



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10**

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OFFICE OF
WATER AND WATERSHEDS

Ms. Wendy Wiles,
Administrator
Environmental Solutions Division

Ms. Lydia Emer,
Administrator
Operations Division
Department of Environmental Quality
811 SW Sixth Avenue
Portland, Oregon 97204-1390

Re: Proposed federal rulemaking for freshwater aquatic life criteria and recommendations for data collection and criteria implementation.

Dear Ms. Wiles and Ms. Emer:

The purpose of this letter is to provide you with information regarding the U.S. Environmental Protection Agency's proposed federal rulemakings for freshwater aquatic life criteria in Oregon. We are also providing our recommendations regarding data collection and other measures that Oregon should consider while new and revised freshwater aquatic life criteria are being developed and that would also support the implementation of the criteria once they are in effect for Oregon waters.

As you know, on January 31, 2013, the EPA disapproved several of Oregon's 2004 revised aquatic life criteria under Clean Water Act (CWA) section 303(c), including the freshwater acute cadmium criterion, and the acute and chronic ammonia, copper, and aluminum criteria. On January 17, 2015, Oregon adopted revised ammonia criteria that addressed the EPA's ammonia disapproval action and the EPA approved these revisions on August 4, 2015.

The EPA is now moving forward with a federal rulemaking to fulfill its responsibility to promptly propose replacement criteria for Oregon to address the January 2013 disapproval action for acute cadmium, acute and chronic copper, and acute and chronic aluminum. The EPA has planned two rulemakings. The first rule was published as a proposal for public comment in the federal register on April 18, 2016, and addresses copper and cadmium criteria for Oregon waters. We anticipate finalizing this rule by January 16, 2017. The second rule will be signed by the EPA Administrator by December 15, 2017 and will address aluminum criteria for Oregon waters. We anticipate finalizing the aluminum rule by September 28, 2018.

For the copper proposed rule that was published on April 18, 2016, the EPA proposed its 2007 304(a) recommendation (the biotic ligand model). The EPA acknowledges that Oregon has initiated a rulemaking process to revise its copper criteria to address the EPA's January 2013 disapproval action.

The EPA supports Oregon's rulemaking process and will continue to work closely with Oregon to help complete a copper criteria revision that is consistent with CWA requirements. If Oregon submits final copper criteria to the EPA for CWA approval, provided that there is sufficient time before the EPA must finalize federal copper criteria, the EPA intends to review and act upon the state's submission prior to any final action on the federal criteria.

The enclosure to this letter provides additional information regarding the proposed copper and aluminum rulemakings, as well as our recommendations and information for review by ODEQ's National Permit Discharge Elimination System (NPDES) permitting program. If you have any questions please feel free to contact me at (206) 553-1855 or Angela Chung, the Region 10 Water Quality Standards unit manager, at (206) 553-6511.

Sincerely,



Daniel D. Opalski, Director
Office of Water and Watersheds

Enclosure

cc: Ms. Jennifer Wigal, Oregon Department of Environmental Quality
Ms. Debra Sturdevant, Oregon Department of Environmental Quality
Mr. Ron Doughten, Oregon Department of Environmental Quality, NPDES Permits Manager
Ms. Ranei Nomura, Oregon Department of Environmental Quality, Western Region
Ms. Tiffany Yelton-Bram, Oregon Department of Environmental Quality, Northwest Region
Mr. Don Butcher, Oregon Department of Environmental Quality, Eastern Region
Mr. Steve Schnurbusch, Oregon Department of Environmental Quality
Mr. Spencer Bohaboy, Oregon Department of Environmental Quality

ENCLOSURE

This enclosure is organized into the following five parts:

Part I discusses the freshwater aquatic life criteria for copper that are being developed for Oregon waters including: background information, information on EPA's national 304(a) recommendation (copper biotic ligand model [BLM]), monitoring needs for the BLM, and EPA's recommendations for National Pollutant Discharge Elimination System (NPDES) permitting until revised copper criteria are in effect in Oregon.

