

DEQ Public Webinar

Ammonia Rulemaking

September 10, 10:00 – 12:00 PDT

Technical Difficulties?

For technical support contact Trina Brown:

Webinar instant chat

Phone: 503-229-6982

Email: brown.trina@deq.state.or.us

Overview of Webinar and Objectives

To see other participants:



Overview of Webinar and Objectives

To ask questions:



Overview of Webinar and Objectives

Objectives

- Members of the public, conservation groups, wastewater or industrial dischargers or others
- Informational purposes only
- DEQ is not taking public comment during this webinar

Why is DEQ Proposing Revisions to Oregon's Ammonia Criteria?

- To address EPA disapproval of Oregon's criteria by proposing ammonia criteria based on the latest science

Overview of Webinar and Objectives

Agenda

- 10:00** **Overview of Webinar and Objectives** (Andrea Matzke)
- 10:05** **Background and Scope of Rulemaking** (Andrea Matzke)
- 10:15** **Ammonia Proposed Revisions and Technical Justification** (Andrea Matzke)
- 11:00** **Implementation and Permitting Considerations**
(Andrea Matzke, Spencer Bohaboy)
- 11:20** **Other Proposed Clarifications** (Aron Borok)
- 11:30** **Question and Answer Session** (All)
- 12:00** **Wrap-Up** (Andrea Matzke)

Overview of Webinar and Objectives

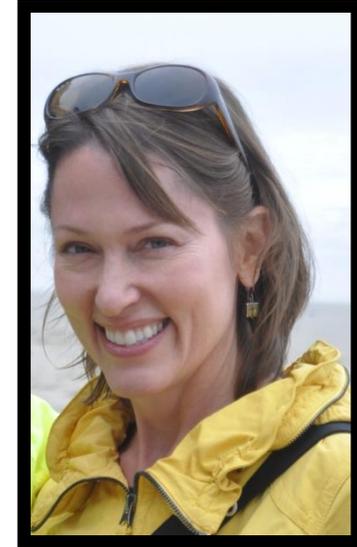
Today's Presenters



Spencer Bohaboy



Aron Borok



Andrea Matzke

A scenic landscape featuring a large lake, forested mountains, and a building in the distance. The scene is captured from an elevated perspective, looking down at a valley filled with dense green trees. In the middle ground, a large body of water stretches across the valley, with a small island or peninsula visible. In the background, several layers of blue-toned mountains rise against a hazy sky. A prominent building with a dome is visible on the right side of the image, nestled among the trees. The overall atmosphere is serene and natural.

