

**OREGON  
ENVIRONMENTAL QUALITY  
COMMISSION MEETING  
MATERIALS 03/30/2000**



**State of Oregon  
Department of  
Environmental  
Quality**

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# A G E N D A

## ENVIRONMENTAL QUALITY COMMISSION MEETING

March 30-31, 2000  
The Discovery Center  
5000 Discovery Drive  
The Dalles, Oregon

**Notes:** Because of the uncertain length of time needed for each agenda item, the Commission may deal with any item at any time in 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 agreeable with participants. Anyone wishing to listen to the discussion on any item should arrive at the beginning of the meeting to avoid missing the item of interest.

**Public Forum:** The Commission will break the meeting at approximately **11:30 a.m.** for the Public Forum if there are people signed up to speak. The Public Forum is an opportunity for citizens to speak to the Commission on environmental issues and concerns not a part of the agenda for this meeting. The public comment period has already closed for the Rule Adoption items and, in accordance with ORS 183.335(13), no comments can be presented to the Commission on those agenda items. Individual presentations will be limited to 5 minutes. The Commission may discontinue this forum after a reasonable time if an exceptionally large number of speakers wish to appear.

### **Thursday, March 30, 2000**

*The Commission will tour several sites in the Hood River/The Dalles area before their meeting*

6:00 p.m. Dinner with local officials

### **Friday, March 31, 2000**

#### **Beginning at 9:30 a.m.**

*The Environmental Quality Commission will hold an executive session at 8:30 a.m. The Commission will be consulting with legal counsel regarding G.A.S.P., et al v. Department of Environmental Quality (Case No. 9708-06159). The executive session is to be held pursuant to ORS 192.600 (1)(f) and ORS 192.660 (1)(h). Representatives of the media will not be allowed to report on any of the deliberations during the session.*

A. Approval of Minutes

B. Action Item: National Marine Fisheries Request for a Waiver for Total Dissolved Gas for Fish Passage on the Main Stem of the Columbia River

C. Informational Item: Legislative Update

## D. Commissioners' Reports

## E. Director's Report

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

The Commission will have lunch at 12:00 noon. . No Commission business will be discussed.

The Commission has set aside May 17-18, 2000, for their next meeting. It will be in Portland, 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.

If special physical, language or other accommodations are needed for this meeting, please advise the 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.

March 27, 2000

EQC

March 30-31, 2000

**THURSDAY MARCH 30**

- 1230 Leave Portland –Box lunches on way to Hood River
- 1345 Fish trap/sorting station—meet with Steve Pribyl, ODFW Asst. Fish Biologist—see map
- 1445 Pacificorp Powerdale 401 tour—meet with Linda Prendergast, Pacificorp
- 1545 Leave for The Dalles
- 1600 Check in at the Quality Inn in The Dalles (take exit #83 off I-84)
- 1730 Leave Quality Inn for the Discovery Center
- 1800 Dinner with local officials and legislators
- 2000 back to Motel

**FRIDAY MARCH 31**

- Breakfast on your own and check out from motel
- 0800 Leave for the Discovery Center
- 0830-1200 Commission Meeting
- 1200 Pick up box lunches at Discovery Center. Leave for Portland

Minutes are not final until approved by the EQC

## Environmental Quality Commission Minutes of the Two Hundred and Eighty-Second Meeting

February 10-11, 2000  
Regular Meeting

On February 10-11, 2000, the regular meeting of the Environmental Quality Commission (EQC) was held at the Department of Environmental Quality (DEQ) headquarters, 811 SW Sixth Avenue, Portland, Oregon. The following Environmental Quality Commission members were present:

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

Also present were Larry Knudsen, Assistant Attorney General, Oregon Department of Justice (DOJ); Langdon Marsh, Director, Department of Environmental Quality; and other staff from DEQ.

Note: The Staff reports presented at this meeting, which contain the Department's recommendations, are on file in the Office of the Director, 811 SW Sixth Avenue, Portland, Oregon 97204. Written material submitted at this meeting is made a part of the record and is on file at the above address. These written materials are incorporated in the minutes of the meeting by reference.

Chair Eden called the meeting to order at 1:30 p.m. on Thursday, February 10.

### A. Approval of Minutes

The following corrections were made to the November 18-19, 1999 minutes. On page 2, 1<sup>st</sup> paragraph, the 7<sup>th</sup> line should read "... When asked if hazardous waste is temporarily stored on-site prior to being;" on page 2, paragraph 6, the word "file" should be "pile;" on page 3, 1<sup>st</sup> paragraph, 2<sup>nd</sup> line, the word "contaminates" should be "contaminants;" and a date and topic were added to the end of the last sentence on page 7, paragraph 6. A motion was made by Commissioner Van Vliet to accept these minutes as corrected. Commissioner Malarkey seconded the motion and it was carried with five "yes" votes.

The following correction was made to the December 20, 1999 minutes. On page 4, 2<sup>nd</sup> paragraph, last line, the word "loose" should be "lose." A motion was made by Commissioner Van Vliet to accept the minutes as corrected. Commissioner Bennett seconded the motion and it carried with five "yes" votes.

### B. Approval of Tax Credits

Maggie Vandehey, Tax Credit Coordinator, presented the agenda item and its Addendum. The following applications were removed from consideration by the Commission action at this time.

App. No.	Applicant	Certified Cost	Percentage Allocable	Type	Value
4979	Willamette Industries, Inc.	\$615,050	100%	Air	\$307,525
4570	Willamette Industries, Inc.	\$2,812,715	100%	SW	\$1,406,358
5049	Mitsubishi Silicon America	\$278,399	100%	Air	\$139,200
5100	Mitsubishi Silicon America	\$1,599,606	100%	Water	\$799,803
5101	Mitsubishi Silicon America	\$37,358	100%	Air	\$18,679
5102	Mitsubishi Silicon America	\$95,170	100%	Air	\$47,585
5103	Mitsubishi Silicon America	\$145,824	100%	Air	\$72,912
5104	Mitsubishi Silicon America	\$146,236	100%	Air	\$73,118
5105	Mitsubishi Silicon America	\$128,179	100%	Air	\$64,090

The following applications were presented for approval.

Commission Action	App. No.	Applicant	Certified Cost	Percentage Allocable	Type	Value
Approve	5179	Capitol Recycling & Disposal, Inc.	\$16,882	100%	SW	\$8,441
Approve	5264	Capitol Recycling & Disposal, Inc.	\$171,113	100%	SW	\$85,556
Approve	5267	United Disposal Service, Inc.	\$28,281	100%	SW	\$14,141
Approve	5269	United Disposal Service, Inc.	\$46,603	100%	SW	\$23,301
Approve	5279	Forrest Paint Company	\$34,357	100%	Air	\$17,179
Approve	5281	United Disposal Service, Inc.	\$14,307	100%	SW	\$7,154
Approve	5287	Capitol Recycling & Disposal, Inc.	\$18,106	100%	SW	\$9,053
Approve	5288	Capitol Recycling & Disposal, Inc.	\$52,131	100%	SW	\$26,066
Approve	5290	Capitol Recycling & Disposal, Inc.	\$42,890	100%	SW	\$21,445
Approve	5296	Grabhorn, Inc.	\$300,565	100%	SW	\$150,283
Approve	5308	United Disposal Service, Inc.	\$8,243	100%	SW	\$4,122
Approve	5322	Capitol Recycling & Disposal, Inc.	\$4,420	100%	SW	\$2,210
Approve	5328	United Disposal Service, Inc.	\$9,538	100%	SW	\$4,769
Approve	5338	Capitol Recycling & Disposal, Inc.	\$26,919	100%	SW	\$13,460
Approve	5343	Capitol Recycling & Disposal, Inc.	\$32,744	100%	SW	\$16,372
Approve	5344	United Disposal Service, Inc.	\$24,680	100%	SW	\$12,340
Approve	5347	Weldon's Enterprises, Inc.	\$64,052	100%	Perc	\$32,026
Approve	5349	Environmental Waste Systems,	\$7,273	100%	SW	\$3,636
Approve	5351	United Disposal Service, Inc.	\$8,243	100%	SW	\$4,122
Approve	5352	Keller Drop Box, Inc.	\$6,789	100%	SW	\$3,395
Approve	5354	Steve A. Kenner	\$5,745	100%	Perc	\$2,873

Commissioner Malarkey asked if the recycling tax credits are for new facilities or equipment only, for enlargement of a community that is being served, or for replacement of aging facilities. Staff responded that containers are for new service areas. Other equipment could be replacement equipment (identified under the eligibility section) and if eligible according to law, the percentage allocable section would show the calculations described in the rule. Commissioner Bennett moved to approve applications as presented in Attachment A of Agenda Item B with the exception of the applications pulled from the agenda. Commissioner Malarkey seconded the motion and it carried with five "yes" votes.