Part II provides EPA's recommendations for aluminum monitoring and for NPDES permitting until numeric aluminum criteria are applicable in Oregon.

Part III discusses transparency in NPDES permit development,

Part IV discusses sufficiently sensitive monitoring requirements for NPDES permits, and

Part V provides a general discussion on anti-backsliding for NPDES permits.

I. COPPER

A. Background Information

In 2004, Oregon adopted EPA's 1995 304(a) recommendation for copper criteria. These criteria are hardness-based equations that were developed by relating the toxic effect concentration of copper to ambient water hardness.

In 2013, EPA disapproved Oregon's copper criteria because studies show that hardness itself is not the most accurate determinant of copper toxicity and, therefore, may not be protective of aquatic life. As explained in the 2013 letter, rather than use hardness as a surrogate, it is more accurate to directly consider the suite of separate water quality variables (pH, dissolved organic carbon [DOC], alkalinity, and a number of specific ion concentrations) that often correlate with hardness in natural waters. Additionally, in August 2012 EPA received the National Marine Fisheries Service (NMFS) biological opinion. NMFS' opinion determined that Oregon's 2004 revised hardness-based copper criteria would jeopardize species in Oregon that are listed as threatened or endangered under the federal Endangered Species Act (ESA). The reasonable and prudent alternative (RPA) in the biological opinion indicated that Oregon should adopt the EPA's 2007 BLM¹ to develop a chronic criterion of 1.45 µg/L and an acute criterion of 2.3 µg/L.

The BLM is not intended to be used to derive predetermined values as written in the RPA; therefore, EPA requested clarification of the copper RPA from NMFS. On January 19, 2016, NMFS sent EPA a letter clarifying that "...use of EPA's 2007 Copper BLM to derive copper criteria that are specific to

¹ The BLM is EPA's current 304(a) recommendation for copper (*Aquatic Life Ambient Freshwater Quality Criteria-Copper, 2007 Revision*, EPA-822-R-07-001).

individual locations or eco regions is appropriate under the RPA, provided that the state of Oregon has the appropriate data to input into the BLM and appropriate procedures to use the BLM.”

The BLM is a modeling approach that incorporates the use of the biotic ligand model (a metal bioavailability model) in the criteria derivation procedures. The BLM takes, as inputs, receiving water body monitoring data and enables the development of site-specific water quality criteria using these inputs. The BLM requires ten input variables from the ambient water to calculate a freshwater copper criterion: temperature, pH, DOC, calcium, magnesium, sodium, potassium, sulfate, chloride, and alkalinity. Criteria developed using the BLM can be tailored to the site-specific water chemistry of a water body and thus ensure the protection of the aquatic life use, whereas the protectiveness of hardness-dependent criteria relies on the correlation, in a particular water body, between water quality variables that affect copper toxicity and the site-specific hardness. Criteria developed from a hardness-based equation may be more or less stringent than needed to protect the aquatic life uses of a waterbody.

B. EPA Recommendation for Protecting Existing and Designated Uses from Toxic Effects of Copper until New Copper Criteria become effective in Oregon

1. Background Information

In general, after EPA disapproves revised state water quality criteria, the previously EPA-approved criteria applicable to the designated aquatic life uses are in effect for CWA purposes until EPA approves revised state criteria or promulgates federal criteria. However, in this particular instance, relying on the previously EPA-approved copper criteria may not be protective of existing or designated uses because they are based on the EPA’s 1985 304(a) national recommendation. The 1985 criteria recommendations are hardness-based equations that are less stringent than the copper criteria that EPA disapproved in 2013. Given this information, and the NMFS determination that the more stringent hardness-based copper criteria would jeopardize the continued existence of endangered species, EPA is providing Oregon with recommendations to protect aquatic life uses until new or revised copper criteria are in effect for CWA purposes.