Background and Scope of Rulemaking

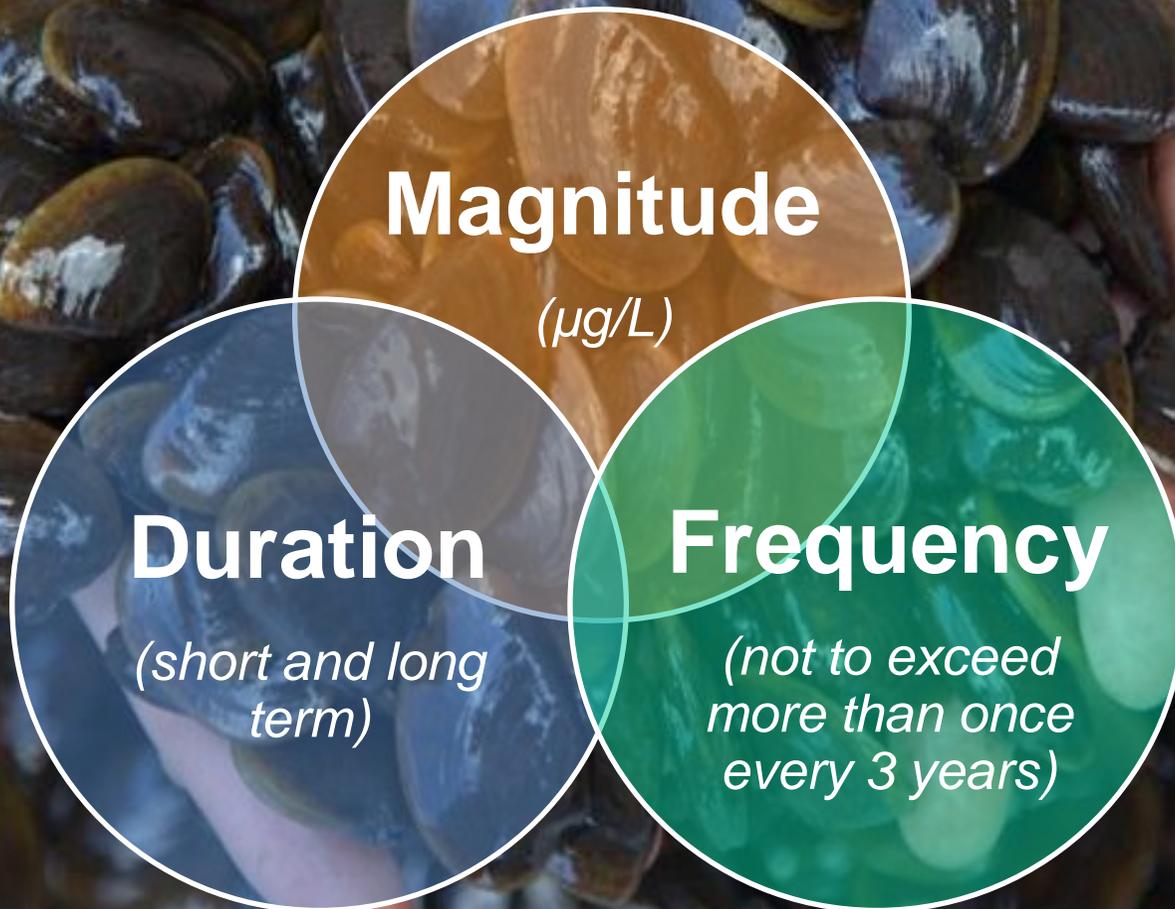
Aquatic Life Toxics Criteria

- Concentrations of a pollutant at which aquatic life (such as fish, shellfish and aquatic insects) are protected
- Toxics criteria are used in wastewater discharge permits, water quality assessments (303(d) list), TMDLs and the Cleanup Program

Beneficial use protected: *fish and aquatic life*



What Comprises the Aquatic Life Toxics Criteria?



2004 Oregon Water Quality Standards Adoption

- Oregon adopted a number of revised or new water quality criteria for toxics
- EPA must approve revisions to water quality standards
- Endangered Species Act (ESA) consultation with National Marine Fisheries Service and U.S. Fish & Wildlife Service for criteria affecting aquatic life
- Litigation and technical issues prolonged ESA consultation and subsequent EPA action

Background and Scope of Rulemaking

ESA Consultation: NMFS jeopardy decision Aug. 14, 2012 on Oregon's 2004 Adopted Criteria

- ammonia, aluminum, cadmium and copper adopted criteria would cause jeopardy to T&E anadromous salmon and trout species
- Oregon's adopted ammonia criteria based on EPA's 1999 recommendations
- Reasonable and Prudent Alternatives: NMFS described a specific process in the Biological Opinion to derive ammonia criteria protective of salmonids.
- EPA must consider NMFS's decision before taking action on a state's water quality standard.

EPA Action Jan. 31, 2013 on Oregon's 2004 Adopted Criteria

Disapproved:

- 11 pesticides, freshwater selenium
- freshwater copper, aluminum and cadmium (acute only) criteria
- freshwater ammonia: 1999 ammonia criteria are not protective of freshwater mussels and snails
 - Therefore, Oregon's effective criteria continue to be based on EPA's 1985 recommendations

Oregon needs to respond to disapprovals in a timely manner

Discussions with Stakeholders Jan. and Feb. 2014

- Invited tribes and a range of stakeholders to provide input on rulemaking priorities to address EPA disapprovals
- DEQ also provided information on EPA's latest 2013 ammonia recommendations and described EPA's 2007 recommendations to use the Biotic Ligand Model to derive site-specific criteria for copper

Recommendation: Initiate ammonia rulemaking based on EPA's 2013 recommendations.

