finer resolution capabilities for regional haze will be the responsibility of individual states. With respect to the Scenic Area, additional fine resolution modeling work as proposed in this study plan will complement the efforts of the NWRTC.

Proposed modeling.

As discussed above, there are two main objectives to the modeling component of the study:
1) to help understand current sources contributing to air pollution within the gorge.
2) to provide a modeling methodology for future use in quantitatively estimating air quality changes resulting from different emissions scenarios.

For objective 1, monitoring data, emissions inventories, chemical and dispersion modeling, back-trajectories and other methods, in combinations with meteorological and chemical transport modeling will be used. The results of these studies will form a conceptual framework of the physical and chemical processes affecting air quality in the Scenic Area, and draw conclusions regarding current sources of air quality degradation.. Chemical modeling will include chemical (fingerprint) models such as Chemical Mass Balance (CMB), and the ISOPART chemical transformation model. Thus, a variety of techniques will be used to gather information, rather than relying exclusively on results from a particular analysis or modeling exercise. Conclusions will be drawn based upon a preponderance of evidence.

For objective 2, it is proposed to use a three-dimensional chemical transport photochemical model. The proposed model is the EPA Community Multiscale Air Quality (CMAQ) Dispersion Modeling System, together with its associated process modules. The WRAP regional haze modeling, as described above, will use the same model, and synergies should develop between the two efforts. As described in objective 1, CMAQ will be used in conjunction with the conceptual framework to better understand how processes work in the Scenic Area. CMAQ will be the primary model used for source attribution, and also the predictive model for evaluation of emission scenarios needed for control strategy development (not done as part of this study).

Other modeling tools may also be tested for use in informing some components of the study, most likely in the formation of the conceptual framework. If simpler modeling tools can be demonstrated to give equivalent results to more sophisticated methods, they may be applied to consider additional cases that cannot be addressed with the complex modeling system (CMAQ) due to resource constraints. Examples of simpler less costly models include CMB, ISOPART, and CALPUFF run in both the forward and reverse mode.

A complete discussion of monitoring, modeling, and emission inventory programs can be found in Appendix A.

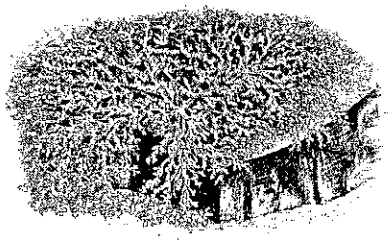
Long-Term Monitoring

Phase 3-On-going Monitoring: The final phase is continuous long-term trends monitoring to track the progress of any implemented strategy. Progress towards the air quality goal will be checked at periodic intervals. If the agreed upon rate of progress is not achieved, then the air quality strategy will be revisited and modified if necessary. To ascertain why the strategy is not achieving reasonable progress and to develop new or modified strategies, additional modeling and monitoring may be necessary. Phase 3 is ongoing. The number and general location of long term monitoring sites cannot be determined until completion of the Foundation Study.

Economic Analysis-Econometric Modeling

Economic analysis is also needed for strategy development so that decision-makers and the public can evaluate cost-benefit issues associated with each air quality strategy option. Econometric modeling will be used to inform the strategy development process.

Econometrics uses statistical theory in application to real world economic problems. It allows us to estimate the strength of economic relationships as well as forecast economic variables based on historical data, which allows businesses, consumers, and decision-makers to better understand the economic environment in which they participate. Common econometric tools include shift-share analysis and input-output modeling. These tools can be applied to various air-quality improvement scenarios to forecast their respective economic impacts. These analysis tools will be used by decision-makers to evaluate the cost information needed to weigh cost-benefit questions associated with each strategy option.



REGIONAL STRATEGY DEVELOPMENT

PUBLIC/STAKEHOLDER/TRIBAL INVOLVEMENT PROCESS

MAKING DECISIONS ABOUT AIR QUALITY- Roles and Responsibilities

The Columbia River Gorge Air Quality project will rely on a collaborative decision-making process. This means involving the public, stakeholder groups, tribes, local government, local business, and others in making decisions about resource protection in the NSA. Each state and federal agency, local government, stakeholder group, and Indian nation has a role in developing the regional air quality strategy. Project oversight and management is the main responsibility of the state environmental agencies and the Southwest Clean Air Agency, with guidance from several partners such as Gorge area counties, state community & economic development agencies, and local tribes. Local elected officials, stakeholder groups, tribes, and the public will be involved at multiple levels in the decision-making process and will help guide the development of the air quality strategy. These groups will have the added responsibility to become better informed about Gorge air quality, and to participate in the collaborative process.

Role of State Agencies, Southwest Clean Air Agency, and the U.S. Forest Service

Under the Scenic Area Management Plan, the states of Oregon and Washington have the responsibility to develop an air quality strategy that meets the purposes of the Scenic Area Act. For the purposes of this work plan, "the states" includes the Oregon DEQ, Washington DOE, and the Southwest Clean Air Agency (SWCAA). The Southwest Clean Air Agency serves in the role of a state environmental agency and is responsible for enforcing federal, state and local outdoor air quality standards and regulations in Clark, Cowlitz, Lewis, Skamania and Wahkiakum counties of southwest Washington state. In doing this work, these agencies must rely heavily on other partnerships as well. The NSA Management Plan calls for a partnership with the U.S Forest Service, which will offer its expertise and perspective throughout the strategy development process. The Oregon Department of Community and Economic Development and the Washington Office of Trade and Economic Development are two important partners as well. Their expertise is needed to help evaluate economic factors when options for air quality strategies are evaluated.

The states' goal is to develop an air quality strategy that meets the dual purposes of the Scenic Area Act, and that reflects to the greatest extent possible the broad range of interests and values held by people, tribes, businesses, local governments, and others within the Scenic Area. To accomplish this, the states will establish an advisory committee representing a cross section of the many different interests that have a stake in the future of the National Scenic Area. The make-up of this committee and the process it will use to develop a strategy recommendation is discussed in detail below.

The committee will use a consensus process to develop its recommendations. This means working hard to find common ground on a strategy that is both equitable and successful. The Committee will make its recommendation to the Oregon DEQ and Washington DOE, which will in turn recommend a strategy to the Columbia River Gorge Commission. Building consensus among varied interests means that the strategy recommendation is one that the community, businesses, and other interests can support. The states will place great weight on a strategy recommendation developed through this collaborative process. However, the states do have the obligation to evaluate whether the recommendation reasonably meets the purposes of the National Scenic Area Act. Barring any clear conflict with the intent of the Act, it is the intention of the states to pass on the Committee recommended strategy to the Gorge Commission unchanged.

