


State of Oregon
Department of Environmental Quality

Memorandum

Date: Feb. 14, 2012

To: Environmental Quality Commission

From: Dick Pedersen, Director 

Subject: Agenda item H, Informational item: Director's dialogue
Feb. 16-17, 2012, EQC meeting

2012 update on the 2011 Annual Report on Columbia River Total Dissolved Gas and Spill for Fish Passage

This is an informational summary about the total dissolved gas levels during the 2011 fish passage spill season at the lower four Columbia River dams, that the commission requires as part of the June 2010 total dissolved gas waiver issued to the federal government and the 2002 total dissolved gas TMDL. The dams affected are Bonneville, The Dalles, John Day and McNary federal hydropower dams on the mainstem Columbia River. DEQ received the 2011 total dissolved gas report from the Army Corps of Engineers Dec. 30, 2011.

The total dissolved gas waiver provides a balance between increased fish survivorship from fish passage spill and increased gas bubble trauma from increased total dissolved gas levels due to spill at the dams. The waiver applies only to the fish passage spill period of April 1 to Aug. 31.

The total dissolved gas standard is 110 percent. The waiver allows for 120 percent in the tailwater, the area downstream of the spilling dam, for the purpose of endangered species fish passage spill. In 2011, Columbia River flows were 117 percent of average, compared to 78 percent in 2010. This increase in flows resulted in 32 days of high flows above the 7Q10¹ when the waiver criterion was not applicable due to flood flow conditions on the Columbia River between May and June.

In 2011, 27 percent, or 164 out of 616, of the total days in the fish passage spill season exceeded the waiver limit. In 2010, only nine percent, or 50 out of 576, days exceeded the waiver limits. The 2011 exceedances were due to several factors:

- The Corps' uncertainty when applying fish passage spill guidance criteria at the dams, such as not properly accounting for runoff patterns from watersheds, water travel time, degassing of total dissolved gas, water temperature effects and spill gate patterns,
- A malfunctioning total dissolved gas monitoring gauge at Bonneville Dam due to destruction from high flows, and
- High runoff flows and flood control operations.

¹ The average peak annual flow for 7 consecutive days that has a recurrence interval of 10 years, defined in the 2002 TDG TMDL.

The Corps' goal is to meet the total dissolved gas waiver limit when implementing the fish passage spill program. The Corps continues to make structural and operational modifications to reduce the total dissolved gas during fish passage spill, such as installing a spillway wall at The Dalles dam.

The Fish Passage Center conducted biological monitoring of juvenile salmon and trout for gas bubble trauma at the Bonneville and McNary dams two days per week for the duration of the fish passage spill period. The commission-issued total dissolved gas waiver states that the fish passage spill program shall be halted if either 15 percent of the fish examined show signs of gas bubble trauma or if five percent of the fish examined have signs of gas bubble trauma over 25 percent of their surface area. There were 7,429 juvenile salmonids examined, and 41 individuals, or 0.6 percent, had signs of gas bubble trauma with less than 25 percent of their surface area affected. In 2010, only one salmonid, or less than 0.1 percent, of the fish examined exhibited gas bubble trauma.

Although the total dissolved has levels exceeded the waiver limit for a portion of the time, the biological monitoring indicated a low risk to out-migrating salmonids. When total dissolved gas did exceed the waiver limit, the Corps reduced the amount of fish passage spill in order to reduce the total dissolved gas levels in the river. DEQ will continue to work with the Corps to reduce the number of waiver exceedances during the fish passage spill season in 2012 and until the waiver expires Aug. 31, 2014.

Human Health Water Quality Standards for toxic pollutants implementation update

Since EPA's approval of the standard last October, we've accomplished the following:

Guidance documents - DEQ finalized an Internal Management Directive for variances Feb. 6. DEQ anticipates completing the Reasonable Potential IMD Guidance, which includes guidance on use of intake credits, this week. On the docket are internal management directives for site-specific background pollutant criterion and development of implementation-ready TMDLs by spring this year. The implementation-ready TMDL directive will incorporate watershed-based planning methods.