Scope of Rulemaking

- Adopt EPA's latest 2013 national recommendations for freshwater ammonia criteria
- Clarifications:
 - Correct an error in the pH rule language for the main stem Snake River
 - Amend the Umatilla Basin-specific standards to align with EPA's partial disapproval
 - Add notes to state's natural conditions criterion and natural conditions criterion for temperature to reflect EPA's disapproval
 - Incorporate plain language into the amended rules consistent with the Oregon Administrative Procedures Act.

Background and Scope of Rulemaking

Rulemaking Schedule

Rulemaking Component	Timeframe
Initiate Rulemaking	April 2014
Public Comment	Sept. 16 – Oct. 30, 2014
Public Hearing (Portland)	Oct. 15, 2014
Environmental Quality Commission Adoption	Jan. 7 – 8, 2015
EPA Action	May 2015 (estimate)



Ammonia Proposed Revisions and Technical Justification

Pollutant found in fertilizers and waste products:

- Municipal and industrial waste
- Septic systems seepage and landfill leachate
- Fertilizer runoff from agricultural and urban sources
- Manure application
- Aquaculture

Effects to Aquatic Life

Fish

- Gill damage and increased ventilation rates
- Reduction in blood oxygen capacity
- Disruption of osmoregulation (cell function/excretion)

Invertebrates (mussels)

- Reduced opening of valve for respiration and feeding
- Impairs secretion of the byssus or “anchoring threads” in bivalves
- Reduced ciliary action on gills

DEQ Proposes to Adopt EPA's 2013 Ammonia Criteria Recommendations

- EPA minimum data requirements met for acute and chronic datasets
 - All 8 families included in toxicity tests—very large dataset (invasive species removed)
 - **Mussels** (Unionid family— “pearly mussels”) and gill-bearing (non-pulmonate) **snails** are some of the most sensitive species
 - 14 T&E species (5 are mussels) included in toxicity tests
- Ammonia toxicity depends on pH and temperature
 - As pH and temperature increases, criteria become more stringent

Ammonia Proposed Revisions and Technical Justification

Mollusks—Freshwater Sentinels

Diverse- there are over 1000 North American freshwater taxa

Broadly distributed in benthic habitats (especially snails)

Long-lived and sedentary (especially mussels)