Komatsu Silicon America requested an extension of time to file a pollution control tax credit application. The applicant said there were "circumstances beyond the control of the applicant." Ms. Vandehey stated

the Hillsboro facility was not operating at this time. They would like the extension in hopes that they would have this facility up and operating within the next year. The applicant does not know if they will operate the facility in Hillsboro but they would like to have an opportunity to apply should they open the facility. Counsel clarified that the Commission has not had a request such as Komatsu's, and this one falls somewhere in the middle of what had previously been granted. The Commission does not have any kind of a precedence to rely on.

Commissioner Reeve said the phrase "circumstances beyond the control of the applicant" has to guide the Commission's decision in terms of any extension we give or don't give. He stated these circumstances seem to be within their control, and the Commission needed to be faithful to the language of the rule but mindful that faithfulness causes a somewhat difficult position for applicants in these circumstances. Commissioner Reeve made a motion to deny the application. Commissioner Malarkey seconded the motion and the motion passed with four "yes" votes. Commissioner Bennett voted "no."

Commissioner Bennett discussed economic development aspects of this program. Chair Eden stated there are movements to look at repairing some of the tax credit guidelines and regulations that create these ambiguities. She noted the next legislative session is coming and that there may be something we can think about. Commissioner Van Vliet asked if there was any effort in the Department right now to look at the wording of some of our statutes, noting the term "substantial completion" and how we apply it. He asked if we should be more precise in our language. During the 1999 session the Department attempted to correct some of the long-standing ambiguities including the items mentioned. HB 2181 did not move forward intact and those changes did not go forward. The Department will not present legislation regarding tax credits in the 2001 session because the program is scheduled to sunset December 31, 2001. In the definition of "substantial completion" counsel advised that it is a legislative change where there is little latitude. Counsel clarified that the Commission does have the ability to define terms that are ambiguous in the legislation and to "fill in the blanks" where the legislation has left them out. One of the problems with the tax credit statutes is that they are more specific and more directive than most of the environmental statutes the Commission deals with, and they have less room for regulatory policy making. The tax credit statutes have been amended about every two years since 1973; and, as a consequence, they are not always internally consistent. Director Marsh stated the Department has not made any decisions on bills that will be brought forward during the next session.

### **C. Action Item: US Fish and Wildlife Services Request for a Waiver to the Total Dissolved Gas of the Water Quality Standard**

Russell Harding, Columbia River Coordinator, presented two applications for variances to the State's total dissolved gas water quality standard, one from the U.S. Fish and Wildlife Service to spill water at Bonneville Dam and one from the U.S. Army Corps of Engineers to spill water at John Day Dam.

Fred Olney and Marv Yoshinaka presented the U.S. Fish and Wildlife Service's petition to the Commission. The Service was seeking a variance for a ten-day period commencing on March 9, 2000, to spill water at Bonneville Dam to assist outmigrating Spring Creek National Fish Hatchery tule fall chinook smolts. About eight million smolts are due to be released in March, and the purpose of the spill request is to assist these smolts past Bonneville Dam. Biological sampling will be conducted as well as monitoring of redds below the dam to ensure there are no adverse impacts to resident fish, migrating smolts, and eggs and fry in the redds. The fish provide 9 percent of the west coast Vancouver Island fishery and 27 percent of the Oregon/Washington coastal fishery. If it were not for these fish, a disproportionately greater number of threatened and endangered Snake River salmon would be taken.

Raphael Bill from the Confederated Tribes of the Umatilla Indian Reservation, and Olney Patt Junior, Tribal Chief of the Warm Springs Council explained the importance of the Spring Creek National Fish Hatchery fish for ceremonial, religious and subsistence use. Because of their relatively low oil content, these fish are especially important as a source of protein for the winter months. Approving this request will ensure the survival of an additional 150,400 juveniles that will result in 1,650 returning adults.

In its discussion, the Commission found that its failure to act would result in more juveniles proceeding via screened bypass facilities and turbines resulting in greater numbers of mortalities. The balance of risk between elevated dissolved gas levels as a result of spill was more than off-set by improved survival of juveniles, and that resident fish and returning adults would be protected from gas bubble disease. The Commission voiced its frustration at the timing of this petition, and requested that future petitions be received by September 30 for the following year. The Commission understood that while this is very feasible, it would not be possible to determine the exact dates of the hatchery release that early.

A motion was made by Commissioner Van Vliet to approve the variance request by adopting the draft order appended at Appendix B of the staff report. Commissioner Bennett seconded the motion and it carried with five "yes" votes.

Rock Peters and Joe Carroll presented the request from the U.S. Army Corps of Engineers to spill water at John Day dam to test the hydraulic performance of flow deflectors at a number of spill quantities and deflector submergences. Flow deflectors have been installed at all lower Snake and Lower Columbia River Dams prior to 1997 with the exception of The Dalles, Ice Harbor and John Day dams. Deflectors have subsequently been installed at Ice Harbor and John Day. When deflectors were first installed they were designed to abate gas generated as a result of uncontrolled spill. Now they are being used to abate gas for fish passage. The deflectors at Ice harbor have performed very well at submergences between 3 and 11 feet. The John Day deflectors, with their submergences between 11 and 17 feet have not done as well. Other than the submergence, the bathymetry of the stilling basin at the two dams is different, Ice Harbor being substantially more shallow than that at the John Day dam. The first part of the proposed test is to try and separate the influence of submergence and bathymetry on deflector performance. The second part will be to assess the performance of the deflectors at varying submergences. Finally, the test is designed to evaluate the efficacy of installing deflectors on bays 1 and 20 (the two end bays), which are currently un-deflected. The benefits from this test would accrue for future fish migrating in the river. There will be physical and biological monitoring in place to ensure compliance with any variance levels.

The Department recommended a variance to allow 120 percent saturation of total dissolved gas relative to atmospheric pressure in the tailwater of John Day Dam and 115 percent in the forebay of The Dalles Dam. In addition, the Department recommended that for no more than six hours in 24 should saturation exceed 125 percent.

The Commission required the test beginning no later than February 20, 2000, so it would not overlap with the variance granted for the Spring Creek National Fish Hatchery release. Commissioner Van Vliet moved that the request for a variance to the total dissolved gas standard by the U.S. Army Corps of Engineers be approved and that the draft order appended to the staff report at Appendix C be adopted subject to amendment of the commencement date. The motion was seconded by Commissioner Malarkey and it carried with five "yes" votes.

Rock Peters of the U.S. Army Corps of Engineers presented a summary of the Corps' gas abatement program. The program began in 1994 and is a cooperative venture between the Corps' Walla Walla and Portland Districts as well as other interested parties in the region. The program initially consisted of two phases:

1. short term actions that can be completed quickly to abate dissolved gas levels; and
2. longer term strategies.

The installation of flow deflectors at Ice Harbor and John Day Dams was accomplished under the first phase. The second phase involves a five-year study. The study is an alternatives investigation in which alternatives are evaluated relative to their expected outcomes and cost. A final draft report on this is expected in September 2000 with a final by April 2001.

In 1999 the National Marine Fisheries Service proposed a change, and "Fast-Track," was born. The objective here is to move beyond the study to look at spill optimization. The projects in most urgent need for evaluation for optimization are Bonneville, McNary and Lower Monument Dams. Bonneville is



scheduled to be concluded by the end of 2000. The other two will follow in December 2000/January 2001. In evaluating alternative spill patterns, the Corps is balancing fish passage efficiency, gas production and tailwater egress.

The Commission requested the Corps return at a future meeting for a more full briefing. Chair Eden also expressed an interest in viewing a flow deflector at Bonneville Dam later this year.

**F. Action Item: Pollution Control Bonds**

Barrett MacDougall, Budget Analyst, presented this item. The Department explained that in March 2000, \$8 million in bonds would be sold to provide State Match for the State Revolving Fund (SRF), and \$8 million in bonds would be sold to provide financing for the cleanup of Orphan sites. Additionally, it is planned to sell up to \$4 million in SRF Match bonds in the Spring of 2001, if necessary. A motion was made by Commissioner Bennett to approve and adopt the Resolution and findings. Commissioner Van Vliet seconded the motion and it carried with five "yes" votes.

The meeting was recessed at 4:40 p.m. On Friday, February 11, the morning began with an executive session at 8:00 a.m. The Commission discussed current and likely litigation including EZ Drain Company v. State of Oregon, Department of Environmental Quality, Case No. 9809-06683; and Northwest Environmental Advocates and Northwest Environmental Defense Center v. Carol Browner, Administrator, EPA, and Associated Oregon Industries, Northwest Pulp and Paper Association, Oregon Forest Industries Council and State of Oregon, Department of Environmental Quality. The executive session was held pursuant to ORS 192.660(1)(h). The regular meeting was resumed at 9:07 a.m.