Training - DEQ participated in an ACWA-sponsored training in January and will participate in the second ACWA workshop next week. DEQ is planning to work with industrial permit holders to ensure their training needs are met, and will train staff this spring on new directives and compliance tools.

Variance template - During the rulemaking, DEQ committed to assisting permit holder needing variances. DEQ has not yet received a request to conduct a pilot variance. This may be due to lack of existing data to conduct a reasonable potential analysis, or that a facility's permit is not up for renewal at this time. As an alternative to a variance pilot, DEQ will consult with stakeholders to assess the need for, and develop, a template to guide permit holders through the variance process.

Pesticides permit and its implications for forestry in Oregon

DEQ has been working with the Oregon Department of Agriculture to implement a new pesticide general permit, and the two agencies have focused their outreach and communications efforts mostly on the agricultural community. Forest industry sources and advocacy groups recently raised concerns about the permit's relationship to and effects on forestry operations. DEQ and ODA are working with the Oregon Forest Industries Council, Oregonians for Food and Shelter, and Oregon Nursery Association to understand their concerns and resolve any frustrations or other issues. DEQ and ODA are also working with the Oregon Department of Forestry to develop guidance to address how the permit affects various forestry activities, and will ask key forestry stakeholders to review the draft guidance. Once the agencies finalize the guidance, it will be shared with the forestry community as appropriate and outreach meetings will continue.

On January 17, Oregonians for Foods and Shelter, the Oregon Nursery Association and Oregon Forest Industries Council held a meeting for their stakeholders with ODA, ODF and DEQ present. Agency staff provided a brief overview of the pesticide permit requirements and then held a question and answer session. Approximately 35 people attended this first meeting. The group will meet again in February to address questions raised at the first meeting that needed additional research.

Klamath Falls air quality updates

DEQ has some good news to share about Klamath Falls. DEQ staff members have been working with Klamath County Environmental Health to address the county's current violations of the PM_{2.5} fine particulate health standard. DEQ and the county formed an advisory committee, which has been meeting for a year and is slated to finish its work this March.

As with past efforts in Klamath Falls for PM₁₀, DEQ must submit a plan to EPA showing how the area will come into compliance with the PM_{2.5} health standard as soon as possible. The good news is that DEQ's analysis shows Klamath Falls will be in compliance within the next two years. The reason include a successful woodstove change-out program implemented over the last few years, attainment strategies approved by Klamath County in 2007, and the suite of emission reduction strategies currently being considered by the committee. Not surprisingly, the main strategies focus on reducing pollution from residential wood burning, but the new attainment plan will also address motor vehicle emissions and growth management for new or expanding industrial sources. The plan focuses public health protection. The county is also motivated to remove the stigma of nonattainment for both public health and economic reasons. The plan will come to you for adoption later this year, after which DEQ will submit it to EPA for approval.

For DEQ, the next steps are:

- Finalize the strategies prepared by the advisory committee
- Develop a plan to bring Klamath Falls into attainment by 2014 with federal air quality health standards for PM_{2.5} after considering input from the Klamath Falls Air Quality Advisory Committee
- Prepare proposed rules
- Work with Klamath County Government to incorporate appropriate strategies into the county's Clean Air Ordinance

- Start the rulemaking process and hold at least one public hearing
- Bring final rules to the Environmental Quality Commission for potential adoption in December 2012.

Mercury emissions reductions at Ash Grove Cement in Durkee

In 2006, a DEQ air quality engineer read in the Oregonian that Ash Grove Cement in Durkee was the highest generator of mercury emissions in Oregon. The locally-sourced raw material for the cement had high levels of naturally-occurring mercury and was the source of mercury emissions from the plant. This prompted the DEQ engineer to review emissions testing data and reporting records for the plant.

Ash Grove Cement conducted comprehensive emissions testing to better quantify and characterize the mercury emissions from their plant. The plant was emitting about 2700 pounds of mercury each year. The Ash Grove Cement-Durkee plant was the largest source of mercury emissions in Oregon; it was also one of the largest emitters in the country.