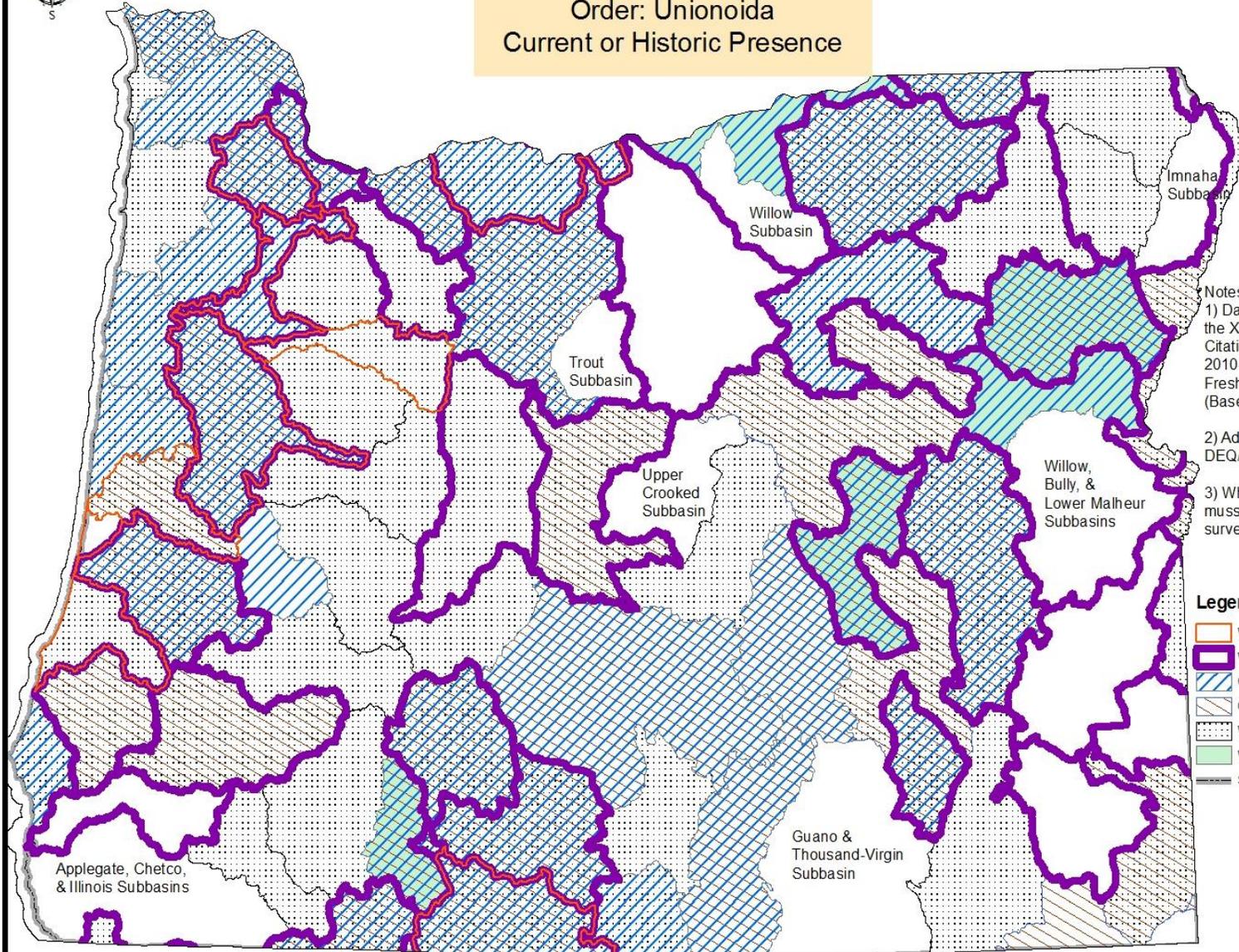
Sensitive e.g. ammonia, chlorine, Cu

Protected species 118 federally listed (88 mussels, 30 snails)





Oregon Mussel Species
Order: Unionoida
Current or Historic Presence



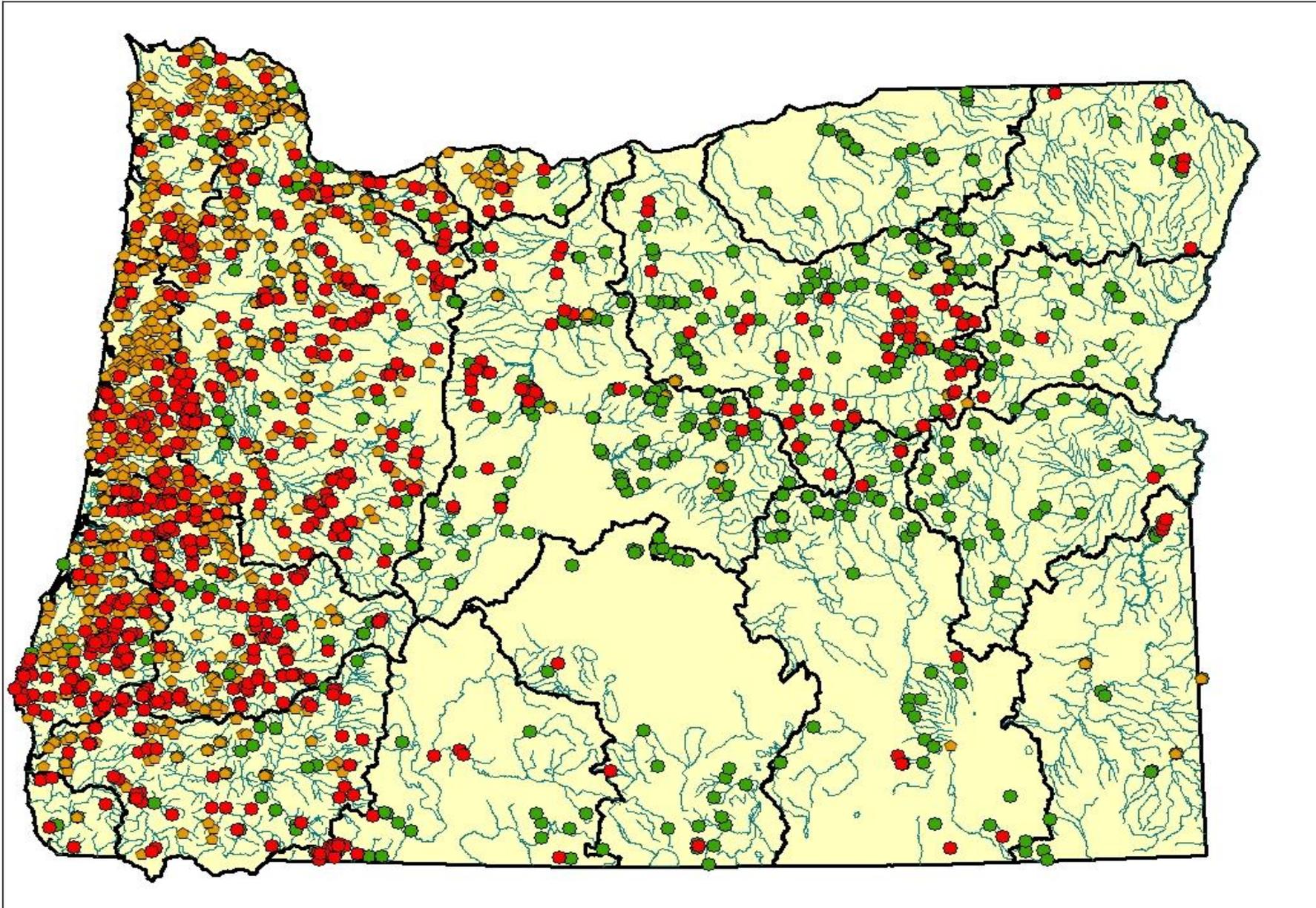
Notes:
 1) Data presented here is from the Xerces Society. Citation: The Xerces Society 2010-2014. Western Freshwater Mussel Database. (Based on May 28, 2013 data.)
 2) Additional data from Oregon DEQ/LEAD
 3) White areas indicate mussels absent or not surveyed.