As an initial matter, Oregon’s antidegradation provision at OAR 340-041-0004(1) states that “[t]he purpose of the Antidegradation Policy is to guide decisions...and to protect, maintain, and enhance existing surface water quality to ensure the full protection of all existing uses...” A state’s antidegradation rule is a water quality standard that is implemented through the NPDES program. The antidegradation rule is a separate and independent requirement that is not necessarily satisfied by proper implementation of the state’s numeric criteria. In this instance, Tier 1 (i.e., protect, maintain, and enhance existing surface water quality to ensure the full protection of all existing uses) is the most relevant portion of the antidegradation rule because it establishes a standard that is applicable to all waters, and requires that all existing uses of a water body and the level of water quality necessary to protect those existing uses be maintained and protected. EPA has consistently stated that this provision establishes the “absolute floor for water quality in all waters of the United States.” *Water Quality Standards Regulation*, 48 Fed. Reg. 51400, 51403 (Nov 8, 1983). This means that “the water quality in the water body may be lowered only to the point at which the water quality is sufficient to protect and maintain all existing uses, and that it is not permissible to allow water quality to be lowered to the extent that any existing use is impaired.” (*Proposed Water Quality Guidance for the Great Lakes System*, 58

Fed. Reg. 20802, 20886 (Aug. 16, 1993)). Therefore, the state's antidegradation policy can justify a numeric criteria value that is more stringent than a state's EPA-approved numeric criterion.

The recommendations provided herein are intended to address protection of freshwater aquatic life, including aquatic species in Oregon waters that are federally listed as threatened or endangered. As noted, the 2012 NMFS Biological Opinion determined that Oregon's 2004 revised hardness-based copper criteria would likely jeopardize the continued existence of certain ESA-listed species present in Oregon waters and result in the destruction or adverse modification of critical habitat for such species. Subsequent to the NMFS Biological Opinion, EPA disapproved Oregon's 2004 revised hardness-based copper criteria causing the less stringent 1985 hardness-based criteria to become effective for CWA purposes. As a result, DEQ's reliance on the currently effective numeric freshwater copper criteria may not always be protective of ESA-listed aquatic species, and the ESA prohibits acts that harm listed species. In light of these unique circumstances, the EPA is providing the following recommendations to DEQ as guidance for how to proceed with program implementation in a manner that is protective of aquatic life, including ESA-listed species, until new or revised criteria are in effect for CWA purposes.

2. EPA's Recommendation

For the reasons provided above, EPA recommends that until revised freshwater numeric copper criteria have been approved for use in Oregon, DEQ permit writers determine whether reasonable potential exists for a discharge of copper to cause or contribute to an excursion of Oregon's toxic substances narrative criterion (OAR 340-041-0032), which is applicable to all surface waters in the state. If DEQ permit writers determine reasonable potential exists, effluent limits for copper, based on the toxic substances narrative criterion, must be developed and incorporated into the permit. EPA believes, in this situation, that DEQ can accomplish this by relying on the state's narrative criteria and antidegradation provision to allow the use of EPA's 2007 BLM to develop numeric copper values that are protective of designated and existing uses. In particular, NMFS has confirmed that the copper BLM would be an appropriate alternative to the concerns raised in their Biological Opinion and will be a more accurate reflection of the copper concentration that will protect Oregon's aquatic life given varying water chemistry. These more accurate values may be *higher or lower* than the corresponding hardness-based criteria, since the BLM accounts for the effect of more influential parameters on copper bioavailability (i.e., pH, DOC), and a more complete suite of water chemistry parameters (10 vs 1) than the outdated hardness-based copper criteria. A better accounting for these more influential parameters will move copper criteria concentrations higher (in waters where the hardness based criteria for copper would have been over-protective, due to local conditions) and lower (in waters where the hardness based criteria for copper would have been under-protective, due to local conditions).