It is then the responsibility of the Columbia River Gorge Commission to decide if the recommended strategy meets the purposes of the National Scenic Area Act.

Role of Elected Officials, the Public, Tribes, and others

There are many opportunities for elected officials, tribes, stakeholders, and the public to participate in developing the air quality strategy. These are described in more detail throughout this work plan. In brief, key elected officials, tribes, as well as stakeholder and community interest groups will serve directly on the advisory committee. Other elected officials, stakeholder groups, and the general public will participate through meetings, public forums, workshops, and other venues. However, the main avenue for input will be through the stakeholder advisory committee process.

Stakeholder Advisory Committee

Responsibilities and Membership

The Advisory Committee will have the responsibility to review the results of our scientific investigation, evaluate options for improving air quality, evaluate the results of economic analysis, and weigh cost-benefit questions as they consider different strategy options. The Committee will make a recommendation to the states for a preferred air quality strategy that meets that stated goals. The states will convey this recommendation to the Gorge Commission for consideration and approval.

The Advisory Committee will be initiated during the Foundation Study. The Committee, either in full or through a subgroup, will work with the states to select the Phase-2 Technical Study Plan. The organizational structure of the Advisory Committee, including the establishment and make-up of any subcommittees will be addressed during the Technical Foundation Study period as the Committee works with the states to develop the second phase technical study program. Every effort will be made to ensure that the selected organization promotes close communication among all the participants and ensures a defensible scientific foundation for the project. While the technical study is being conducted, the Committee will work to build a common understanding of air quality issues among Committee members and identify important issues needing their

involvement (such as funding, and establishing agreed upon growth and economic assumptions) before they begin creation and evaluation of strategy options. The Committee will review results of the technical study as it becomes available. The Committee may also discuss the potential for voluntary pollution prevention activities.

The Advisory Committee will have broad representation reflecting the many diverse interests in the National Scenic Area, and those who may be impacted by decisions made in developing the regional strategy. The following interests are proposed as Advisory Committee members, and would be invited to serve by the states. The Inter-Agency Project Coordination Team will evaluate public and stakeholder comment on the draft work plan before making a final recommendation on Advisory Committee membership. The Team may refine the initial membership proposal and will seek an equitable balance of interests within the Committee. Proposed interests represented on the Committee could include but are not limited to:

- One representative from Wasco County.
- One representative from Klickitat County.
- One representative from Hood River County.
- One representative from Skamania County.
- One representative from Multnomah County.
- One representative from Clark County.
- One representative each (Oregon and Washington) from major industry within the National Scenic Area (NSA).
- One representative each (Oregon and Washington) of major industry outside the NSA (but which may impact the NSA).
- One representative from an environmental organization located within the NSA.
- One representative from an environmental organization located outside the NSA.
- One "citizen at large" from Oregon.
- One "citizen at large" from Washington.
- One representative for Ports within the NSA.
- One representative for the Port of Portland.
- One representative each (Oregon and Washington) from agricultural interests within the NSA.
- One representative from METRO Regional Government (representing the greater Portland/Tri-County area).
- One representative from the Columbia Gorge Economic Development Association.
- One representative from the Regional Transportation Council (Clark County Transportation planning group).
- One representative from the Columbia River Gorge Visitors Association.
- One representative from the Warm Springs Indian Nation$^{\Psi}$
- One representative from the Umatilla Indian Nation$^{\Psi}$
- One representative from the Yakama Indian Nation$^{\Psi}$
- One representative from the Nez Perce Indian Nation$^{\Psi}$
- One representative from the U.S. Forest Service
- One representative from the U.S. Environmental Protection Agency

[Ψ] *Note: As sovereign nations, the Warm Springs, Umatilla, Yakama, and Nez Perce tribes will also participate at the state and federal level through the routine government-to-government consultation process.*

Each sector (or interest group) invited for Committee membership will be asked to select one representative and one alternate to serve on the Committee. To fill the Committee seats the states will solicit nominations from each sector. If more than one group desires to represent their sector, the states will select the group they believe will best represent the majority of interests from that sector.

Role of States and the Forest Service in Committee Process.

The Oregon Department of Environmental Quality, the Washington Department of Ecology, and the Southwest Clean Air Agency will not serve on the Advisory Committee but will provide staffing support, providing information and analysis as needed. The Oregon Department of Economic and Community Development and the Washington Department of Trade and Economic Development will also help staff the Committee and will be a resource on economic issues. The U.S. Forest Service will serve on the Advisory Committee and will also provide staffing support.

Advisory Committee- Decision Making Process

Using a Consensus Process

It is important to the long-term success of this work that we use an open and collaborative approach to making decisions about air quality in the Gorge. A process where stakeholders can, to the greatest extent possible, find common ground and achieve a balance of community interests that still meets the desired goals. To achieve this, the Advisory Committee will use a **consensus approach** for decision making.

A collaborative decision-making process requires that all participants commit to work in good faith toward consensus recommendations. Consensus is a process of *"give & take"*, of finding common ground and creative solutions to meet the purposes of the Scenic Area Act in a way that all interests can support. Consensus is reached if all interests at the table support an idea, or can at least say; *"I can live with that"*. In a consensus process, the first goal is for the Committee to understand the perspectives of each stakeholder interest. From that understanding, the group works to develop solutions that address each other's needs.

The committee will need to evaluate many complex issues. The committee will have the option to form subgroups as needed to focus on specific issues and ideas, and bring back recommendations to the full committee membership. A subgroup allows stakeholders with expertise in certain fields to focus intensely on a complex question or issue. The full committee provides the integrating structure where issues and ideas can be understood together and in context.

The states and Advisory Committee will go to great lengths to reach decisions through consensus. However, if the Advisory Committee can not reach consensus on an issue (reaches an impasse), the Committee will document the issue and differences of opinion involved, and submit the issue to the Oregon DEQ, Washington DOE, and Southwest Clean Air Agency (SWCAA) for resolution.