- Legend**
- Western Floater (*A. kennerlyi*)
 - Western ridged (*G. angulata*)
 - Oregon Floater (*A. oregonensis*)
 - California Floater (*A. californiensis*)
 - Western pearlshell (*M. falcata*)
 - Winged Floater (*A. nuttalliana*)
 - State boundary

Oregon Department of Environmental Quality/Environmental Solutions Division/Water Quality
 File: \\Dqhq1\WQ-Share\mollusk_maps\OregonMolluskPresence_17JUN2014.mxd
 Prepared by: S. Aalbers (17JUN2014), Printed: 17JUN2014 (sda)
 1:2,850,000
 0 10 20 40 60 80 Miles
 Oregon Lambert projection

This data analysis was conducted for strategic planning purposes. If other uses are considered for the data, please contact DEQ's Water Quality Standards for details on how this query was performed. It is important to understand the limitations and qualifications of queries to ensure appropriate interpretation of this data. No warranty expressed or implied is made regarding the accuracy or utility. This disclaimer applies both to individual use of the data and aggregate use with other data.

Pulmonate and Non-Pulmonate Snail Presence in Oregon



Pulmonate snails

- ◆ DEQ database
- WMC database

Non-pulmonate (gilled) snails

- ◆ DEQ database
- WMC database

Ammonia Proposed Revisions and Technical Justification

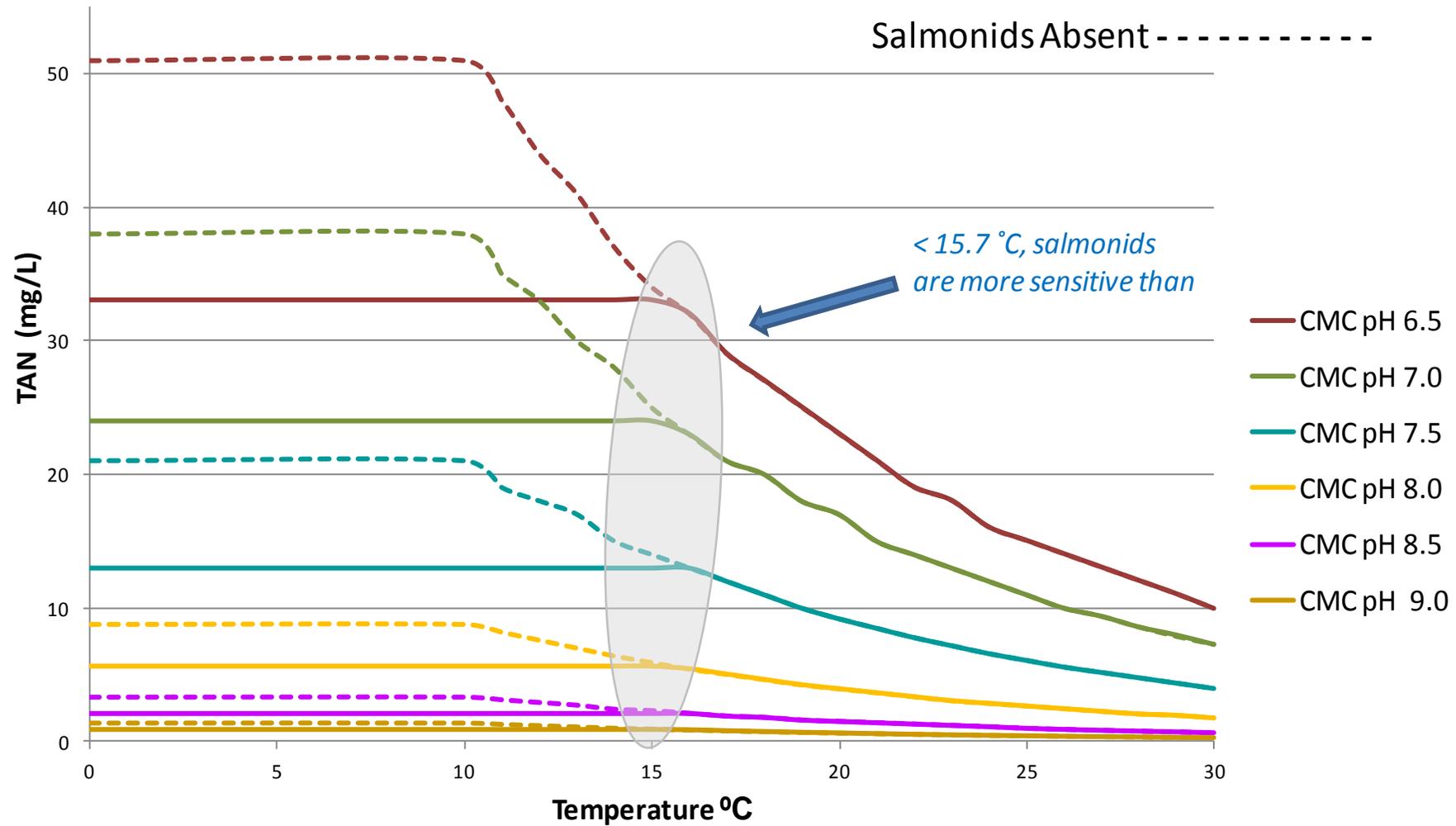
EPA acute/CMC criteria (1-hr. average)

- EPA included 120 acute studies: 52 invertebrates, 44 fish and 4 amphibians
- Expressed as mg/L TAN—**T**otal **A**mmonia **N**itrogen (NH₃ and NH₄)
- Generally, more stringent than Oregon's criteria
- Temp > 15.7°C → mussels more sensitive
- Temp < 15.7°C → salmonids more sensitive

Therefore, two sets of acute criteria apply based on the presence or absence of salmonids