**D. Informational Update: Request for Revocation of the Umatilla Chemical Agent Facility Permits**

Wayne C. Thomas, Umatilla Demilitarization Program Administrator, and Sue Oliver, Senior Hazardous Waste Specialist, gave the Commission an update on the status of the Request for Revocation of the permits for the Umatilla Chemical Agent Disposal Facility. The Department is reviewing approximately 135 documents related to the Revocation Request, based on criteria provided in a guidance memorandum from the Department of Justice concerning the legal bases for modification, revocation and/or termination of a hazardous waste permit.

**E. Informational Item: Current Status of the Chemical Stockpile Emergency Preparedness Program (CSEPP)**

The Commission received an update on the current status of the Chemical Stockpile Emergency Preparedness Program (CSEPP) in the communities surrounding the Umatilla Chemical Depot. Lt. Col. Thomas Woloszyn, Umatilla Chemical Depot Commander, briefed the Commission on the readiness status of the Depot's "Chemical Accident/Incident Response" program. Casey Beard, Morrow County Emergency Management Director, and Meg Capps, Umatilla County CSEPP Manager, discussed the readiness status of the off-post emergency response community. Chris Brown, Oregon Emergency Management CSEPP Manager, discussed the accidental siren activation that occurred on December 30, 1999.

**G. Rule Adoption: Heating Oil Tank Technical and Licensing Rule Revisions**

Mary Wahl, Waste Prevention and Management Division Administrator, gave a brief overview of the situation in Oregon regarding heating oil tank cleanups. Mike Kortenhof, Tanks Manager, described pertinent points in the rule packages. Division 177 is modified to include technical standards for voluntarily decommissioning a tank and adding provisions for reports to be certified by licensed service providers. Division 163 contains the requirements for service provider licensing. Service providers now certify that a tank decommissioning or cleanup meets all technical standards and regulations, then that report is filed with DEQ for a \$50 filing fee. DEQ will then inspect the work of service providers instead of reviewing individual reports from tank owners. Service providers must also have errors-and-omissions insurance. As a result of public comment, the insurance amounts were reduced from \$1,000,000 per occurrence and \$2,000,000 aggregate to \$500,000 per occurrence and \$1,000,000 aggregate. To fund

the program, license fees are increased sharply by statute from \$100 every two years to \$750 per year for service providers and from \$25 every two years to \$150 every two years for supervisors. The program worked with service providers during an "early implementation" period to work out procedural issues with the new certification requirements.

Commission members had a few general questions about the program and rules. Laurie McCulloch was asked to respond to a question by Chair Eden about the definition of "confirmed release." Chair Eden requested two changes to the rules: 1) Division 163 - 340-163-0070, change the word "impact" to "affect" where used, and 2) Division 177 - 340-177-0095(4)(a)(A), combine (A) under (a) as there is no (B). A motion to approve the rules with the changes specified was made by Commissioner Reeve. It was seconded by Commissioner Malarkey and carried with five "yes" votes.

#### **H. Rule Adoption: Marine Loading Vapor Control Rules**

Annette Liebe, Acting Air Quality Division Administrator, and Kevin Downing, Air Quality staff, made a presentation on the process used in developing the rule proposal which included a summary of the comments received during the public comment period and the Department's recommendation on the changes suggested. The rule proposal presented called for reducing gasoline vapors year round by at least 95 percent when loading fuel products at any terminal in the Portland area. The rule establishes a performance standard for emission reduction but allows a business decision about which method to use. There are two classes of control that would likely be employed to meet the air quality protection standard, and both systems would rely on collected vapors from the enclosed barge. The unloading process was regulated by controls in place since the late 1970s such that vapors are not released uncontrolled during this phase of the transport and delivery process. After unloading, the barges travel with their tanks enclosed and the remaining vapors stay within the vessel. The ship-to-ship transfers that occurred while either vessel was berthed at a terminal dock would be processed through the terminal's control equipment. Control of the air emissions from these transfers at mid stream is not as feasible. The rule does prohibit this loading activity on Clean Air Action Days and requires record keeping and reporting of the mid-stream transfer activity so its frequency can be tracked and the impact evaluated. The rule does not apply to refueling operations and it focused on gasoline shipments. The bunker fuel used by ocean going vessels is a very heavy grade of petroleum product and is not as volatile as gasoline.

Commissioner Bennett raised a question about whether there were problems in other areas of the state from marine loading from oil terminals, such as Coos Bay and Astoria. Staff responded that this rule was intended to address known air quality issues in the Portland area as highlighted in the Ozone Maintenance Plan. While there are bulk gas terminals in other parts of the state, air quality protection needs did not warrant requiring controls at these locations at this time.

Larry Knudsen, Assistant Attorney General, pointed out a motion for adoption should also reflect that this rule is adopted as a revision to the Oregon State Implementation Plan (SIP). A motion was made by Commissioner Van Vliet to approve the rule for adoption with the revision to the SIP. The motion was seconded by Commissioner Reeve and it carried with five "yes" votes.

**Public Comment:** No citizens testified before the Commission.

#### **I. Temporary Rule Adoption: Rules for Contested Case Hearings Conducted by the Hearing Office Panel (HB 2525)**

Susan Greco, Rules Coordinator with the Director's Office, explained to the Commission that the temporary rules were proposed to align the Department's rules governing contested case hearings with HB 2525 and the Attorney General's Hearing Panel Rules. The Hearing Panel Rules as filed on December 23, 1999, became effective on January 1, 2000, the date the Central Hearing Panel came into being. At this time, several of the Department's rules are considered to be 'procedural rules' and thus are negated by the Hearing Panel Rules. The temporary rulemaking would repeal those rules that are no longer needed by the Department. Under several Hearing Panel Rules, the Department has the authority to adopt its own rules, either limiting the availability of certain procedures, providing for public attendance

at contested case hearings, or outlining the procedures for filing exceptions before the Commission. The rulemaking would also adopt those rules. Additionally, the rulemaking would make some housekeeping changes and adopt the most recent changes to the Model Rules for use in rulemaking.

It was recommended the Commission adopt the rule amendments contained in Attachment A of the staff report as amended by the revisions contained in the memorandum dated February 9, 2000, along with the Statement of Need and Justification. The rules would be in effect for no longer than six months. A motion was made by Commissioner Van Vliet to approve the temporary rule adoption with the stated amendments. Commissioner Malarkey seconded the motion and it passed with five "yes" votes.

#### **J. Informational Item: 1999-2002 Water Quality Standards Review**

Mike Llewelyn, Water Quality Division Administrator; Jan Renfro, Program Policy and Project Assistance Manager, and Debra Sturdevant, Water Quality staff, presented an informational report on the 1999-2002 water quality standards review. The presentation included background information on water quality standards and triennial review. Staff outlined the work planned for this review cycle, and the topics the Department will not be able to address given available resources and the commitments DEQ made during the Endangered Species Act (ESA) consultation in our last standards revision. Topics to be addressed during this standards review cycle include temperature, beneficial use designations, antidegradation, certain toxic pollutants, and some nutrients and pH work. The Department will participate in an Environmental Protection Agency (EPA) Region 10 project to develop federal temperature criteria for the northwest and will consider revising Oregon's temperature standards to adopt those criteria.

A Policy Advisory Committee (PAC) of stakeholders and agency advisors has been assembled to advise the Department through the review process. Technical committees will be formed to help the Department compile and synthesize relevant scientific information and develop scientifically sound standards alternatives for consideration. Staff will return to the EQC several times over the next three years with informational items, work sessions and action items for standards revision and adoption. In addition to working with public advisory committees, the Department will solicit input from the public through workshops and hearings.

#### **K. Action Item: Approval of Hearing Order Regarding Assessment of Civil Penalty in the Matter of Cascade General, Inc., Case No. HW-NWR-97-176**

Larry Knudsen, Assistant Attorney General, Department of Justice, presented the final order for Commission approval. A correction was made in the Conclusions and Reasons portion of the Order to reflect that the Commission had allowed additional evidence but this evidence did not change the conclusion. Commissioner Reeve made a motion to approve the final order and findings of fact with the correction mentioned. The motion was seconded by Commissioner Van Vliet and approved with "yes" votes from Commissioners Van Vliet and Reeve and Chair Eden. Commissioners Malarkey and Bennett abstained.

#### **L. Temporary Rule Adoption: Rulemaking to Extend the Vehicle Inspection Program Hardship Waiver**

Annette Liebe, Acting Air Quality Division Administrator, and Lauri Cook, SIP Coordinator, made a presentation regarding the need to extend the low-income waiver for the enhanced vehicle inspection program. The presentation included a brief summary of the initial low-income waiver rule and its status. The rule proposal presented for consideration by the Commission called for extending the current low-income waiver rule for 180 days to bridge the time gap between the expiration of the initial waiver rule under a pilot program and the adoption of a permanent rule.