Other Important Principals in Designing a Collaborative Decision-Making Process

Trust and Ownership: An important part of the advisory process will be to provide a *learning environment* for all participants to develop basic knowledge about Gorge issues. The process could provide for ongoing help and "tutoring" for sectors that have less technical and/or policy resources. The process will place some of the "doing" with the participants, through work groups, team assignments, and other methods, so that they build ownership of the information and the outcomes. It is recognized that there may be some tension between various sectors participating in the stakeholder group. The states and SWCAA will evaluate the need to work with these interests prior to beginning the decision-making process to build trust and assure them a fair process.

Defining a leadership structure for the Advisory Group

When the Committee is formed, members will need to discuss several issues regarding group structure and process, including group leadership. The use of a Committee Chair is a common leadership approach for an advisory committee, and the selection of the Committee Chair is a vital first step. The role of Committee Chair is a difficult one and the success or failure of a committee greatly depends upon the ability of the chair to facilitate a fair and equitable process for discussion and decision-making. There are several key concepts common to the function of any Committee Chair:

- The chair must be perceived as neutral and fair, and should not have a vested interest in most issues being considered by the Committee. This does not mean that the chair will have no interest, but the role of chair is to ensure an open and fair process for decision-making, not lobby for a particular outcome. If a conflict of interest exists on a particular topic the chair should acknowledge it and have someone else facilitate that discussion.

- The chair needs to keep the Committee on task and keep each meeting agenda moving. The chair needs to be clear on what action, if any, the committee is being asked to take on each agenda item. The chair also ensures an opportunity during each meeting for members of the public or other visiting stakeholders to voice their opinion.

- The chair should work with all committee members to ensure that each viewpoint is being expressed. In general, the chair should elicit opinions from committee members before voicing his or her own. The chair must be accessible to Committee staff to discuss issues as they rise and anticipate problem areas.

Appointing a Chair: Typically, committee chairs are appointment by the lead agencies (in this case Oregon DEQ and Washington DOE) based on nominations from the advisory group. Other options could be explored as well.

Ground Rules

Ground rules are established to help support a collaborative and constructive process. Ground rules should be developed by the advisory group itself, with guidance from a professional facilitator, the committee chair, and/or the project coordination team. Examples of some key ground rules that could be agreed to include:

- *Strive for broad consensus on issues.*
- *Commit to participate constructively.*
- *Evaluate and define common goals.*
- *Identify areas with greatest potential for conflict and discuss ways to address these issues.*
- *Agree to set aside the time required for meetings and between-meeting review of information, to participate actively and constructively at meetings, to strive to reach agreement within the group on recommendations and to respect the ground rules.*
- *Achieve closure on issues as they are processed.*
- *Understand and document continuing concerns and inability to support elements of the results.*
- *Close the loop on comments and questions. Ensure that participants can see how their interests and inputs were involved in shaping the results (even if they do not like the outcome).*
- *Consult regularly with broad constituencies and attempt to provide inputs and reactions to ideas that represent those interests.*
- *Achieve political consistency and support for outcomes, without allowing "end runs" around the advisory process to achieve individual sector changes.*

Support for outcomes is particularly important to the success of any collaborative decision making process. Decision-makers must uphold their commitment to work through the consensus process, and not attempt to effect a different outcome once a consensus recommendation has been reached. The commitment to this collaborative process can be defined specifically in a Committee Charter.

Develop a Group Charter

A Committee Charter is a useful tool that can help support a collaborative decision-making process. A Charter would describe and document overarching issues such as a goal statement, commitment to collaborative decision making process, ground rules, etc.

A charter could help instill a sense of ownership and common ground. Outside a Charter, the group will agree on meeting structure, and approximate meeting schedules.

Evaluate the Role of Facilitation and Mediation

The Committee may also want to use a professional facilitator or mediator to assist and/or lead the group. The use of a facilitator or mediator however will not be required. "Facilitation" and "Mediation" play two different roles in the deliberative process. A *Facilitator* guides the process to ensure all stakeholder interests are heard, but is not a problem solver. A *Mediator* will also help ensure all voices are heard, but will (if requested by the committee) act in a negotiator role to help resolve conflicts within the group. At the appropriate time, the Committee can evaluate the merits and possible role of facilitation and/or mediation.

Evaluation of Strategy Options-Selection of Strategy Recommendations

The Committee will have several tools at their disposal to develop options for an air quality strategy:

- The results of the scientific investigation will have characterized air quality in the Gorge and identified those emission sources (both inside and outside the Gorge) that significantly contribute to air quality impacts in the National Scenic Area.

- Predictive modeling tools will be available to estimate future air quality trends in the Gorge and test the effectiveness of various emission reduction strategies. The modeling tools will evaluate the amount of air quality improvement that can be expected from any collection of strategies.

- Economic models will be used to evaluate the potential costs and economic consequences of various strategy options. This analysis will provide the cost information needed to weigh questions of cost-benefit.

Developing Air Quality Strategy Options

Based on results of the air quality study, and using the predictive modeling tools, the Committee will develop several air quality strategy options that protect and enhance the scenic, natural, recreational, and cultural resources of the Gorge. The Committee will begin by reviewing the air quality improvement that can be expected from existing state and federal programs, then consider whether any additional emission reductions are needed.

As an initial starting point for the evaluation the Committee will be encouraged to develop a series of strategy options, each providing an increasingly greater level of air quality protection. Once the air quality benefit of each option is understood, economic

modeling and analysis will be performed to assess the economic impacts of the various strategies. From these analyses will come important cost-benefit information needed to weigh air quality and economic questions. It is important to note that economic impacts need not be negative. Reducing air pollutants can produce economic benefits. For example, reducing air pollution in the Scenic Area would likely benefit both the tourism and agricultural industries.