Salmonid sensitivity at lower temperatures

EPA Aug. 2013 Ammonia Acute (CMC) 1-hour Criteria
salmonids present and absent



Comparison between current and proposed acute ammonia criteria

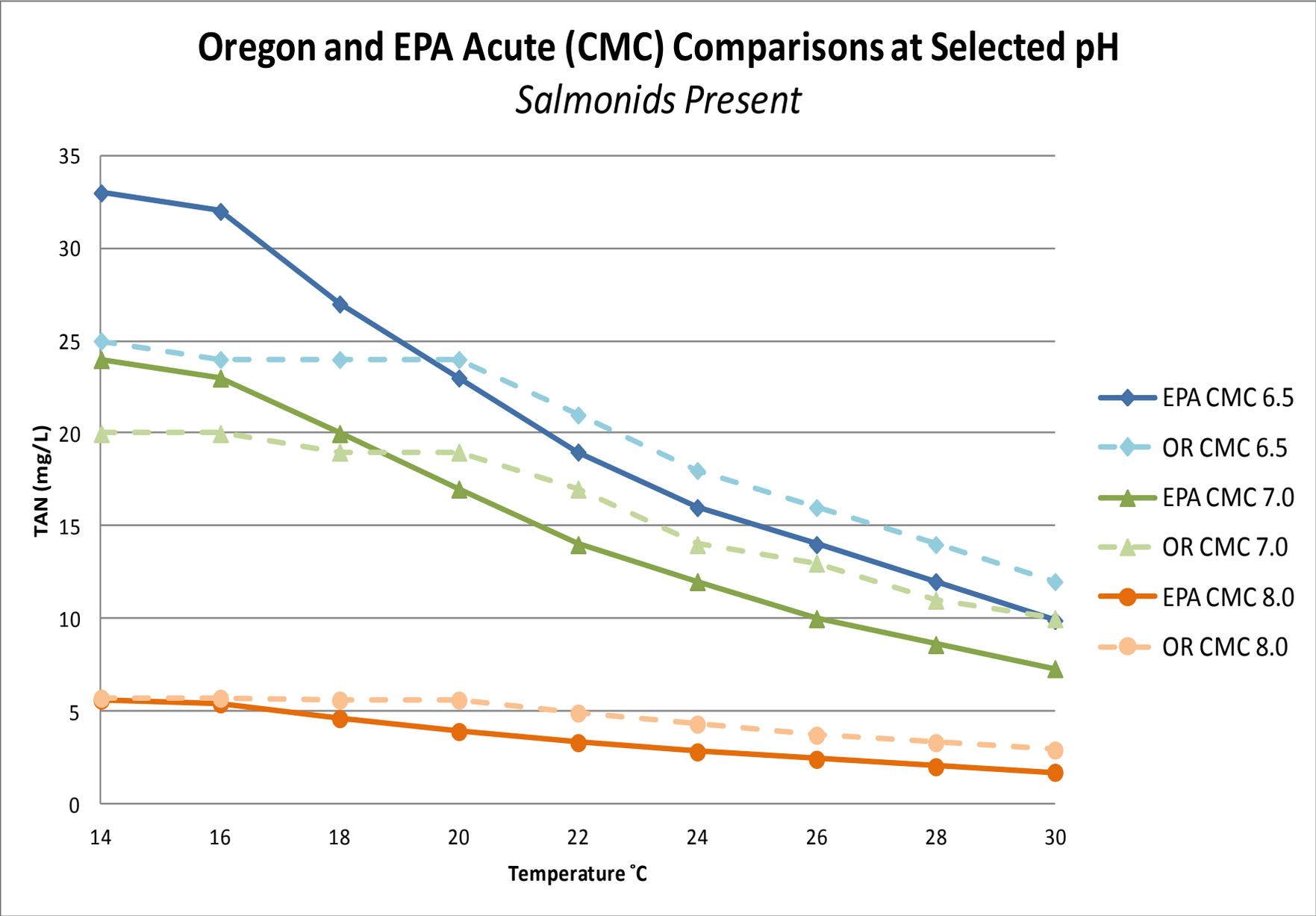


Table 1: Ammonia Acute Criteria Values (One-hour Average)—Salmonid Species Present
 Temperature and pH-Dependent and expressed as Total Ammonia Nitrogen (mg/L TAN)

Criteria cannot be exceeded more than once every three years

$$Acute\ Criterion = MIN \left(\left(\frac{0.275}{1 + 10^{7.204-pH}} + \frac{39.0}{1 + 10^{pH-7.204}} \right), \left(0.7249 \times \left(\frac{0.0114}{1 + 10^{7.204-pH}} + \frac{1.6181}{1 + 10^{pH-7.204}} \right) \times (23.12 \times 10^{0.036 \times (20-T)}) \right) \right)$$