Commissioner Reeve noted the sentence on page two of the report indicated there were "negligent" impacts to air quality. Staff responded that the report should read "negligible" impacts. Commissioner Reeve also inquired about the removal of the words "one-time" from the rule. Staff's response was originally the pilot program was developed to evaluate the waiver program based on a two-year period, which is one registration cycle, and therefore it was limited to a single occurrence. A low number of

waivers were granted, and there was an economic need for these applicants. This issue would be further evaluated in the permanent rulemaking. A motion was made by Commissioner Van Vliet to approve the temporary rule for adoption with the correction. It was seconded by Commissioner Reeve and it carried with five "yes" votes.

#### **M. Temporary Rule Adoption: Amendment of the Expiration Date of New or Innovative Technology or Material Approvals Granted by the Director**

Mike Llewelyn, Water Quality Administrator, Ed Woods, Land Applications and Licensing Manager, and Sherman Olson, On-site staff, presented a brief summary of the staff report to the Commission. By extending the expiration date for approvals granted by the Director, the Department would have the opportunity to have the Technical Review Committee review the new innovative technology and materials rules, and make recommendations, as appropriate, for change. The Department would consider the committee's recommendations and could initiate a rulemaking effort to be completed prior to the expiration of the temporary rule.

Representatives for Infiltrator Systems, Inc., Michael Campbell and Todd Winkler, spoke to the Commission regarding this matter. The position of Infiltrator Systems, Inc. initially was not to oppose the temporary rule extending the expiration date. However, because this corporation has put forth the effort to develop a proposal to demonstrate performance of their product, the corporation has changed its position and now does not support the staff recommendation.

After discussion, a motion was made by Commissioner Van Vliet to adopt the proposed temporary rule. The motion was seconded by Commissioner Malarkey and it carried with four "yes" votes. Commissioner Reeve voted no.

#### **N. Commissioners' Reports**

Chair Eden updated the Commission on her meetings regarding the Umatilla Chemical Depot.

#### **O. Director's Report**

In January, Senator Veral Tarno from Coos and Curry Counties held a "town hall" hearing at the Capitol about Oregon Department of Agriculture's (ODA) Areawide Water Quality Management Planning, also known as SB 1010 plans. ODA's proposed Umpqua Basin Plan and rule has met strong opposition from the agricultural community in that area. Over 200 people attended the Salem meeting. Concerns ranged from private property taking to lack of public notification. DEQ testified regarding the relationship of SB 1010 plans to the Total Maximum Daily Load (TMDL) program. ODA Director Phil Ward is following up by speaking with several Healthy Streams Partnership members with positive results. EPA and DEQ continue to participate in settlement discussions with Northwest Environmental Advocates (NWEA) and the National Environmental Defense Council (NEDC) regarding a 1997 lawsuit on Oregon's TMDL program. Settlement discussions have stalled due to complications arising from the re-emergence of a named plaintiff to a separate 1986 Consent Decree related to the TMDL Program.

The Governor's office and DEQ are continuing conversations with EPA, federal, state and tribal natural resource trustees, and the Portland Harbor Group to reach an agreement for the state to manage the Portland Harbor cleanup. This would avoid a federal Superfund listing of Portland Harbor. The Portland Harbor Sediment Investigation Work Plan is nearing completion. DEQ also started upland site discovery work and the potentially responsible party's list has expanded from the original 17 to nearly 35.

The Governor formed the Willamette Restoration Initiative (WRI) to build political consensus for program support and policies to improve and protect the Willamette Basin. DEQ Director Lang Marsh is on the board of directors, and DEQ Western Region Administrator Steve Greenwood was the chair of the WRI Clean Water Workgroup. The workgroup recommendations to the WRI Board at a recent two-day meeting included improving riparian zone management, focusing on non-point sources of pollution, and developing mechanisms for effluent and pollutant trading. The WRI Board will refine recommendations from four strategic workgroups into a draft restoration strategy and workplan. The board will submit a

revised Willamette Restoration Strategy to the Governor's office for legislative consideration in May. There will be several public workshops and hearings about the proposed strategy before finalization in the fall.

Construction of Combined Sewer Overflow (CSO) control facilities for the Columbia Slough is scheduled for completion in December. Control facilities for the Willamette River are in the planning stage. The City has developed a Clean River Plan to address CSOs, storm water, endangered species, water quality, and habitat issues in the lower Willamette and tributary streams in a comprehensive and coordinated way. DEQ has been meeting with city representatives to try to understand the Clean Water Plan and its assumption of a nine-year delay in CSO control.

The New Carissa wreck removal operations were suspended due to extreme weather last October. It is doubtful that refloating the shipwreck is a viable removal method due to further degradation of the shipwrecked structure. The final disposition of the stern will be determined in the spring when the remainder of the stern section will be re-examined by DEQ and the responsible party to determine removal options. The New Carissa Unified Command, made up of representatives of the Coast Guard, DEQ and responsible party, signed its last Decision Memo on February 1. DEQ, representing state interests, accepted the federal closure of the emergency response, but will continue working with the responsible party. State statutes require the responsible party to continue monitoring and removing oil as necessary. State interests also include attractive nuisance and liability concerns and the long-term fate of the stern. The one-year anniversary of the ship's grounding was February 4.

Director Lang Marsh has embarked on a strategic outreach effort to travel around Oregon talking to citizen's groups, neighborhood associations, schools, media, and various influential community members. During these events, the Director talks about the Oregon environment and the work that DEQ is doing as well as takes questions, input, and suggestions from the audience. His speeches highlight three themes: cleaning up rivers and streams; reducing people's exposure to toxics; and getting more community involvement in solving environmental problems. On January 26 and 27, the Director had a successful tour of the Salem and Eugene areas. The Director will do a Central Oregon speaking tour February 14, 15 and 16.

Governor Kitzhaber recently announced his intent to issue an executive order in March to make state government a leader in the fight to sustain our environment and quality of life in the face of a growing population. The order will direct state agencies to make more efficient use of energy and materials.

There being no further business, the meeting was adjourned at 2:47 p.m.

Date: March 27, 2000

**To:** Environmental Quality Commission  
**From:** Langdon Marsh, Director   
**Subject:** Agenda Item B, National Marine Fisheries Service's Request for a Variance to the Total Dissolved Gas Water Quality Standard, EQC Meeting March 31, 2000

**Statement of Purpose**

The National Marine Fisheries Service (NMFS) has petitioned the Commission for a variance to the State's total dissolved gas water quality standard to enable water to be spilled at all four Lower Columbia River dams (McNary, John Day, The Dalles and Bonneville) to assist outmigrating threatened and endangered salmonid smolts. The petition requests a variance from the standard of 110 percent of saturation relative to atmospheric pressure, between April 20, 2000 and August 31, 2000. For this period, NMFS is seeking a total dissolved gas standard of 115 percent saturation as measured in the forebay of each of the dams, and 120 percent saturation as measured in the tailrace.

**Background and Rationale for the Request**

In late 1991 and early 1992, NMFS determined that three species of salmon from the Snake River Basin were endangered or threatened under the Endangered Species Act (ESA). The listed species were sockeye salmon, spring/summer chinook, and fall chinook. In March, 1995, an ESA Section 7 Biological Opinion on the operation of the federal Columbia River Power System was issued. The Biological Opinion established a set of reasonable and prudent alternatives (RPA's) with the objective of improving the operation and configuration of the federal power system to meet a no jeopardy requirement of the ESA, and to fulfill the United States' commitment to uphold Indian treaty rights. The RPA's relative to spill and total dissolved gas are:

1. RPA#2 – Recommends that the U.S. Army Corps of Engineers (COE) spill water at the Snake and Columbia River hydroelectric projects to increase fish passage efficiency (FPE) during the period of spring/summer chinook migration at all projects. The objective of spilling water over a hydroelectric project is achieving a FPE of 80 percent (that is 80 percent of the juvenile migrants pass the project via non-turbine routes, i.e. over project spillways or via bypass systems);

2. RPA#16 – Directs Bonneville Power Administration, Bureau of Reclamation and the COE to participate in the development and implementation of a monitoring and evaluation program to investigate the effects of total dissolved gas saturation;
3. RPA#18 – The COE is directed to participate in the development and implementation of a gas abatement program at all projects using structural modifications.

In May, 1998, NMFS issued a Supplemental Biological Opinion. The Supplemental Biological Opinion was developed in part to address the needs of the newly listed threatened Snake River and Lower Columbia River steelhead, and endangered Upper Columbia River steelhead which were listed in August 1997, and March 1998 respectively. The Supplemental Biological Opinion calls for additional spill on a system-wide basis and an extended spill season.