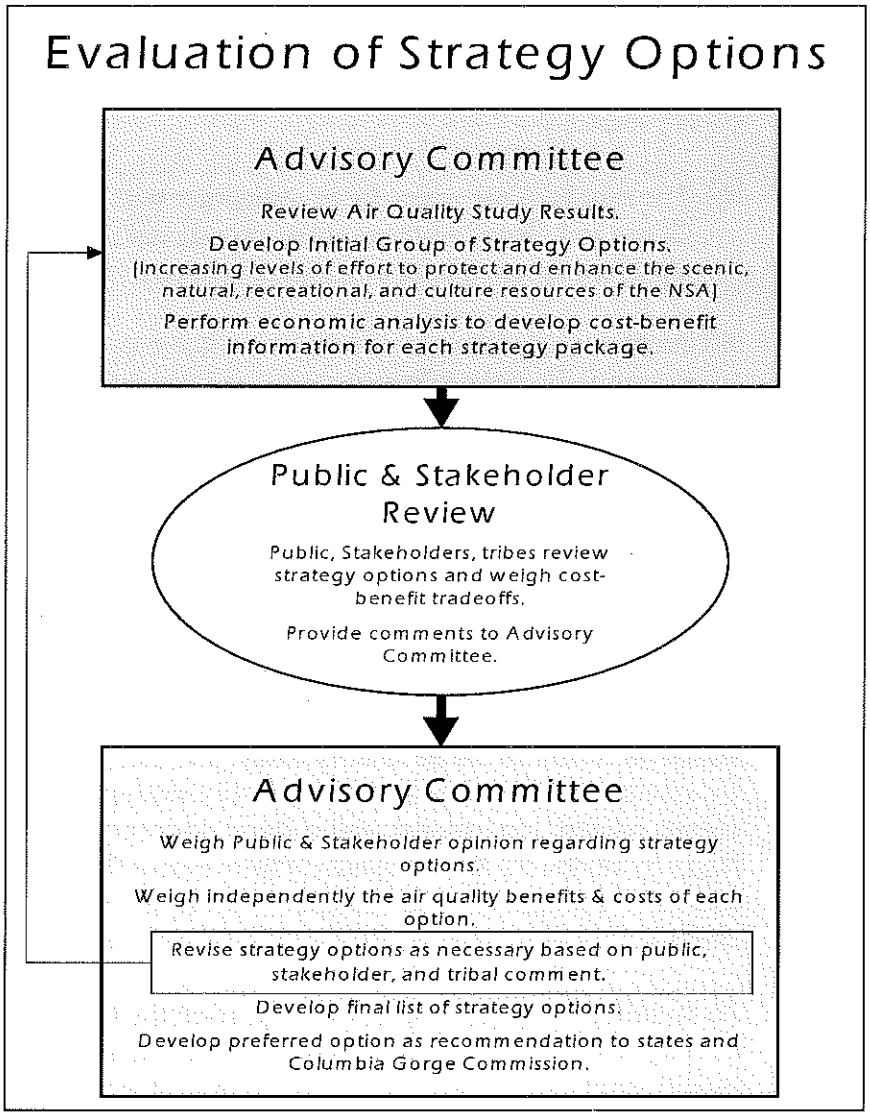
Predicting the Future

One of the most important pieces of information the Committee will use in developing air quality strategy options are the assumptions and forecasts of future growth and change within and outside of the NSA. Forecasts for population, housing, and anticipated changes in economics and employment will all affect estimates of future emissions and air quality. In developing strategy options, the Committee will evaluate the various assumptions for anticipated growth and change that will influence future emissions. Air quality forecasts will be based on growth and other planning assumptions agreed upon by local governments, the states, and the Committee.

Evaluation of Strategy Options-Public, Stakeholder, and Tribal Involvement

Public and stakeholder involvement is a vital part of the strategy development process. Initial strategy options developed through the committee process, including the associated cost-benefit analysis, will be taken before the public and stakeholders for review and comment. Feedback from the public will help inform the Advisory Committee as they develop their recommended strategy.

Public outreach efforts will include techniques such as public workshops, town meetings, focus groups, and surveys, and other methods. Each venue will provide an



opportunity for stakeholders, tribes, and the public to consider options for air quality improvement, evaluate associated costs and economic impacts, and weigh questions of cost-benefit. The public and stakeholders will evaluate how well strategy options address protection of scenic, natural, cultural, and recreational resources as well as support Gorge economies in a way consistent with resource protection.

Final Selection of a Preferred Regional Air Quality Strategy

Once public, stakeholder, and tribal input are gathered, the Committee will refine and finalize the strategy options. Strategy options may be presented for public comment several times as they are refined. In brief, the Advisory Committee will:

- *Evaluate public and stakeholder input regarding the initial strategy options.*
- *Evaluate independently the air quality benefits and costs of each strategy option, and*
- *Develop and recommend a preferred regional air quality strategy that meets the objectives of the Gorge Area Management Plan and meets the dual purposes of the National Scenic Area Act.*

Next Steps

The Committee will make their recommendation to the Oregon Department of Environmental Quality and Washington Department of Ecology. The state will evaluate whether the recommendation meets the purposes of the National Scenic Area Act. Barring any clear conflict with the intent of the Act, the states will carry the Committee's recommendation forward to the Gorge Commission.

The Columbia River Gorge Commission will decide if the recommended strategy meets the dual purposes of the National Scenic Area Act. If so, the states and other agencies as necessary will carry out implementation of the strategy. If the Commission believes that the recommended strategy does not meet the intent of the Act, states will request that the strategy recommendation be returned to the states and advisory committee for further evaluation, with specific guidance from the Commission on outstanding issues to be resolved.

Regional Strategy Implementation

Once the Columbia Gorge Commission approves an air quality strategy, the states, as well as other agencies as needed, will move forward to implement the approved measures. At this time we can not presume to know what the final strategy recommendations will be. A comprehensive strategy may involve both regional and local emissions sources affecting Gorge air quality. Such a strategy could combine measures that rely on both state rules and local ordinances, in addition to existing federal programs. The final strategy may also include a combination of mandatory and voluntary measures.

Continued Study of Gorge Air Quality

Monitoring and study of air quality in the Gorge will continue during and after implementation of the regional strategy. Air quality trends in the NSA will be tracked to ensure that improvement is made as expected.

Estimated Funding Level Needed

Initial budget estimates are as follows. Funding will be needed for key milestones throughout the 2001 to 2006 timeframe. Funding levels are general estimates only and may be refined as additional information becomes available.

Project Task	Estimates Range of Costs	Time frame for Funding
Technical Foundation Study	Approximately 1,000,000	2001-2002
Phase-2 Technical Study	To be determined	To be determined
Econometric Modeling and Analysis Evaluating three-five strategy options	60,000 to 150,000	2003-2006
Public/Stakeholder Advisory Process Three air quality agencies support and staffing for Advisory Committee and decision-making process. Public, Stakeholder and tribal outreach and involvement.	$350,000	2003-2006
Total Estimated Cost Range	Approximately $1.44 million plus cost of Phase-2 technical work.	

