

State of Oregon  
Department of Environmental Quality

Memorandum

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**Date:** March 17, 2014

**To:** Environmental Quality Commission

**From:** Dick Pedersen, Director

**Subject:** Agenda item I, Informational item: Director's report  
March 19-20, 2014, EQC meeting

**Fiscal year 2013 Gold Star Certificate for accounting**

DEQ's accounting staff has again been recognized with a Gold Star certificate from the state Chief Financial Officer. This certificate reflects DEQ's commitment to providing accurate and timely financial information at the end of each fiscal year, and is the state equivalent of the federal Certificate of Achievement for Excellence in Financial Reporting. Oregon has received this federal designation annually since 1992, due in part to the excellent work of the Gold Star accounting staff at DEQ and other state agencies.

Richard Lawrence served as the main accountant for the Comprehensive Annual Financial Report submittal that received the award, with the support of the DEQ accounting team: Clarence Baillo, Robert Beall, Mary Clair, Dee David, Dan Frank, Colleen Foster, Shaumae Hall, Laurie Hunter, Rod Lemeni, Kelly Scharbrough and John Wolfe

**Clean Fuels program update**

On Feb. 13, 2014, Governor Kitzhaber directed DEQ to move forward with full implementation of the Clean Fuels Program. This will provide regulatory certainty for companies looking to invest in Oregon jobs, alternative fuels and vehicles and the infrastructure necessary to get these fuels to consumers.

DEQ will draft proposed rules for the Oregon Environmental Quality Commission to consider for adoption. The formal rulemaking process will include opportunities for the public to provide oral and written comments on the draft rules. DEQ will provide updates to the commission throughout our process. The current legislation creating this program ends Dec. 31, 2015. The program cannot be fully implemented beyond that date without the sunset clause being removed.

**2012 Oregon Water Quality Integrated Report**

The Integrated Report provides an overall assessment of Oregon's water quality. Part of the list, known as the 303(d) list, identifies waters bodies that are water quality limited, meaning they do not meet water quality standards, and need management plans with pollutant load limits, also known as Total Maximum Daily Loads. Other parts of the list identify waters that are attaining standards or that have plans in place, typically TMDLs, and are expected to achieve standards. The integrated report helps DEQ identify and reduce water pollution throughout the state and meet Clean Water Act requirements.

DEQ published a draft 2012 Integrated Report and 303(d) list for public review and comment from Jan. 2 to Feb. 24, 2014. During the comment period DEQ provided information at a public hearing and through a webinar. DEQ received comments from 26 parties, including EPA, and staff members are reviewing the comments and evaluating needed revisions to the proposed listings of impaired waters. When DEQ completes a final 303(d) list, the agency will submit it to EPA for approval. If EPA disapproves portions the list, they will likely add waters based on their own analysis.

The 2012 Integrated Report has a limited scope in terms of the geographic areas and pollutants assessed, as did the last report done in 2010. The limited scope is part of a trial effort by DEQ to use a watershed approach to align the report with work in other water quality program areas. Limited staff resources also necessitated a focused scope and an expanded timeline to complete the 2012 report.

DEQ's 2012 Integrated Report focused on the following evaluations:

1. Dissolved oxygen in the Willamette Basin and Umatilla Basin,
2. Toxics substances using the aquatic life and human health criteria effective at the time of the analysis, as well as fish consumption or hazardous algal bloom advisories, and
3. Removal of waters from the list of impaired waters to incorporate new data, reflect changes to water quality criteria or correct errors.

Some of the significant comments DEQ received include:

1. The scope of the report is too limited, both in terms of geographic area and the parameters analyzed.
2. The analysis should be redone using the currently effective aquatic life criteria for toxics.
3. DEQ did not use all the data and information available.
4. Some listings are overly broad in geographic or temporal extent and therefore could impact cities unnecessarily.

DEQ recognizes that Oregon's Clean Water Act assessment program is limited and needs improvement. The agency is planning a process improvement project to review procedures and develop needed data infrastructure and management tools. These steps will help DEQ build its capability to conduct a meaningful and timely assessment and an Integrated Report that meets Clean Water Act requirements and provides DEQ and the state the information needed to manage and protect our water resources.

### **Total dissolved gas waiver and annual report**

The U.S. Army Corps of Engineers' five-year, Columbia River total dissolved gas waiver from DEQ expires at the end of the 2014 calendar year. The total dissolved gas standard is 110 percent of barometric pressure. The waiver allows 120 percent in the tailwater, the area downstream of the spilling dam. The waiver affects spill operations at Bonneville, The Dalles, John Day and McNary federal hydropower dams on the mainstem Columbia River. The increase in allowable total dissolved gas levels lets operators increase spill for purposes of Endangered Species Act-listed salmonid migration from April 1 through

August 31 and other specific reasons, such as maintenance activities, occurring outside the downstream migration period.

DEQ anticipates receiving the Corps' request for renewal of the waiver allowing 120 percent during the same migration period. The waiver renewal timeline includes DEQ presentation of an informational item to the commission this June followed by presentation of the waiver request in August. The annual report for the 2013 fish spill season is included as an attachment to this update.

**Date:** March 6, 2014

**To:** Environmental Quality Commission

**Subject:** Annual Report on 2013 Columbia River Total Dissolved Gas and Spill for Fish Passage

### **Annual report and update**

This is an informational summary about the total dissolved gas levels during the 2013 fish passage spill season at the four lower Columbia River dams. The commission requires this report 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 2013 total dissolved gas report from the Army Corps of Engineers Dec. 26, 2013.

### **2013 results**

The total dissolved gas standard is 110 percent of barometric pressure. The 2010 waiver allows 120 percent in the tailwater, the area downstream of the spilling dam, for the purpose of endangered species fish passage. The waiver applies to the fish passage spill period of April 1 to August 31 of each calendar year. In 2013, Columbia River flows were 101 percent of average, compared to 106 percent in 2012. There were no days of high flows above the 7Q10<sup>1</sup> when the waiver criterion was not applicable due to flood flow conditions on the Columbia River between May and June.

In 2013, 4.2 percent, or 26 out of 612, of the total days in the fish passage spill season exceeded the waiver limit. In 2012, 40 percent of the days exceeded the waiver limits. The higher 2012 flow year and associated events, such as the destruction of the total dissolved gas monitoring gauge at Bonneville Dam, are the primary reasons for the larger percent of exceedance occurrences in 2012.

The 2013 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
- Malfunctioning monitoring gauges at McNary and Bonneville dams and
- Powerhouse capacities and power load requirements relative to high flows.

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

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

passage spill program must 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. The Fish Passage Center examined 6,682 juvenile salmonids and 27 individuals, or 0.4 percent, had signs of gas bubble trauma with less than 25 percent of their surface area affected. This is a slight reduction from 2012 when 0.6 percent, or 42 salmonids of 7,301 examined, exhibited gas bubble trauma.

### **Risks to fish**

Although the total dissolved gas 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. The Corps' goal is to meet the total dissolved gas waiver limit when implementing the fish passage spill program. DEQ will continue to work with the Corps to reduce the number of waiver exceedances during the 2014 fish passage spill season, which is the last spill season before the waiver expires at the end of the 2014 calendar year.

*Report prepared by Paula Calvert, DEQ Columbia River Coordinator*