There are four methods by which downstream migrating salmonids can pass dams. These passage methods are via the turbines, transportation by barge, through the screened fish by-pass system, and over the spillway. The Biological Opinion seeks to pass 80 percent of migrating juveniles either over the spillway or through the screened bypass system. NMFS believes that FPE can be improved by increasing the level of spill. This is one method used by NMFS to try and increase the number of returning adult salmon and steelhead. The Independent Science Advisory Board (ISAB) established by the Northwest Power Planning Council recommended that no single method be used for passing fish by the dams but that multiple methods should be utilized including fish by-pass systems and transportation. Multiple methods are employed in the Columbia River Basin in an attempt to spread risk and increase fish returns.

The purpose of the spill program is to improve the downstream passage of ESA listed stocks of fish by providing a route of passage by the dams that has lower mortality than passage by the turbines. Spilling water for fish passage, however, can generate elevated levels of total dissolved gas that can have detrimental effects on fish. Spill for fish as an alternate passage route and the associated mortality due to total dissolved gas must be balanced against mortality of turbine passage. Estimated survivorship associated with increased levels of spill and total dissolved gas levels is contained in Table 1. These estimates were calculated from the NMFS SIMPAS model used for estimating fish passage and survivorship at the dams.

**Table 1.** Estimated spring chinook project survivals at two different river flows with tailrace TDG capped at two different levels for each of the lower Columbia River dams.

River Flow TDG	% Survivorship			
	250 kcfs		300 kcfs	
	110%	120%	110%	120%
Bonneville	92.9	93.4	92.5	93.0
The Dalles	94.9	97.6	94.7	96.9
John Day	95.0	95.3	94.9	95.2
McNary	96.9	97.4	97.1	97.2

### Summary of 1999 Spill Season

The following summarizes the water quantity and monitoring results from the 1999 migration season. The Commission granted a variance to the total dissolved gas water quality standard for the 1999 season identical to the one sought this year.

#### Water Conditions

The water year was characterized by higher than average flows, with 123 percent of average runoff volume above Lower Granite Dam on the Lower Snake River, and 121 percent of average runoff at The Dalles Dam. The year was characterized by a relatively cool spring that delayed runoff into the early summer.

#### Physical Monitoring of Total Dissolved Gas

Physical monitoring for total dissolved gas levels occurred in the forebay and tailrace of each of the four lower Columbia River dams. Generally, even though it was a high runoff year, the shape of the freshet resulted in a relatively even runoff. The result was that total dissolved gas levels remained generally within the variance limits set by the Commission last year.

Dissolved gas levels in the McNary Dam forebay benefited from the flow deflectors installed at Ice Harbor Dam on the Lower Snake River. These resulted in lower incoming dissolved gas levels, with exceedances of the 115 percent forebay level occurring in late April, late May and early June. Limited powerhouse capacity at McNary Dam, however, resulted in long periods of uncontrolled spill from late April through July.

Forebay monitors at John Day Dam recorded exceedances of the 115 percent level for a total of 12 days at the end of May and beginning of June. The 120 percent level in the John Day tailrace



was exceeded during the spring, but for the remainder of the season, spill was managed to remain within the variance. The result of this was that the 80 percent FPE target was not met at John Day Dam. This was addressed during the John Day spill test that the Commission considered at its February 2000 meeting.

Total dissolved gas levels at The Dalles Dam exceeded the variance limit in the forebay for two days in mid-June. The tailrace, however, exceeded the 120 percent level from late May through mid June.

Bonneville forebay exceeded the variance from April through mid June, however tailrace levels exceeded the 120 percent level on only a few days.

Again in 1999, the majority of spill was uncontrolled, either because the hydraulic capacity of dams was exceeded, or due to lack of electricity market.

#### Biological Monitoring for Gas Bubble Disease

Monitoring of juvenile salmonids was conducted at McNary and Bonneville Dams on the Lower Columbia River. Sampling occurred two days per week with 100 fish of each of the two prevalent species being sampled each day. Fish were examined using a variable magnification (6x to 40x) dissecting scope. The lateral line and unpaired fins were examined for signs of bubbles. Table 2 summarizes the results of the smolt monitoring program conducted on the Lower Snake and Columbia Rivers

**Table 2** 1999 Smolt Monitoring Results

<b>Percentage of Fin Occluded</b>	<b>Numbers of Fish (percent)</b>
1 to 5 percent	118 (0.6)
5 to 25 percent	29 (0.1)
Greater than 25 percent	1 (0.01)
Total Number of Fish Sampled	25,184

These results reflect similar results for previous years. Generally, incidences of gas bubbles increased with increased total dissolved gas levels.

Adult migrants were sampled for signs of gas bubble disease. This is a more difficult procedure, in that it impacts migration time, and may result in adult mortality. As a result, adult monitoring at Bonneville Dam was conducted in conjunction with other research activities. Table 3 summarizes the results of the adult monitoring at Bonneville Dam

Table 3 1999 Migrant Adult Monitoring at Bonneville Dam

Species	# Fish Examined	# Fish with GBT Signs
Chinook	745	0
Steelhead	273	0
Sockeye	184	0

### Gas Bubble Research

Funding levels for research on gas bubble disease has been steadily reduced over the last few years. The emphasis has been shifted to the COE's Gas Abatement Program, which the Commission heard about at its February 2000 meeting. Notwithstanding this, some research was conducted in 1999.

The Columbia River Inter-Tribal Fish Commission continued its research program designed to assess if there is a difference between gas bubble signs detected in fish in dam reservoirs as compared to those in the fish bypass system where smolt monitoring takes place. Of the smolts monitored at the bypass facilities during 1999, 0.5 percent showed signs of gas bubbles, compared to 0.9 percent in the reservoirs. These results do not correlate well with 1998 results in which the reservoir result was the same, but the proportion of fish detected with bubbles in the bypass system was higher. Further analysis is being undertaken on these data.

The second research project continued in 1999 was a study to evaluate the lateral and vertical distribution of migrants in relation to the superstaturated water plume. The general study design was to implant juvenile hatchery steelhead and chinook salmon with pressure-sensitive radio transmitters, release them at Ice Harbor Dam and then track them over the 67.5 kilometers downstream to McNary Dam. A total of 42 juvenile steelhead were released and 30 juvenile chinook. Steelhead were located 793 times, with a median of 19 times per fish, and chinook were located a total of 642 times with a median of 22 times per fish.

Median depths of juvenile steelhead and chinook were from 2.4 to 2.7 meters deep. Total dissolved gas concentrations at these depths were 114 percent. There are, however, flaws in this study, for example, detection varies inversely with depth, so that fish migrating below 12 meters of depth would not be detected.

### **Physical and Biological Monitoring for the 2000 Spill Season**

Physical monitoring in 2000 will be almost identical to that in 1999, and involve the use of the COE's network of fixed monitors in the forebay and tailrace of each dam. Changes in protocols will occur relating to quality assurance and quality control.

Juvenile salmonid monitoring will be conducted by the Smolt Monitoring Program using the same protocols as in 1999. There will be no adult monitoring in 2000. Evidence from the previous six years shows few incidences of bubbles in adult fish at the level of variance being sought here. Additionally, juveniles are more susceptible to gas bubble disease, and if they are being adequately monitored, we have assurance that adults will also be protected. Physical handling of adult fish causes stress and potentially mortality.

### **Past Actions**

The Commission has approved variances to the total dissolved gas standard to facilitate salmonid smolt migration every year since 1994, with appropriate conditions. One of those conditions requires that a report be filed with DEQ each year. In large measure, the requirement for this report dictates timing of the variance request. The spill season does not end until August 31 each year. By the time data is compiled and reviewed for its quality, NMFS is not able to compile the report much before January each year. The other change of note in this regard is that DEQ has a staff member who is able to devote attention to the data and to issues during the spill season. For these reasons, the Department recommends a truncated report for the future reporting the characteristics of the water year, along with in-season observations of exceedances and smolt monitoring results. This should allow more timely submission of requests.

### **Authority of the Commission with Respect to the Issue**

The authority of the Commission to address this issue is contained in Oregon Administrative Rules OAR 340-41-205, 445, 485 and 525(2)(n). A copy of the rule is attached at Appendix A.

At its meeting of February 16, 1995, the Commission modified the administrative rules to enable modifications of the total dissolved gas standard in the Columbia River for the purpose of assisting juvenile in-river salmon migration.

If the Commission is to grant the requested variance, it is required to make the following four findings:

- (i) Failure to act would result in greater harm to salmonid stock survival through in-river migration than would occur by increased spill;

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

The rule also enables the Commission to consider alternative modes of migration, at its discretion.