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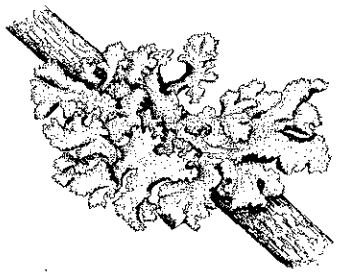


GLOSSARY

Key words described here are those commonly used in discussions of air quality and visibility. Not all appear in the work plan document, but are included for general interest and information.

Air pollutant: An unwanted chemical or other material found in the air.

Air pollution: Degradation of air quality resulting from unwanted chemicals or other materials occurring in the air.

Air Quality Values (AQRVs): including visibility, flora, fauna, cultural and historical resources, related values odor, soil, water, and virtually all resources that are dependent upon and affected by air quality. "These values include visibility and those scenic, cultural, biological, and recreation resources of an area that are affected by air quality"

Apportionment: to distribute or divide and assign proportionately

Dry deposition: Also known as dryfall, includes gases and particles deposited from the atmosphere to water and land surfaces. This dryfall can include acidifying compounds such as nitric acid vapor, nitrate and sulfate particles, and acidic gases.

Emissions: Release of pollutants into the air from a source.

Extinction: the attenuation of light due to scattering and absorption as it passes through a medium.

Extinction budget: Apportioning the extinction coefficient to atmospheric constituents to analysis estimate the change in visibility caused by a change in constituent concentrations.

Fine particles: Particulate matter with an aerodynamic diameter of 2.5 microns or less (PM2.5). Fine particles are responsible for most atmospheric particle-induced extinction. Ambient fine particulate matter consists basically of five species: sulfates, ammonium nitrate, organics, elemental carbon, and soil dust.

Haze: an atmospheric aerosol of sufficient concentration to be visible. The particles are so small that they cannot be seen individually, but are still effective in scene distortion.

Humidity: Water in air, as a gas. Often measured as a percentage, compared to the maximum amount of water vapor the air can contain at that temperature.

Hydrocarbons: compounds containing only hydrogen and carbon. Examples: methane, benzene, decane, etc.

Impairment: The degree to which a scenic view or distance of clear visibility is degraded by man-made pollutants.

IMPROVE: Interagency Monitoring of PROtected Visual Environments.

Integrating nephelometer: an instrument that measures the amount of light scattered (scattering coefficient).

Light-absorbing carbon: carbon particles in the atmosphere that absorb light. Black carbon.

Light extinction budget: the percent of total atmospheric extinction attributed to each aerosol and gaseous component of the atmosphere.

Monitoring: Measurement of air pollution and related atmospheric parameters

National Ambient Air Quality Standards: Permissible levels of criteria air pollutants established to protect public health and welfare. Established and maintained by EPA under authority of the Clean Air Act.

Nephelometer: an instrument used to measure the light scattering component of light extinction.

Particulate matter: Dust, soot, other tiny bits of solid materials that are released into and move around in the air.

Perceptible: Capable of being seen.

Photochemical: Any chemical reaction which is initiated by light. Such processes are process important in the production of ozone and sulfates in smog.

Rayleigh scattering: the scattering of light by particles much smaller than the wavelength of the light. In the ideal case, the process is one of a pure dipole interaction with the electric field of the light wave.

Reconstructed light extinction: The relationship between atmospheric aerosols and the light extinction coefficient. Can usually be approximated as the sum of the products of the concentrations of individual species and their respective light extinction efficiencies.

Regional haze: A cloud of aerosols extending up to hundreds of miles across a region and

promoting noticeably hazy conditions. Condition of the atmosphere in which uniformly distributed aerosol obscures the entire vista irrespective of direction or point of observation. Is not easily traced visually to a single source.

Scattering (light): an interaction of a light wave with an object that causes the light to be redirected in its path. In elastic scattering, no energy is lost to the object.

Scattering efficiency: The relative ability of aerosols and gases to scatter light. A higher scattering efficiency means more light scattering per unit mass or number of particles, this in turn means poorer visibility. In general, fine particles (diameter less than 2.5 microns) are efficient scatterers of visible light.

Secondary aerosols: aerosol formed by the interaction of two or more gas molecules and/or primary aerosols.

Secondary particles: form in the atmosphere by a gas-to-particle conversion process.

Smog: A mixture of air pollutants, principally ground-level ozone, produced by chemical reactions involving smog-forming chemicals. See also haze.
SO2:

Soot: Black particles with high concentrations of carbon in graphitic and amorphous elemental forms. It is a product of incomplete combustion of organic compounds.

Stable air mass: an air mass which has little vertical mixing. See temperature inversion.

Stagnation periods: lengths of time during which little atmospheric mixing occurs over a geographical area, making the presence of layered hazes more likely. See temperature inversion.

Standard visual range: reciprocal of the extinction coefficient. The distance under daylight and uniform lighting conditions at which the apparent contrast between a specified target and its background becomes just equal to the threshold contrast of an observer, assumed to be 0.02.

Sulfates: those aerosols which have origins in the gas-to-aerosol conversion of sulfur dioxide; of primary interest are sulfuric acid and ammonium sulfates.

Sulfur dioxide: a gas (SO2) consisting of one sulfur and two oxygen atoms. Of interest because sulfur dioxide converts to an aerosol that is a very efficient light scatterer. Also, it can convert into acid droplets consisting primarily of sulfuric acid.

Temperature inversion: in meteorology, a departure from the normal decrease of temperature with increasing altitude such that the temperature is higher at a given height in the inversion layer than would be expected from the temperature below the layer. This warmer layer leads to increased stability and limited vertical mixing of air.

Total light extinction: The sum of scattering (including Rayleigh scattering) and absorption
coefficients.

Unstable air mass: an air mass that is vertically well mixed. See also stable air mass, temperature inversion.

Visibility: refers to the visual quality of the view, or scene, in daylight with respect to color rendition and contrast definition. The ability to perceive form, color, and texture.

Visual range: the distance at which a large black object just disappears from view.

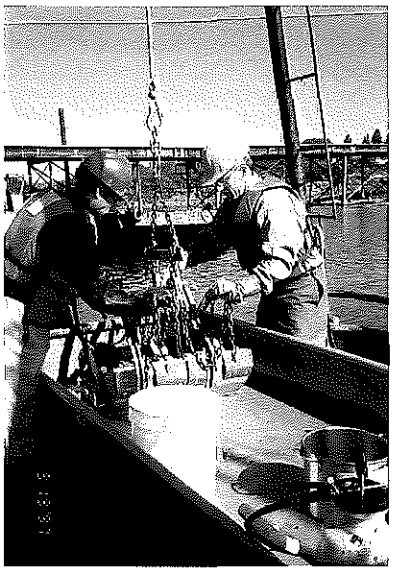
Wet deposition: The deposit of atmospheric gases and particles (incorporated into rain, snow,
fog, or mist) to water or land surfaces.