C. EPA's Proposed Copper Rulemaking for Oregon

On April 18, 2016, EPA proposed to establish the 2007 national recommended freshwater aquatic life criteria for copper² for freshwaters in the state of Oregon. EPA anticipates finalizing the rule by January 16, 2017.³ As discussed previously, criteria developed using the BLM can be tailored to the site-specific water chemistry of a water body and thus ensure the protection of the aquatic life use. EPA's proposal

² USEPA. 2007. *Aquatic Life Ambient Freshwater Quality Criteria - Copper*. U.S. Environmental Protection Agency, Office of Water, Washington, D.C. EPA-822-R-07-001.

http://water.epa.gov/scitech/swguidance/standards/criteria/aqlife/copper/upload/2009_04_27_criteria_copper_2007_criteria-full.pdf.

³ If Oregon submits revised copper criteria prior to EPA's finalization of a federal rule and EPA reviews and approves the state's revised criteria prior to January 16, 2017 then EPA will not proceed with a final rule for copper.

includes conservative default input parameters for use in the BLM for the following parameters: calcium, magnesium, sodium, potassium, alkalinity, chloride, sulfate and dissolved organic carbon. These defaults should be used to address situations where site-specific data are not available for some or all of these parameters. We note that there are no default input parameters for pH or temperature and these data should be collected at the site where the BLM is being used to derive criteria.

D. Recommendations for Using the BLM

The BLM is a modeling approach that incorporates the use of a metal bioavailability model in the criteria derivation procedures. As with any equation-based criterion, it is important to accurately determine the site to which the criterion will apply and to have sufficient ambient data to accurately reflect the spatial and temporal variability of the site. The more ambient data that are collected, the more accurately the water chemistry at the site can be characterized, which will result in more accurate criteria development. Where NPDES discharges are located, it is important to collect data upstream of the influence of the effluent discharge and downstream of the discharge. We recommend that data be collected at several downstream sampling locations to accurately characterize the water body and those areas where the aquatic life will be more sensitive to the toxic effects of copper. In general, sampling locations should not be overly influenced by the presence or absence of effluent discharges unless these discharges result in ambient copper being made more bioavailable, and thus toxic, to aquatic life. We also note that any input (e.g., tributary, NPDES discharge, etc.) or output (e.g., water withdrawals, etc.) within a site's boundaries should be carefully considered to determine its effect on ambient copper availability.

1. Site selection

It is important to define the boundaries of the site to which an equation-based criterion will apply prior to monitoring. Appropriate sites should be based on the physical and chemical variability of the water. Oregon should consider the following when defining a site to which the criterion applies:

- (1) Metals are generally persistent, so calculating criteria at or near an NPDES discharge (e.g., at the edge of a mixing zone) could result in a criterion that is not protective of areas that are outside the mixing zone.
- (2) As the size of a site increases, the spatial and temporal variability is likely to increase and, thus, more sampling sites will be required to adequately account for the spatial and temporal variability.
- (3) Downstream water quality standards must be considered when calculating a protective criterion in upstream waters.

2. Sampling

As previously mentioned, the copper BLM requires the following ten input variables from the ambient water to calculate a freshwater copper criterion including:

Temperature (T)	Sodium (Na)
Dissolved Organic Carbon (DOC)	Potassium (K)
pH	Sulfate (SO ₄)
Calcium (Ca)	Chloride (Cl)
Magnesium (Mg)	Alkalinity

Generally, the BLM is most sensitive to DOC and pH and both of these parameters can vary widely seasonally and yearly. Therefore, it's important to collect enough samples over a long enough time period to capture the seasonal and yearly variability. Additionally, pH can vary widely diurnally so it is important that this parameter be monitored as close as possible to the time when the ambient pH will be lowest. Additionally, due to the complexity involved with monitoring some of the BLM input parameters we recommend that DEQ develop a quality assurance plan that permittees follow to ensure that clean sampling techniques and proper sampling procedures are used and quality data are collected.

In the interim, when an effluent discharge covered under the NPDES program has detectable amounts of copper, it is reasonable to expect the facility to collect sufficient, representative ambient data upstream and at location(s) downstream of its effluent discharge, as discussed previously, to support development of a location-specific BLM criterion. Sampling frequency should be adequate to capture the variability in the ambient water. We recommend DEQ develop methods, such as a power analysis, to verify that the ambient data collected adequately captures the seasonal and hydrologic variability to ensure that an adequate sample size has been collected.