### **Alternatives and Evaluation**

There are four main methods of salmonid migration past Columbia River dams. These are transportation, turbine passage, screened by-pass passage, and spill. In practice, all four of these modes will be used in 2000 as they have been in the past. None of these passage routes is without risk. While studies on transportation are continuing, preliminary findings of adults straying upon returning to spawning, and temperature concerns at the collector projects pose a risk to fish by this method. Turbine passage has a level of mortality associated with it variously calculated at between 10 and 15 percent. By-pass facilities do not guide all smolts away from the turbines, and there are concerns at temperatures exceeding 68 degrees Fahrenheit in the by-pass structures. Temperatures at these levels are considerably above what is optimal for cold water fisheries. Finally, spill has associated with it the risk of elevated levels of dissolved gas which can result in mortalities from gas bubble disease. Mortalities from spill at the levels requested in the NMFS' request have been calculated at between two and three percent.

The issue before the Commission is one of balancing risk. To not approve the variance to the state's dissolved gas standard will result in more fish migrating via the turbines. In earlier work conducted by the Department, the waiver at the level requested was determined to be a relatively conservative approach which would result in protection of migrating salmonids. At the same time, it was determined that waivers at the level of 125 to 130 percent would pose increased risks to fish. Between 120 and 125 percent, the Department was unsure of the impacts, and elected to recommend that the Commission adopt the more conservative approach, at which the Department believed the risks of elevated dissolved gas were outweighed by the benefits, and that the risks inherent in spill were preferable to the risks inherent in other modes of fish passage. This is supported by the National Research Council's publication, *Upstream: Salmon and Society in the Pacific Northwest*, that recommended risk be spread by facilitating alternative modes of migration. The use of these alternatives is designed to increase survival of outmigrating juvenile

salmonids. Although it appears spill benefits outmigrating juvenile salmonids as compared to turbine passage, there is still a low risk of adverse effects occurring from total dissolved gas. In addition, the Department remains concerned about the effects of gas bubble disease resulting from the spill program on early life stages of salmonids, other anadromous fish, and resident fish.

In relation to the four findings required to be made under the total dissolved gas rule, the following are supported by this petition:

- (i) failure to act will result in more salmonid passage via hydroelectric dam turbines. Estimated mortalities from fish passing through turbines is between 10 and 15 percent. Fish passing over spillways as a result of spill experience 2 to 3 percent mortality. The Commission is, therefore able to make the first finding;
- (ii) the balance of risk of impairment to migrating salmonids, resident fish, and other aquatic life due to elevated dissolved gas levels needs to be balanced against migrating juvenile salmonid mortality from turbine passage. Resident fish and aquatic invertebrates in the Columbia River downstream of Bonneville Dam were monitored by NMFS for signs of gas bubble disease in 1993, 1994, 1995, 1996, 1997, and 1998. There was a low incidence of gas bubble disease (less than one percent) in resident fish examined in 1993 and 1995 while in 1994, 1997, and 1998 none of the fish observed had signs of gas bubble disease. There were no signs of gas bubble disease observed in the aquatic invertebrates examined. Signs of gas bubble disease were prevalent in 1996 but this was a high flow year with large volumes of involuntary spill and total dissolved gas levels above 115 percent in the forebays and 120 percent in the tail races of dams. There is a low incidence of gas bubble disease in migrating juvenile and adult salmonids when the total dissolved gas levels are at or below 115 percent in the dam forebays and 120 percent in the tailraces. The low incidence of gas bubble disease observed has been regarded as a low risk for mortality from gas bubble disease. Total dissolved gas levels of between 130 to 140 percent from involuntary spill, resulted in an increased incidence of gas bubble disease and is regarded as an increased risk of mortality from gas bubble disease. Given the past monitoring of gas bubble disease the levels requested in this petition seem to be a reasonable balance between increased survivorship due to reduced turbine mortality and the risk of mortality from gas bubble disease. The Commission is, therefore able to make the second finding;
- (iii) NMFS has submitted a physical monitoring plan. Physical monitoring will be conducted by the COE at Camas/Washougal, and the Bonneville Dam forebay and in the forebay and tailraces of McNary, John Day, and The Dalles Dams. Hourly data will be available on the COE's Internet World Wide Web pages. Implementation of the physical monitoring plan will ensure that data will exist to determine compliance with the standards for the voluntary spill program. The Commission is, therefore able to make the third finding;

- (iv) NMFS has submitted a biological monitoring plan. Juvenile salmonids will be collected at Bonneville and McNary Dams and examined for signs of gas bubble disease on non-paired fins, eyes, and lateral lines. Therefore, the Commission is able to make the fourth finding.

With these findings, the Commission is able to approve the variation to the total dissolved gas standard as sought by the NMFS.

### **Summary of Public Input Opportunity**

The Department issued a public notice on February 29, 2000. A public hearing was held on March 20, 2000, and the date for receiving written comments ended at 5:00 p.m. on March 24, 2000. No one attended the hearing, and no written comment was received.

### **Conclusions**

The Department has supported the request for a variance at the levels sought again this year, viewing these levels as being conservative when weighing the potential benefits to fish against the potential harm from elevated total dissolved gas levels. The Department continues to support the variance.

### **Intended Future Actions**

The Columbia River appears on DEQ's 303(d) list of waters not meeting standards for total dissolved gas, mostly as a result of uncontrolled spill. The Department will be moving ahead with development of a TMDL for this over the next 12-15 months. The Department will have a representative at the weekly Technical Management Team meetings, at which river operations are decided each week, to ensure adherence to the variance limits.

### **Department Recommendation**

The Department recommends that the Commission grant this petition by adopting the findings contained in the Draft Order attached as Appendix C, subject to implementation of the physical and biological monitoring regime as detailed in the monitoring plan accompanying the NMFS request dated February 7, 2000, and:

- (i) Approve a revised total dissolved gas standard for the Columbia River for the period from midnight on April 10, 2000 to midnight on August 31, 2000;

- (ii) Approve a total dissolved gas standard for the Columbia River of a daily (12 highest hours) average of 115 percent as measured in the forebays of McNary, John Day, The Dalles, and Bonneville Dams and at the Camas/Washougal monitoring stations;
- (iii) Approve a cap on total dissolved gas for the Columbia River during the spill program of 120 percent measured in the tailraces of McNary, John Day, and The Dalles monitoring stations, based on the highest two hours during the 12 highest hourly measurements per calendar day during these times; and
- (iv) Approve a cap on total dissolved gas for the Columbia River during the spill program of 125 percent, based on the highest two hours during the 12 highest hourly measurements per calendar day during these times; and
- (v) Require that if 15 percent of the juvenile fish examined show signs of gas bubble disease in their non-paired fins where more than 25 percent of the surface area of the fin is occluded by gas bubbles, the Director will terminate the variance;
- (vi) Require NMFS to incorporate the following conditions into its program:
  - 1. NMFS must provide written notice to the Department within 24 hours of any violations of the conditions in the variance as it relates to voluntary spill. Such notice shall include actions proposed to reduce total dissolved gas levels or the reason(s) for no action;
  - 2. that NMFS provide a report of the spill program for 2000. The report should be completed by December 31, 2000 and supply information on the levels of total dissolved gas, the fish monitored and incidence and severity of gas bubble disease.

### **Attachments**

- Appendix A: Oregon Administrative Rule Relating to the Total Dissolved Gas Standard.
- Appendix B: Map of Columbia River Showing Locations of Federal Hydropower Projects.
- Appendix C: Draft Order Approving the National Marine Fisheries Service's Request for a Variance.


### **Reference Documents (available upon request)**

National Marine Fisheries Service (2000) *1999 Annual Report to the Oregon Department of Environmental Quality*, February 25, 2000.

Approved:

Section:

Division:



Report Prepared By: Russell Harding

Phone: (503) 229-5284

Date Prepared: March 24, 2000





**Oregon Administrative Rule, OAR 340-41-205, 445, 485 and 525 (2)(n)**

- (A) The concentration of total dissolved gas relative to atmospheric pressure at the point of sample collection shall not exceed 110 percent of saturation, except when stream flow exceeds the ten-year, seven-day average flood. However, for hatchery receiving waters and waters of less than two feet in depth, the concentration of total dissolved gas relative to atmospheric pressure at the point of sample collection shall not exceed 105 percent of saturation;
- (B) The Commission may modify the total dissolved gas criteria in the Columbia River for the purpose of allowing increased spill for salmonid migration. The Commission must find that:
- (i) Failure to act would result in greater harm to salmonid stock survival through in-river migration than would occur by increased spill;
  - (ii) The modified total dissolved gas criteria associated with the increased spill provides a reasonable balance of the risk of impairment due to elevated total dissolved gas to both resident biological communities and other migrating fish and to migrating adult and juvenile salmonids when compared to other options for in-river migration of salmon;
  - (iii) Adequate data will exist to determine compliance with the standards; and
  - (iv) Biological monitoring is occurring to document that the migratory salmonid and resident biological communities are being protected.
- (C) The Commission will give public notice and notify all known interested parties and will make provision for opportunity to be heard and comment on the evidence presented by others, except that the Director may modify the total dissolved gas criteria for emergencies for a period not exceeding 48 hours;
- (D) The Commission may, at its discretion, consider alternative modes of migration.
- 15