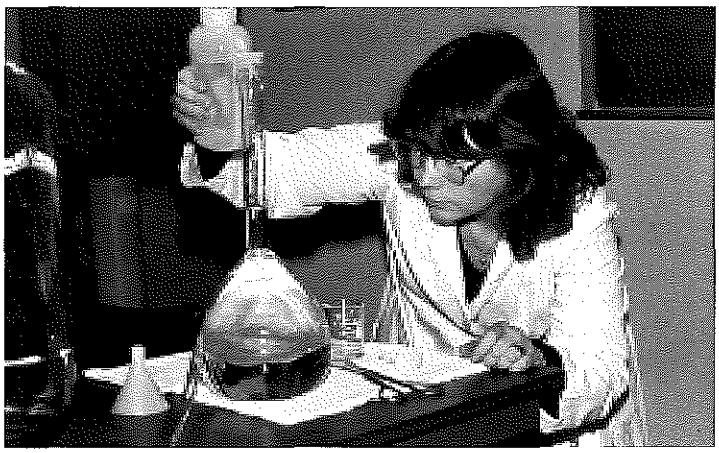
APPENDIX A

Columbia River Gorge Visibility and Air Quality Study, Working Draft: Existing Knowledge and Additional Recommended Scientific Assessment to Consider, June 2001. Provides a more detailed discussion of existing air quality knowledge and technical assessment needs for the Columbia River Gorge NSA.

DEQ

State of Oregon
Department of Environmental Quality





April 2000

STRATEGIC PLAN

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Overview

This Strategic Plan provides a high level view of the Department of Environmental Quality's (DEQ) vision for the future. DEQ's mission is to be an active leader in restoring, maintaining and enhancing the quality of Oregon's air, water and land. This mission defines the scope of the work we do as we strive to achieve our vision of working cooperatively with all Oregonians for a healthy, sustainable environment.

To achieve our vision, we must address several emerging environmental challenges such as population growth, toxics and salmon restoration. This plan identifies the long term goals and immediate priorities that DEQ has defined so that the work we do advances our ability to achieve sustainable environmental management.

DEQ Short-Term Priorities

1. Increasing opportunities for Oregonians to participate locally to prevent and solve environmental problems
2. Cleaning Oregon's rivers and streams
3. Protecting people's health from harmful toxics

DEQ has identified three priorities as urgent and important actions that will move Oregon toward sustainability. While these priorities do not replace the broader actions that DEQ takes to protect the environment, they move us in critical ways toward achieving the six broad goals outlined below. These goals reflect the environmental concerns, needs and responsibilities of the people who work, live and raise families in Oregon.

DEQ Long-Term Goals

1. Restore clean water
2. Reduce risk from toxics and clean up contaminated sites
3. Minimize and manage waste
4. Protect clean air
5. Increase community responsibility
6. Increase openness and efficiency

This plan does not detail all of the work we do to regulate and protect the environment. It is intended to communicate the urgent actions we need to take and the changes we need to make in how we work. As a management tool, this plan guides our decision making process and helps us to avoid multiple and conflicting priorities, over-commitments, and duplicated efforts.

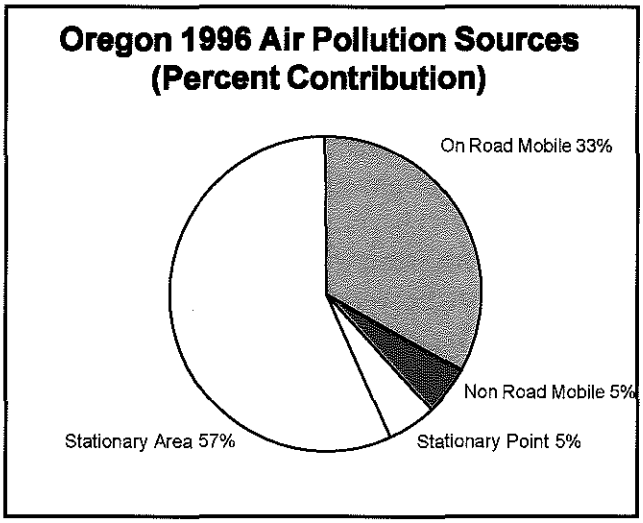
More information is available through other planning tools, which are outlined in the Related Planning Tools section. DEQ contacts, listed at the end of the document, can also provide additional details about program planning activities.

Current Challenges

Starting in 1938, Oregon's ethic of environmental responsibility has led to groundbreaking legislation and significant gains in environmental recovery. We now enjoy clean air in all parts of the state. We've limited end-of-pipe pollution into rivers and streams. Most of the worst contamination is being cleaned up. We can be proud of the progress we've made. New challenges face us, however, at the dawn of the 21st century.

- Today's pollution standards consider only a few well-known substances, but hundreds of other toxic and hazardous pollutants come from cars, small businesses and individuals. We're only beginning to understand the health effects of most of these pollutants.

- New chemicals we create have unknown future effects and generate more hazardous waste. There is a great need for more information so that these issues can be managed effectively.



- Population growth continues to rise, increasing the cumulative effects of human activity.

- Many of our native salmon and other species and their habitats are threatened, endangered or otherwise at risk.

- While more people recycle today than 20 years ago, total waste generation continues to rise.

To respond to these complex challenges, we have a lot of work and a lot more learning ahead on the path to sustainable environmental quality. In the past, we have achieved gains by regulating pollution and prescribing control technologies from the largest or most obvious sources of environmental problems. To address the current environmental challenges, we must add actions that include partnering and education to reduce pollution from small businesses and individuals.

We must shift our attention from *controlling* the pollution to *preventing* it.

As we reflect on these changes and prepare for this new century, we recognize that we are at a critical juncture. Continued success requires leadership and a clear expression of long and short-term priorities in order to define our desired future and outline our path to get there.

Short-Term Strategic Direction

In the short-term, DEQ must place emphasis on particular work that is critical to achieving our goals. This work represents the next steps we believe are essential to create our desired future. In addition, we must emphasize certain operational practices in order to meet current challenges. This section describes DEQ's priority work for the next several years, and the critical operational changes needed to successfully take these priority actions.