For facilities with permits that will be re-issued within the next two years, we strongly recommend that DEQ contact those facilities and request appropriate monitoring such that the data necessary to use the BLM are available when the permit is re-issued. Additionally, EPA strongly encourages the state to incorporate adequate ambient monitoring requirements into re-issued permits to ensure that ambient water body changes that may occur over time are captured. Over the long term, it is important to ensure that any change to chemistry of the ambient water is captured such that the criteria can be revised as appropriate.

Additional Monitoring Information and Recommendations

EPA recommends that dissolved and total recoverable ambient copper samples be collected at the same time and locations as the BLM input parameters are collected. Collection of downstream dissolved and total recoverable copper is recommended because those data will facilitate the development of a site-specific translator for the facilities such that total recoverable effluent data may be “translated” to dissolved data.

Furthermore, upstream dissolved copper data should be collected at the same time to determine the assimilative capacity of the water body. Sampling frequency should be adequate to capture the natural variability in the ambient water.

Summary of EPA Recommended Monitoring Requirements

In addition to the monitoring below we recommend that effluent sampling occur on the same days as ambient sampling.

Table 1: Ambient Sampling for Cu BLM Parameters

Facility Type	Sampling Frequency ²	Sampling Location	
		Upstream (outside the influence of the effluent)	Downstream

Industrial Facilities with copper in their discharge	1-2 minimum of samples per month	BLM parameters ¹ , dissolved copper	BLM parameters ¹ , dissolved copper, total recoverable copper
Publicly Owned Treatment Works (POTWs) with pretreatment requirements	1-2 minimum of samples per month	BLM parameters ¹ , dissolved copper	BLM parameters ¹ , dissolved copper, total recoverable copper
POTWs with detectable amounts of copper in their discharge and flows \geq 1mgd, and POTWs with a flow of < 1mgd where the State suspects copper may be a component of their discharge.	1 sample per month (minimum)	BLM parameters ¹ , dissolved copper	BLM parameters ¹ , dissolved copper, total recoverable copper
<ol style="list-style-type: none"> 1. BLM parameters include: DOC, pH (which should be collected as close to dawn as possible), temperature ($^{\circ}$C), calcium, magnesium, sodium, potassium, sulfate, chloride, and alkalinity. Upstream and downstream samples should be collected on the same day. Date and time of sample collection should be collected and reported. 2. This is a minimum sampling recommendation; more sampling may be required to ensure that spatial and temporal variability is captured at a site. As mentioned above, methods, such as a power analysis, to verify that the ambient data adequately capture the seasonal and hydrologic variability should be developed to ensure that an adequate sample size has been collected. 			

3. Need for Site Specific Information to Implement the BLM

As mentioned previously, on April 18, 2016, EPA proposed a rule that would apply EPA's 2007 national recommended freshwater aquatic life criteria for copper to Oregon's waters. Criteria developed using the BLM can be tailored to the site-specific water chemistry of a water body and thus ensure the protection of the aquatic life use.

EPA recommends that DEQ inform permittees with detectable amounts of copper in their effluent discharge of the EPA's proposed rule. We also recommend that DEQ provide permittees with information so they can collect the necessary ambient data that will be needed to develop an appropriately protective copper criterion for their site such that the appropriate criterion can be used in reasonable potential calculations and permit limit development if necessary. As mentioned above, EPA's rule proposes the use of conservative estimates for input values where site-specific data are not available. This may result in copper criteria more stringent than necessary for the site-specific conditions of a waterbody. Therefore, it will be beneficial for permittees to accurately characterize the water chemistry relative to the location of their discharge. To further this objective, EPA recommends that DEQ inform permittees, likely to have copper in their effluent discharge, about this letter and EPA's recommendations.