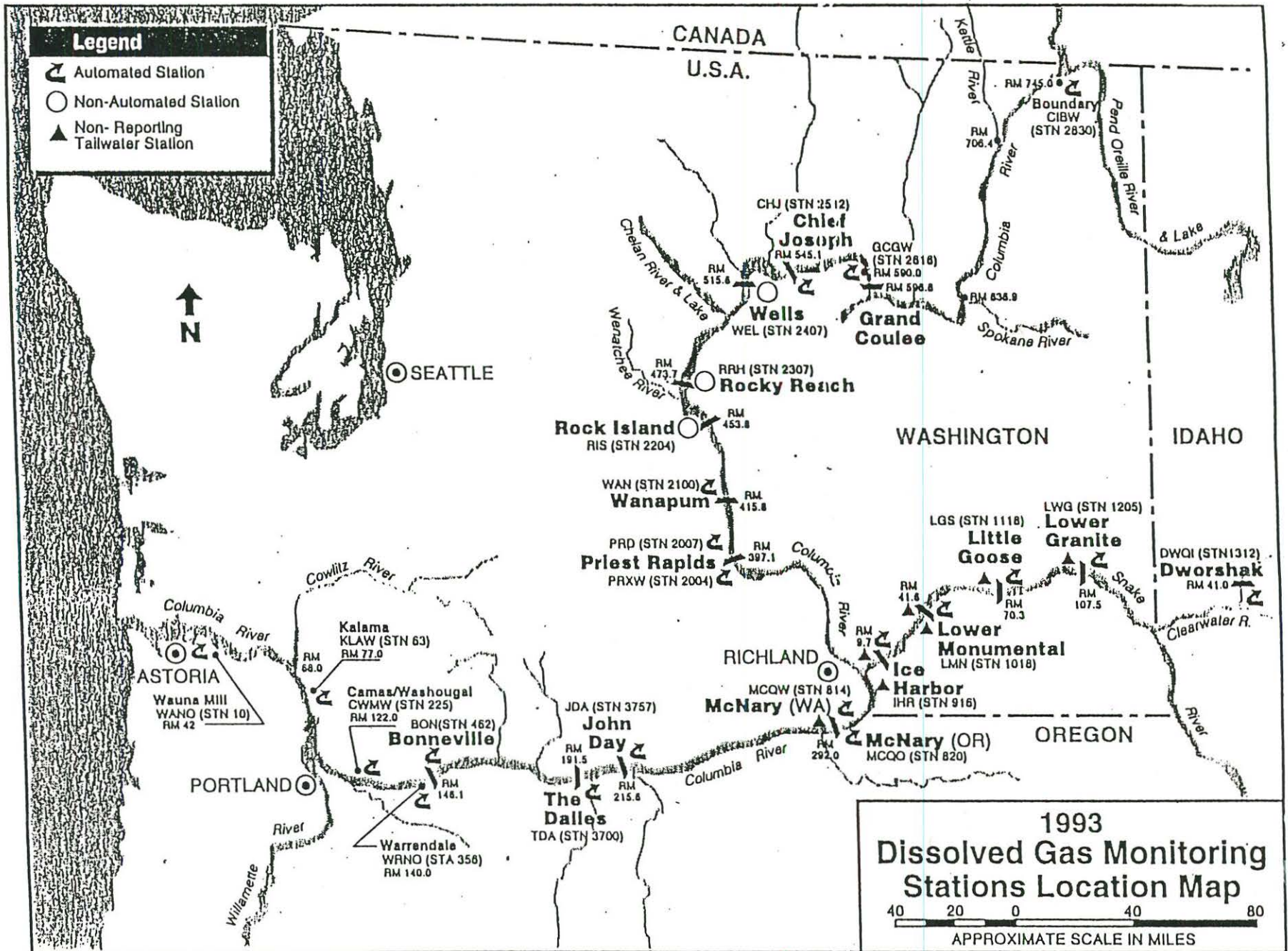


Figure 1. Locations of Dissolved Gas Monitoring Stations.

**Draft Order Approving the National Marine Fisheries Service's Request**

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION

In the matter of the National Marine Fisheries Service's request to spill water to assist out-migrating threatened and endangered salmon smolts ( ( ORDER ( (

WHEREAS the Department of Environmental Quality received a request from the National Marine Fisheries Service dated February 7, 2000, to adjust the Total Dissolved Gas Standard as necessary to spill water over McNary, John Day, The Dalles and Bonneville Dams on the Lower Columbia River to assist out-migrating threatened and endangered salmon smolts, for the period from April 10, 2000 to August 31, 2000; and

WHEREAS the Department of Environmental Quality received a report from the National Marine Fisheries Service relating to spill at the four lower Columbia River Federal Hidropower projects during 1999, on February 26, 2000; and

WHEREAS the public was notified of the request on February 29, 2000, and given the opportunity to provide testimony at 3:00 p.m. on March 20, 2000, and the opportunity to provide written comments until 5:00 p.m. on March 24, 2000; and

WHEREAS the Environmental Quality Commission met on March 31, 2000 and considered the request, justification and public comment.

THEREFORE the Environmental Quality Commission orders as follows:

1. Acting under OAR 340-41-205, 445, 485 and 525(2)(n), the Commission finds that:
  - (i) failure to act will result in more salmonid passage via hydroelectric dam turbines. Estimated mortalities from fish passing through turbines is between 10 and 15 percent. Fish passing over spillways as a result of spill experience 2 to 3 percent mortality;

- (ii) the balance of risk of impairment to migrating salmonids, resident fish, and other aquatic life due to elevated dissolved gas levels needs to be balanced against migrating juvenile

salmonid mortality from turbine passage. Resident fish and aquatic invertebrates in the Columbia River downstream of Bonneville Dam were monitored by NMFS for signs of gas bubble disease in 1993, 1994, 1995, 1996, 1997, and 1998. There was a low incidence of gas bubble disease (less than one percent) in resident fish examined in 1993 and 1995 while in 1994, 1997, and 1998 none of the fish observed had signs of gas bubble disease. There were no signs of gas bubble disease observed in the aquatic invertebrates examined. Signs of gas bubble disease were prevalent in 1996 but this was a high flow year with large volumes of involuntary spill and total dissolved gas levels above 115 percent in the forebays and 120 percent in the tail races of dams. There is a low incidence of gas bubble disease in migrating juvenile and adult salmonids when the total dissolved gas levels are at or below 115 percent in the dam forebays and 120 percent in the tailraces. The low incidence of gas bubble disease observed has been regarded as a low risk for mortality from gas bubble disease. Total dissolved gas levels of between 130 to 140 percent from involuntary spill, resulted in an increased incidence of gas bubble disease and is regarded as an increased risk of mortality from gas bubble disease. Given the past monitoring of gas bubble disease the levels requested in this petition seem to be a reasonable balance between increased survivorship due to reduced turbine mortality and the risk of mortality from gas bubble disease;

- (iii) NMFS has submitted a detailed physical monitoring plan. Physical monitoring will be conducted by the Army Corps of Engineers at Camas/Washougal, and the Bonneville Dam forebay and in the forebay and tailraces of McNary, John Day, and The Dalles Dams. Hourly data will be available on the COE's Internet World Wide Web pages. Implementation of the physical monitoring plan will ensure that data will exist to determine compliance with the standards for the voluntary spill program. The Commission is, therefore able to make the third finding.
- (iv) NMFS has submitted a biological monitoring plan. Juvenile salmonids will be collected at Bonneville and McNary Dams and examined for signs of gas bubble disease on non-paired fins, eyes, and lateral lines;

2. The Environmental Quality Commission approves a modification to the Total Dissolved Gas standard for spill over McNary, John Day, The Dalles and Bonneville Dams on the Lower Columbia River, subject to the following conditions:

- (i) Approve a revised total dissolved gas standard for the Columbia River for the period from midnight on April 10, 2000 to midnight on August 31, 2000;
- (ii) Approve a total dissolved gas standard for the Columbia River of a daily (12 highest hours) average of 115 percent as measured in the forebays of McNary, John Day, The Dalles, and Bonneville Dams and at the Camas/Washougal monitoring stations;
- (iii) Approve a cap on total dissolved gas for the Columbia River during the spill program of 120 percent measured in the tailraces of McNary, John Day, and The Dalles monitoring stations, based on the highest two hours during the 12 highest hourly measurements per calendar day during these times; and
- (iv) Approve a cap on total dissolved gas for the Columbia River during the spill program of 125 percent, based on the highest two hours during the 12 highest hourly measurements per calendar day during these times; and
- (v) Require that if 15 percent of the juvenile fish examined show signs of gas bubble disease in their non-paired fins where more than 25 percent of the surface area of the fin is occluded by gas bubbles, the Director will terminate the variance;
- (vi) Require NMFS to incorporate the following conditions into its program:
  - 1. That NMFS must provide written notice to the Department within 24 hours of any violations of the conditions in the variance as it relates to voluntary spill. Such notice shall include actions proposed to reduce TDG levels or the reason(s) for no action;
  - 2. That NMFS provide a report of the spill program for 2000. The report should be completed by December 31, 2000 and supply information on the levels of total dissolved gas, the fish monitored and incidence and severity of gas bubble disease.