In early 2007, Ash Grove Cement voluntarily researched ways to reduce mercury emissions. The company evaluated several control configurations and monitoring technologies during a six-week pilot study. Later in 2007, DEQ organized a Citizen's Advisory Committee to discuss mercury emissions from the plant and to agree on a path forward to address these emissions. The committee decided, and Ash Grove agreed, to install an activated carbon injection system at the facility to reduce mercury emissions.

The committee's input was used to draft a Mutual Agreement and Order that required Ash Grove to install the carbon injection system and reduce mercury emissions by at least 75 percent by 2012. The order was signed in July 2008.

Ash Grove Cement completed construction of the mercury controls in July 2010. Within six months, Ash Grove Cement was able to achieve an 89 percent reduction in mercury, exceeding removal expectations and minimum order requirements. During 2011, the removal efficiencies averaged 95 percent with some months as high as 98 percent removal.

In August 2010, EPA issued a NESHAP for cement plants that established a mercury emission limit of 55 pounds per million tons of clinker. This roughly equates to 98 percent removal efficiency at the Durkee plant. The NESHAP requires Ash Grove to comply with this new standard by September 2013. These recent results from the mercury control system at Ash Grove Cement offer the company some optimism that they may be able to comply with the new standard. However, the margin of compliance is slim. The company requested an extension of the NESHAP compliance date in order to better optimize performance. In accordance with the regulations, DEQ granted a one-year extension for a September 2014 compliance date.

New complaints helpdesk

DEQ launched a new environmental complaints helpdesk last November that includes a toll-free hotline, 1-888-997-7888, a new online complaint submittal form and a Sharepoint-based database. Oregonians can report environmental problems or violations directly to a complaint specialist day or night, seven days a week, leaving a message during non-business hours. They

can also submit all the details immediately online. DEQ staff return calls within two working hours and contact the person making the complaint within two working days with an update on how DEQ is addressing the complaint.

All DEQ staff have desktop access to full complaint data and case status and can much more efficiently answer questions and direct callers. We revamped the web pages and issued a news release about the system last month. DEQ is also investigating the use of a mobile application for Oregonians to submit complaints real-time on smart phones.

The new database allows DEQ to efficiently track and report complaint case status. Here are a few highlights:

- DEQ received 250 pollution reports in December and 297 in January.
- Fifty-six percent of the complaints were related to air quality, mainly about smoke, illegal burning or odors.
- Forty-seven percent of the complaints related to sites in DEQ's Northwest Region, primarily Multnomah and Washington Counties.
- Fifty-five percent of the complaints received have been investigated and closed within one week.

In the past, DEQ received about 3,000 calls a year about environmental problems. We project that this number will increase in 2012 as Oregonians use this new, and much easier, system.

ESCO update

With the Good Neighbor Agreement among ESCO, the NW District Association, Neighbors for Clean Air and the Northwest Environmental Defense Center signed in November, DEQ is moving ahead with the renewal of ESCO's Title V permit. DEQ held a public comment period December 2011 to Feb. 1, 2012, with a public hearing January 24. Approximately 20 people attended the hearing, and two people provided verbal comments. DEQ will evaluate input from the public and may modify the final permit as a result. EPA has indicated that they do not intend to review the permit due to the maturity of Oregon's Title V program. The permit is valid for five years and the Good Neighbor Agreement will also be reviewed at the conclusion of the permit cycle.

Blue Heron Paper Company/ Willamette Falls facility updates

The Blue Heron Paper Company ceased operations in 2011. Metro, the Portland metropolitan area regional government, expressed interest in submitting a bid for the company's facility on 23 acres in Oregon City at Willamette Falls. Metro did not submit a formal bid for the site by last year's Dec. 14 deadline but did submit a nonbinding letter of intent stating that it is interested in buying the property. Water Environment Services did bid on a second company property in West Linn, and is currently in the due diligence phase of the purchase process. DEQ is working to determine the best path forward regarding the permit transfer request, and is in communication with Water Environment Services to develop a schedule for next steps. DEQ will work with Metro or any other successful bidders on the information required during the due diligence period for the property in Oregon City. DEQ is also working with NRI International, the current property manager, to ensure it conducts proper environmental activities at the former mill sites.