II. ALUMINUM

A. Background Information

In 2004, Oregon submitted new freshwater aquatic life aluminum criteria for EPA's review. Since Oregon had no prior numeric freshwater aquatic life aluminum criteria, these numeric criteria were

intended to replace Oregon's use of narrative criteria to express limits on the concentration of aluminum in Oregon waters. Oregon's 2004 aluminum criteria were expressed as numeric values based on EPA's 1988 recommended aluminum criteria. However, Oregon's criteria specified that they applied "to waters with pH values less than 6.6 and hardness values less than 12 mg/L (as CaCO₃)." EPA's recommended criteria differ in this respect. EPA's recommendation provides that they "apply specifically at pH values of 6.5 to 9.0." EPA disapproved Oregon's aluminum criteria because Oregon had not supplied a rationale for the difference between Oregon's statement of the conditions under which the state aluminum criteria would be valid and EPA's statement of when the recommended aluminum criteria would be valid.

EPA had initiated consultation with NMFS on the aluminum criteria, based on its mistaken belief that Oregon's criteria were entirely equivalent to EPA's 1988 recommended aluminum criteria. When EPA recognized the discrepancy, it withdrew the aluminum criteria from the NMFS consultation process since it no longer intended to approve the aluminum criteria. While the opinion acknowledged that EPA withdrew aluminum from the consultation process, NMFS did not have time to modify its opinion to exclude acute and chronic aluminum from the document. Thus, NMFS' biological opinion included its determination that the aluminum criteria, which were the same as EPA's 1988 recommended criteria, would jeopardize endangered species in Oregon.

B. EPA Recommendation for Protecting Existing and Designated Uses from Toxic Effects of Aluminum until New Aluminum Criteria become effective in Oregon

As stated previously, in general, after EPA disapproves revised state water quality criteria, the previously EPA-approved criteria applicable to the designated aquatic life uses are in effect for CWA purposes until EPA approves revised state criteria or promulgates federal criteria. Since Oregon has no prior numeric freshwater aquatic life aluminum criteria, the narrative criteria should be used to express limits on the concentration of aluminum in Oregon waters.

C. EPA's Proposed Aluminum Rulemaking

EPA anticipates proposing numeric freshwater aquatic life criteria for aluminum in Oregon by December 15, 2017 and finalizing the criteria by September 28, 2018. Currently, EPA is in the process of updating its 304(a) recommendation for aluminum. In the process of updating the science, EPA has concluded that pH, DOC, and hardness, in particular, are three water chemistry constituents that affect aluminum bioavailability and toxicity.

EPA intends that its proposed rule for aluminum criteria for Oregon will articulate how the aquatic life aluminum criteria were derived in a scientifically defensible manner and why the criteria are protective of aquatic life in freshwaters in Oregon.

D. EPA's NPDES Permit Recommendations until Numeric Criteria for Aluminum are promulgated in Oregon

Until numeric criteria for aluminum are promulgated in Oregon, EPA recommends that DEQ's permitting program include monitoring requirements and a re-opener clause in any permit that becomes available for public comment for the following types of facilities:

1. All industrial facilities that may have aluminum as a constituent of their effluent discharge.

2. All major municipal wastewater treatment facilities that may receive indirect discharges of aluminum into their treatment system or use aluminum sulfate.

With respect to the types of facilities identified above, EPA recommends, at a minimum, the monitoring in Table 2 be completed for the term of the permit. Additionally, the same considerations described for the copper BLM regarding site selection, monitoring location(s), and collecting sufficient representative spatial and temporal data should be considered for aluminum.

Table 2: Effluent and Ambient Sampling

Parameter	Location		
	Effluent	Upstream ^{1,2} (outside the influence of the effluent)	Downstream ^{1,2}
Aluminum (total recoverable)	2/month	2/month	---
pH	---	---	1-2/month
DOC	---	---	1-2/month
Hardness	---	---	1-2/month
temperature			1-2/month
conductivity			1-2/month
<ol style="list-style-type: none"> 1. All ambient samples should be collected on the same date and as early in the morning as possible. Date and time of sample collection should be collected and reported. 2. This is a minimum sampling recommendation; more sampling may be required to ensure that spatial and temporal variability is captured at a site. Methods, such as a power analysis, to verify that the ambient data adequately captures the seasonal and hydrologic variability should be developed to ensure that an adequate sample size has been collected. 			