Priority Work

Our priorities for the next 2-5 years provide the next step in achieving our long-term goals and, ultimately, our vision. These priorities are:

1. Increasing opportunities for Oregonians to participate locally to prevent and solve environmental problems

2. Cleaning Oregon's rivers and streams

3. Protecting people's health from harmful toxics

This does not mean that other work is compromised, rather that future environmental gains will be greatest by concentrating our work in these areas whenever possible.

1. Increasing opportunities for Oregonians to participate locally to prevent and solve environmental problems

We know that citizens want to take action to improve their own communities, and we can give them the tools, information and assistance they need to succeed. Environmental protection is most likely to succeed - and persist - if it is based where there is the greatest concern about the local environment. We advance our goal of community-based environmental actions by helping citizens assume responsibility for their local environment.

Selected Priority Actions:

- Participate actively in Community Solution Teams to be a local problem-solver.

- Prepare information about the environmental condition of at least 6 specific geographic areas, and complete environmental improvement projects for those areas in partnership with local stakeholders.

- Partner with business to give incentives for individuals to choose environmentally responsible actions, like transit subsidies or buyback programs.

- Encourage local communities and small businesses to prevent pollution and use resources efficiently.

- Establish neighborhood liaisons to assist communities in solving and preventing environmental problems.

2. Cleaning Oregon's rivers and streams

In the past, DEQ has worked largely on limiting the amount of pollution that industry and municipalities discharge. Now we need to work on improving polluted surface waters, riparian damage, and other problems caused by individual actions. DEQ, in partnership with others, will put actions in place to clean up Oregon's rivers and streams. This is the next step toward our long-term goal of clean water that meets designated beneficial uses.

Selected Priority Actions:

- Partner with other Natural Resource agencies, local communities, and stakeholders to implement the Oregon Plan for Salmon and Watersheds.

- Develop water quality management plans (called TMDLs) for all of Oregon's impaired rivers and streams (by 2007).

- Issue water quality permits on a watershed basis to promote a holistic review of water quality impacts.

- Enhance efforts to prevent and control stormwater runoff in urban areas.

3. Protecting people's health from harmful toxics

Human exposure to toxic chemicals is of increasing concern in Oregon today as we learn more about the health effects of chemicals. People are exposed to toxics through many sources such as chemical emissions from cars, trucks, and industrial plants; or through the food chain where persistent and bio-accumulative toxins (PBTs) can appear. Known types of PBTs include mercury, some pesticides, dioxin and PCBs, but there is still a need for more accurate, credible, and user-friendly information about toxics and their potential health impacts. These actions correct and prevent problems in our land and water, and make our air cleaner.

Selected Priority Actions:

- Develop a state hazardous air pollutants program to augment the federal program and address growing concerns regarding toxic air pollution.

- Inform citizens about potential health risks associated with toxic substances.

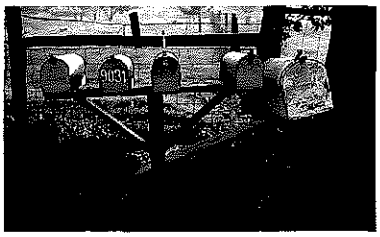
- Implement the Executive Order on PBTs and partner with EPA's PBT initiative.
- Make map-based toxics information available on the Internet.
- Work to prevent and clean up contaminated sites and leaks and spills of toxic chemicals and hazardous substances.
- Increase toxics monitoring on the Willamette River.

Internal Changes

In order to do the work associated with these priorities, we need to look at how DEQ operates and where we may need to change. We will increasingly move the current framework for regulating industrial and commercial activity toward a performance-based system. This system will recognize environmental leaders, provide new incentives and increased technical assistance to improve environmental performance, and increase oversight and enforcement for those not meeting minimum compliance and performance standards.

Over the next several years, DEQ will evolve our current approach to managing the environment by emphasizing the following areas.

- **Environmental Results.** DEQ will select actions that support pollution prevention to achieve environmental progress that is sustainable over the long term. Our work will emphasize environmental and human health outcomes, rather than activities, and we will develop measures to evaluate progress. We will ensure a basic level of environmental protection by all regulated entities and provide incentives for others to go beyond required standards.
- **Partnering.** DEQ will improve working relationships with municipalities, tribal governments, environmental advocates, businesses, community groups, its internal divisions and the federal government to achieve environmental results.
- **Geographic Initiatives and Place-based Problem Solving.** This strategy accelerates DEQ's shift from a traditional, centralized, approach to an interconnected, interdependent and problem solving, place-based approach. We will undertake more geographically oriented projects and continue to provide services locally.



- **Sound Science.** DEQ will increase monitoring and data collection and improve access to and the utility of scientific information for decision making.
- **Timely and Transparent Business Practices.** DEQ will work to make our actions understandable to stakeholders. We are committed to incorporating new technology and innovation so that our business efficiency and quality of services are continually improved. We will continually evaluate and improve our processes.

Long-Term Strategic Direction

DEQ recognizes that there is much more environmental work to be done beyond the work identified by three priorities. This section describes our long-term path utilizing our vision, mission, and long-range goals and objectives. The Strategic Direction provides guidance for setting operational priorities, making operating decisions and allocating resources.

Vision

Our vision is to work cooperatively with all Oregonians for a healthy, sustainable environment.

In our vision, we see Oregon as a leader in both environmental quality and a sound economy. Oregon will be recognized for eliminating the accepted belief in a trade-off between environmental and economic stewardship. Financial incentives and regulatory reform will result in greener businesses and technologies that will provide jobs while improving the environment. We will transition from a system of strict regulations to cooperative goal-setting and flexible means to achieve those goals.

When our vision is realized, decisions affecting the environment will be guided by the understanding that all aspects of life are interconnected, interdependent and cumulative. DEQ is mindful of the needs of this and future generations when establishing policies to promote healthy air, clean water, safe communities and vibrant ecosystems. When we are all working together, Oregon will be a place where all people, communities, and businesses assume personal responsibility for preservation and restoration of the environment.

Oregon's Future

- There is no further degradation of the environment, and "special places" are preserved.
- Our native, wild salmon return in large numbers to plentiful, clean waters.
- Our skies are free of haze, dust or smog.
- Work is done with non-polluting technologies and with materials that are either fully recovered or fully returned to a natural state at the end of their product life cycle; there will be "zero waste" in our lives.