Portland Harbor update

Portland Harbor cleanup activities have been in the news recently, mostly due to an industry-funded study that stated there might be minimal human health benefits from the cleanup of contaminated sediments that could cost between \$445 million and \$2.2 billion. The wide band of cost estimates represents as little as three percent of the contaminated sediments being removed to up to 16 percent of the contaminated sediments removed from the 10-mile stretch of industrial waterfront EPA designed as a Superfund site in 2001. EPA disputes the findings and the numbers cited in the industry study.

DEQ remains committed to cleaning up this site, in cooperation with EPA and the businesses responsible for the site contamination.

States and auto manufacturers renegotiate agreement on electric vehicles

In late January, the California Air Resources Board adopted a suite of regulations to update motor vehicle and fuel standards. Because Oregon has opted in to the California low emission vehicle program, these rules will apply in Oregon as well. One part of the rule, called LEV-3, will reduce smog-forming emissions by 75 percent and significantly reduce greenhouse gas emission from 2015 to 2025. The greenhouse gas standard is equivalent to 54.5 miles per gallon for the average passenger vehicle by 2025. CARB has worked closely with EPA to align the rules with national standards, and EPA is expected to adopt comparable federal requirements later this year.

An important part of the CARB rules that will not be included in the federal program is an update to the zero emission vehicle sales mandates, called ZEV 2.0. CARB staff proposed to significantly expand the requirement of sales for zero-emission vehicles, such as battery electric and fuel cell vehicles, and transitional vehicles, such as plug-in hybrids. The expanded rules would require that one of every seven new cars sold in 2025 be zero-emission or plug-in hybrid. The proposal includes special provisions for Oregon and nine other states that opted into the zero emission vehicle program, based on an agreement reached between auto makers and the opt-in states during January. Under the agreement, manufacturers could slowly phase-in the requirements in the opt-in states and California in exchange for supplying a firm number of electric cars in 2016. The manufacturers are required to introduce these same kinds of vehicles by 2018, so this provision would bring the air quality improvements and reductions to the opt-in states two years sooner than previous agreements. The agreement allows automakers to pool their compliance obligations in the west and eastern parts of the country, and to trade between the two regions at a 30 percent premium – for example, if a manufacturer is required to sell 100 cars in Oregon they could sell 130 cars in Massachusetts, or another eastern opt-in state, in lieu of Oregon's 100, or vice versa. This allows automakers to sell electric vehicles where there is demand, while creating a strong incentive to provide vehicles in each region of the country.

EPA issues 2010 Toxic Release Inventory information

On Jan. 5, EPA issued the Toxic Release Inventory, which contains information about releases of toxic substances into the air, land and water. Nationally, EPA reports that total releases in 2010 were higher than in 2009 and 2008, but lower than in 2007 and previous years. Total releases into the air decreased six percent since 2009, while releases into surface water increased nine

percent and releases into land increased 28 percent since 2009. Much of the increase in 2010 is the result of changes in the metal mining sector.

In Oregon, 271 facilities reported a total of 18 million pounds of toxic chemical releases for 2010, an increase of 20 percent or about three million pounds over 2009. This increase is almost completely attributable to increased quantities of hazardous waste, much of it related to metal mining, received by the Chemical Waste Management facility in Arlington from out-of-state sources. Even with the 20 percent increase in total releases, the 2010 Oregon figures are the second lowest, with 2009 being the lowest, in the past decade.

Astoria Marine Construction Company

Astoria Marine Construction Company is a site in Astoria that is eligible for listing on the national Superfund list. Community members have expressed concern about the stigma associated with the potential listing as a Superfund location DEQ has worked with EPA, the site's owners and other relevant parties over the past year to understand the severity of contamination at the site and develop a cleanup plan. In January, Astoria Marine attorneys were successful in locating several "defense" insurance policies that may be able to fund site characterization, evaluate pollutants and their levels at the site, and develop a cleanup plan. These insurance policies could also possibly pay for environmental remedies at the site. DEQ is meeting with the owners and EPA to determine how to structure an arrangement for state oversight. Should the terms of the agreement between DEQ and the owners be acceptable to EPA, EPA may defer listing the site.