Dated: \_\_\_\_\_

ON BEHALF OF THE COMMISSION

\_\_\_\_\_  
Director

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State of Oregon  
Department of Environmental Quality

Memorandum

**To:** Environmental Quality Commission

**Date:** March 16, 2000

**From:** Langdon Marsh  
Director



**Subject:** Legislative Preparation

Attached are draft legislative concepts that are being considered for presentation to the 2001 Legislature. The Department is discussing the draft concepts with other state agencies and interested parties. No decisions have been made whether to proceed with the listed concepts.

Agencies must submit legislative concepts to the Department of Administrative Services (DAS) by April 14. During the period April 14 to May 31, DAS and the Governor's office will review, and then approve or deny, proposed legislative concepts. DAS also ensures that legislative concepts are coordinated with the budget process.

Once concepts are reviewed and approved by the Governor's policy staff, they are forwarded to Legislative Counsel for drafting. Legislative Counsel must receive bills by May 31. July 1 is the last date for agencies to submit additional information to Legislative Counsel. All bill drafting stops on December 1, and bills are due to DAS for final review and approval on December 2.

The Governor's office will pre-session file all approved agency bills. The last date for the Governor to pre-session file bills is December 15. The Legislative session will begin on January 8, 2001.

The Department will continue working with agencies and stakeholders to refine the proposals. Our goal is to gain consensus on each of these concepts before the legislative session begins.







**Draft DEQ Legislative Concepts**  
**3/16/00**

**These concepts are preliminary. No decisions have been made whether to proceed with any of these concepts.**

- 1. Willamette River Restoration and Conservation.** Establishes state goals: The Willamette will be healthy for swimming and recreation, drinkable, and will support healthy native fish runs. Establishes incentives and requirements to achieve goals through better management of urban impacts on water quality.
- 2. Environmental Cleanup Financing and Structure.** This is a placeholder bill that can be used to propose any changes recommended by the Environmental Cleanup Financing Committee chaired by Gail Achterman.
- 3. Amend statute for Clean Water State Revolving Fund to allow loans for non-point source and salmon protection.** The current statute restricts loans to publicly owned projects, mainly municipal sewage treatment plants. Annual federal funds are about \$15 million, matched by about \$3 million from the sale of state general obligation bonds.
- 4. Oregon Spill Preparedness**
  - a. **Maritime Spills.** Proposes recommendations by the New Carissa Review Committee, including a new law creating vessel owner liability for removal of wrecked vessels; an increased amount of financial assurance for vessels in Oregon waters; and increased state capacity to respond to spills of oil or hazardous materials.
  - b. **Pipeline Spills.** The pipeline explosion in Bellingham Washington demonstrated the danger of petroleum pipelines. Provide Oregon with jurisdiction to ensure there are no gaps in pipeline spill emergency planning and preparedness.
  - c. **Facility Spills.** Facilities that store very large bulk quantities of chemicals would be required to evaluate spill preparedness and maintain records of their evaluation.
- 5. Recycling and Waste Reduction.** This is a placeholder for DEQ's Waste Policy Leadership Group, a broad-based policy advisory group considering ways to improve and enhance waste reduction and recycling in Oregon. So far, discussion has addressed a long-term vision for the state (for example, minimal or zero waste) and regulatory and non-regulatory measures that begin moving the state toward this vision.
- 6. Underground Storage Tank Leak Prevention.** The 1999 Legislature increased the fee on commercial gasoline storage tanks from \$35 to \$60 per year. This increase sunsets in 2001. Underground storage tanks have been upgraded to comply with federal law, but need ongoing maintenance and inspection to ensure that leak prevention systems work. This concept would establish per tank fees at the level needed to support inspection, technical

assistance and enforcement to protect the public and private investment in new equipment, and prevent another round of leaks and expensive cleanups.

7. **Homeowner Heating Oil Tanks.** This is a placeholder for potential fixes that might be identified for HB 3107, passed in 1999. The new law moves DEQ from overseeing heating oil tank cleanups and decommissioning to certifying and auditing contractors' cleanups and decommissioning. DEQ is working with contractors, the real estate industry and oil heat industry to determine whether any changes are needed to make this new law work better.
8. **Dry Cleaner Waste Prevention and Cleanup.** The 1995 Legislature created a program to clean up and prevent contamination from dry cleaning facilities. The law created an insurance pool to pay cleanup costs, but the Department of Revenue and others have raised concerns about the fee structure that creates this insurance pool. Without revision, the fee structure will not support the cleanups that facility owners are counting on. DEQ is working with the dry cleaning industry to determine whether to propose changes to the law.
9. **Raise statutory amount of DEQ revolving fund.** The Revolving Fund is used for DEQ payroll correction checks, emergency pay advances, final pay checks, etc. Statute currently limits this fund to \$10,000, creating inefficiencies in managing the fund.

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

To: Environmental Quality Commission  
From: Langdon Marsh  
RE: Director's Report

Date: March 27, 2000

**Ross Island**

Most of the field work for Ross Island's Phase I investigation and the Port's assessment of confined disposal cells and has been completed and DEQ is currently evaluating the data draft report due in mid-May. A draft report on the Port's assessment is due in early July. Investigation of the disposition of the breach material has revealed that material removed from the Port's confined disposal cell in 1998 appears to be present in Ross Island's settling pond. Long-term management of this material is currently being evaluated.

Agencies involved in the environmental evaluation of activities at Ross Island have been meeting periodically to discuss common issues and coordinate reviews. These agencies include Oregon Department of Fish and Wildlife, U.S. Fish and Wildlife, National Marine Fisheries Service, DEQ, Division of State Lands, U.S. Army Corps of Engineers, City of Portland, and the Environmental Protection Agency.

**The Environmental Cleanup Advisory Committee**

The Environmental Cleanup Advisory Committee met this month to review the draft guidelines DEQ is developing for Alternative Dispute Resolution (ADR). These guidelines allow for ADR for No Further Action determinations in the Independent Cleanup Pathway. The Environmental Cleanup Advisory Committee was supportive of DEQ's efforts and will help the agency evaluate the success of ADR in the future. Their next meeting is scheduled for April 12 and will primarily involve a report on the DEQ Cleanup Program Customer Survey.

The Environmental Cleanup Finance Committee met on March 15 to review their charter and a draft Request for Proposals (RFP.) This committee will examine the financing of environmental cleanups and look for opportunities for improvement. The committee members have expertise in economics, environmental law, and banking, and will be supported by DEQ staff and a contractor. Their next scheduled meeting is April 27.

**City of Portland Combined Sewer Overflows (CSOs)**

DEQ has been meeting with City of Portland representatives to understand "The Clean River Plan" and its proposed nine-year extension for completion of the Portland's CSO control program. DEQ has not been convinced to support an extension and we sent a letter explaining DEQ's position to the City of Portland.

### **Portland Harbor**

During the last month, the Remedial Investigation and Feasibility Study (RI/FS) work plan for Portland Harbor was out for comment from the members of the Technical Exchange Working Group and the Stakeholder Advisory Group. DEQ received numerous comments on all aspects of the plan. DEQ is evaluating and responding to comments and plan to have a new draft prepared by the middle of April.

March 31 is the date EPA has indicated they will make a decision on whether to list Portland Harbor as a Superfund site or defer the environmental cleanup of Portland Harbor to DEQ. DEQ has put together a documentation package that shows our progress towards meeting EPA criteria for state deferral, including information on Tribal interactions, community outreach plan, enforcement plan, and RI/FS work plan. Mary Wahl, DEQ staff and Langdon Marsh met with Chuck Clarke on March 24 in Seattle to discuss the progress the state has made towards deferral.

### **Willamette Restoration Initiative (WRI)**

The WRI group is discussing its preliminary findings and recommendations with various interests, and will make final revisions to its draft recommendations to protect and restore water quality. They plan to release their proposed recommendations later this spring for public review and comment.

The following strategies being discussed are:

- Reducing erosion and sediments from urban development, agriculture, and forestry
- Reducing fertilizers and pesticides entering the water from both rural and urban sources
- Increasing stream flows during low flow periods
- Reducing point source pollution
- Monitoring and reporting of potential health impacts from consumption and recreation