We have quite a distance to go to fully realize this future state, but if Oregon's history of environmental stewardship says anything about our destiny, we cannot help but be successful in achieving it.

DEQ plays a significant role in leading Oregon towards this future, and we have crafted our mission to guide us.

Mission and Values

Our mission is to be an active leader in restoring, maintaining and enhancing the quality of Oregon's air, water and land.

As a leader we facilitate the implementation of new, innovative ideas that motivate our stakeholders to stay on course towards sustainable environmental management. Our charge encompasses the quality of Oregon's air, water and land, so we must consider all impacts in our actions. Restoring and maintaining the environment means we must identify and stop practices that negatively affect the environment, correct past damage, and prevent future problems. We enhance the environment by creating opportunities for natural systems to blossom and thrive.

In our actions and decisions, we strive to act out of our values. These values reflect who we are and how we want to do business.

Environmental Results. We focus on the environmental outcome. We integrate pollution prevention across air, water and land; balance resources among compliance, technical assistance and education; and focus resources and problem solving on specific geographic areas.

Customer Service. We establish and implement environmental policy through public forums and open participation, seek public involvement, and implement responsible business practices that are timely, transparent, and equitable.

Partnership. Within our agency, among agencies, and with other public jurisdictions, the public sector, and our community, we foster trust, teamwork, collaboration, and equity in our efforts to create a healthy environment for all Oregonians.

Excellence and Integrity. We are proud to provide services in a manner that demonstrates the importance of our mission. We make decisions based on facts and science.

Employee Growth. We are committed to providing the tools, resources and experiences necessary to help employees develop new skills and to enhance their capabilities and quality of work life.

Teamwork. We support our team members through mutual respect and constructive feedback, celebrating our successes while learning from our mistakes. We encourage team participation and decision-making whenever appropriate and provide the tools necessary for teams to be successful.

Diversity. In a state with a growing global role, a varied constituency, and increasingly complex challenges, we value the dignity of all people and strive for a diverse workplace that develops equitable solutions.

Strategic Goals and Objectives

Strategic Goals are statements that reflect overall agency results, or specific conditions of the environment we are trying to achieve through our mission. They are long-term and do not have definite endpoints. Objectives are specific, measurable, achievable, realistic, timed targets for environmental and agency performance results. Here, we show the agency's six broad goals and key objectives that guide us toward achieving them. This is not a complete listing of objectives.

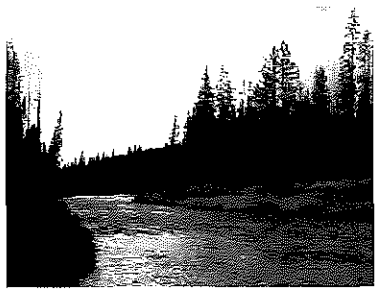
1. **Restore Clean Water**. Make Oregon waters clean enough to support beneficial uses, such as swimming, fishing, drinking, and supporting aquatic life.
   - Adopt water quality management plans (called TMDLs) for the entire state by 2007.
   - Ensure all point source permits are reissued within 1 year of adoption of a water quality management plan (TMDL).
   - Jointly working with designated authorities, ensure all non-point sources identified in water quality management plans implement actions to reduce pollution.
   - Prevent further degradation to surface and ground waters.

2. **Reduce Risk from Toxics and Clean Up Contaminated Sites**. Reverse the danger to human health and the environment from releases, contaminated sites, and from leaks and spills of toxic chemicals, hazardous substances and solid wastes.
   - By 2015, reduce toxics use and exposure from releases of toxic chemicals below established benchmarks where the risk to human and ecosystem health is at safe levels.
   - By 2015, remove the threat to human and ecosystem health from land and water contaminated by hazardous chemicals.
   - By 2020, eliminate releases of persistant, bioaccumulative or toxic chemicals (PBTs) into the environment.

3. **Minimize and Manage Waste**. Minimize and safely manage hazardous substances and solid and hazardous waste.
   - By 2010, reduce the amount of waste generated per capita or economic unit by 10% from 1998 baseline.
   - By 2015, increase the safe management of solid and hazardous waste to reduce long-term exposure of people and ecosystems to wastes to safe levels.

4. **Protect Clean Air**. Ensure continued clean, healthy air for all Oregonians.

   - Prevent health risk from critieria pollutants by keeping all areas of the state meeting and beating health-based air quality standards.
   - By 2010, improve existing visibility levels in designated wilderness and scenic areas.



5. **Increase Community Responsibility**. Increase community-based environmental actions.

   - By 2003, all appropriate agency staff will serve as local partners to provide information and resources for community-based environmental decision making.
   - By 2005, give individuals, businesses, and communities the tools and information they need to take actions to improve their environment.
   - By 2005, provide information about neighborhood environmental conditions and sources via the Internet.

6. **Increase Openness and Efficiency**. Operate with open and accountable business practices.

   - By 2003, evaluate and improve efficiency, effectiveness, and clarity of permitting and reporting processes.
   - By 2005, link data with other agencies to provide comprehensive decision making tools for Oregonians.
   - By 2006, complete process improvements within all primary business functions.

Measures

Measuring the success of environmental protection actions is critical for us to ensure the approaches we use have the intended effect. Since many factors beyond DEQ actions affect the actual condition of the environment, such as weather, population growth, economic activity, and actions by others, developing accurate measurement tools is challenging.

DEQ currently collects and reports on a wide range of environmental data ranging from very high level reports of the overall condition of the state, down to the micrograms of particular contaminants at specific sites. Over the next several years we will work with stakeholders and national consultants to evaluate and improve our system of measures so that we can more effectively:

- Point to our environmental trends;
- Describe DEQ's contribution to changes in the environment;
- Better use data to inform our decisions and manage our resources; and
- Provide useful information to stakeholders and the general public.

Acknowledgments and Contacts

This Strategic Plan was developed through a process that involved managers and staff throughout the Department, whose participation and determination was invaluable. For more information about program plans, please contact:
Water Quality: Michael Llewelyn, 503-229-5324
Air Quality: Greg Aldrich, 503-229-5687
Waste Prevention and Management: Chris Taylor, 503-229-6165
Environmental Cleanup: Alan Kiphut, 503-229-6834
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Visit Our Web Page - http://www.deq.state.or.us

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