Additionally, until final numeric criteria are in place for Oregon, EPA recommends that DEQ use its toxic substances narrative criterion to determine whether reasonable potential exists and, if so, develop effluent limitations in NPDES permits for the types of facilities listed above. EPA's NPDES permitting regulations at 122.44(d)(vi) allow the use of EPA's upcoming draft 304(a) recommendation for this purpose once it is publicly available, along with other options. EPA anticipates draft aluminum criteria will become publicly available in 2017.

III. TRANSPARENCY IN NPDES PERMIT DEVELOPMENT PROCESS

EPA recommends that DEQ increase the transparency of its permit development process by making permit applications and any supplemental data used in permit development publicly available on the DEQ Permit Search webpage, or with the public notice of each draft permit. With respect to copper, EPA also recommends that the data and analysis used to determine the reasonable potential to exceed copper criteria and the development of permit limitations be included in the permit fact sheet.

Further, given DEQ's permit backlog and aged applications, EPA recommends that DEQ require an updated application where (a) the existing application was submitted more than 5 years before public

notice of the draft permit, or (b) DEQ has knowledge of significant changes in understanding of receiving water or effluent quality with regard to copper since the application was submitted.

IV. Sufficiently Sensitive Monitoring

In an August 2015 letter, EPA reminded Region 10 state permitting authorities of EPA's 2014 promulgation of regulations for the use of sufficiently sensitive test methods for NPDES permit applications and reporting. 79 Fed. Reg. 49001 (Aug. 19, 2014). NPDES regulations require states to revise their NPDES permitting programs to conform to changes in Federal NPDES regulations in accordance with 40 CFR 123.62(e). Specifically, 40 C.F.R. § 122.21(e)(3) and 40 C.F.R. § 122.44(i)(1)(iv) required that, where available, EPA-approved analytical methods used for permit applications and for monitoring required in NPDES permits must be sufficiently sensitive to detect and quantify pollutants in effluent at levels that:

- (a) enable DEQ to conduct a 'reasonable potential' determination (including a determination based on Oregon's narrative toxics criterion under paragraph 7, above) and, if necessary, establish WQBELs for copper; and
- (b) assess compliance with the copper effluent limitations. *See* 79 Fed. Reg. at 49,003-04.

Sufficiently sensitive analytical methods should also be used to determine the background concentration of copper in the receiving water.

V. Anti-backsliding Information

In general, the term anti-backsliding refers to statutory and regulatory provisions that prohibit the renewal, reissuance, or modification of an existing NPDES permit that contains effluent limitations, permit conditions, or standards less stringent than those established in the previous permit. However, there are exceptions to the prohibition. In general, CWA section 402(o)(1) allows water quality based limitations to be relaxed if the relaxation is consistent with CWA section 303(d)(4) and section 402(o)(3).⁴

Application of the anti-backsliding provisions is a permit-specific analysis. We encourage Oregon to contact EPA whenever they have questions regarding anti-backsliding especially as they may relate to changes in applicable water quality criteria.

We also encourage Oregon to review EPA's *NPDES Permit Writers' Manual* (EPA-833-K-10-001, September 2010), Chapter 7 (*Final Effluent Limitations and Anti-backsliding*) which provides information on the anti-backsliding statutory provisions, the exceptions to those provisions, and case-specific examples.

⁴ CWA section 402(o)(3) is a safety clause that provides an absolute limitation on backsliding. This section of the CWA prohibits the relaxation of effluent limitations in all cases if the revised effluent limit would result in a violation of applicable effluent guidelines or water quality standards, including antidegradation requirements.