Temperature (°C)																	
pH	0-14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
6.5	33	33	32	29	27	25	23	21	19	18	16	15	14	13	12	11	9.9
6.6	31	31	30	28	26	24	22	20	18	17	16	14	13	12	11	10	9.5
6.7	30	30	29	27	24	22	21	19	18	16	15	14	13	12	11	9.8	9.0
6.8	28	28	27	25	23	21	20	18	17	15	14	13	12	11	10	9.2	8.5
6.9	26	26	25	23	21	20	18	17	15	14	13	12	11	10	9.4	8.6	7.9
7.0	24	24	23	21	20	18	17	15	14	13	12	11	10	9.4	8.6	8.0	7.3
7.1	22		21	20	18	17	15	14	13	12	11	10	9.3	8.5	7.9	7.2	6.7
7.2	20	20	19	18	16	15	14	13	12	11	9.8	9.1	8.3	7.7	7.1	6.5	6.0
7.3	18	18	17	16	14	13	12	11	10	9.5	8.7	8.0	7.4	6.8	6.3	5.8	5.3
7.4	15	15	15	14	13	12	11	9.8	9.0	8.3	7.7	7.0	6.5	6.0	5.5	5.1	4.7
7.5	13	13	13	12	11	10	9.2	8.5	7.8	7.2	6.6	6.1	5.6	5.2	4.8	4.4	4.0
7.6	11	11	11	10	9.3	8.6	7.9	7.3	6.7	6.2	5.7	5.2	4.8	4.4	4.1	3.8	3.5
7.7	9.6	9.6	9.3	8.6	7.9	7.3	6.7	6.2	5.7	5.2	4.8	4.4	4.1	3.8	3.5	3.2	3.0
7.8	8.1	8.1	7.9	7.2	6.7	6.1	5.6	5.2	4.8	4.4	4.0	3.7	3.4	3.2	2.9	2.7	2.5
7.9	6.8	6.8	6.6	6.0	5.6	5.1	4.7	4.3	4.0	3.7	3.4	3.1	2.9	2.6	2.4	2.2	2.1
8.0	5.6	5.6	5.4	5.0	4.6	4.2	3.9	3.6	3.3	3.0	2.8	2.6	2.4	2.2	2.0	1.9	1.7
8.1	4.6	4.6	4.5	4.1	3.8	3.5	3.2	3.0	2.7	2.5	2.3	2.1	2.0	1.8	1.7	1.5	1.4
8.2	3.8	3.8	3.7	3.5	3.1	2.9	2.7	2.4	2.3	2.1	1.9	1.8	1.6	1.5	1.4	1.3	1.2
8.3	3.1	3.1	3.1	2.8	2.6	2.4	2.2	2.0	1.9	1.7	1.6	1.4	1.3	1.2	1.1	1.0	0.96
8.4	2.6	2.6	2.5	2.3	2.1	2.0	1.8	1.7	1.5	1.4	1.3	1.2	1.1	1.0	0.93	0.86	0.79
8.5	2.1	2.1	2.1	1.9	1.8	1.6	1.5	1.4	1.3	1.2	1.1	0.98	0.90	0.83	0.77	0.71	0.65
8.6	1.8	1.8	1.7	1.6	1.5	1.3	1.2	1.1	1.0	0.96	0.88	0.81	0.75	0.69	0.63	0.59	0.54
8.7	1.5	1.5	1.4	1.3	1.2	1.1	1.0	0.94	0.87	0.80	0.74	0.68	0.62	0.57	0.53	0.49	0.45
8.8	1.2	1.2	1.2	1.1	1.0	0.93	0.86	0.79	0.73	0.67	0.62	0.57	0.52	0.48	0.44	0.41	0.37
8.9	1.0	1.0	1.0	0.93	0.85	0.79	0.72	0.67	0.61	0.56	0.52	0.48	0.44	0.40	0.37	0.34	0.32
9.0	0.88	0.88	0.86	0.79	0.73	0.67	0.62	0.57	0.52	0.48	0.44	0.41	0.37	0.34	0.32	0.29	0.27

Ammonia Proposed Revisions and Technical Justification

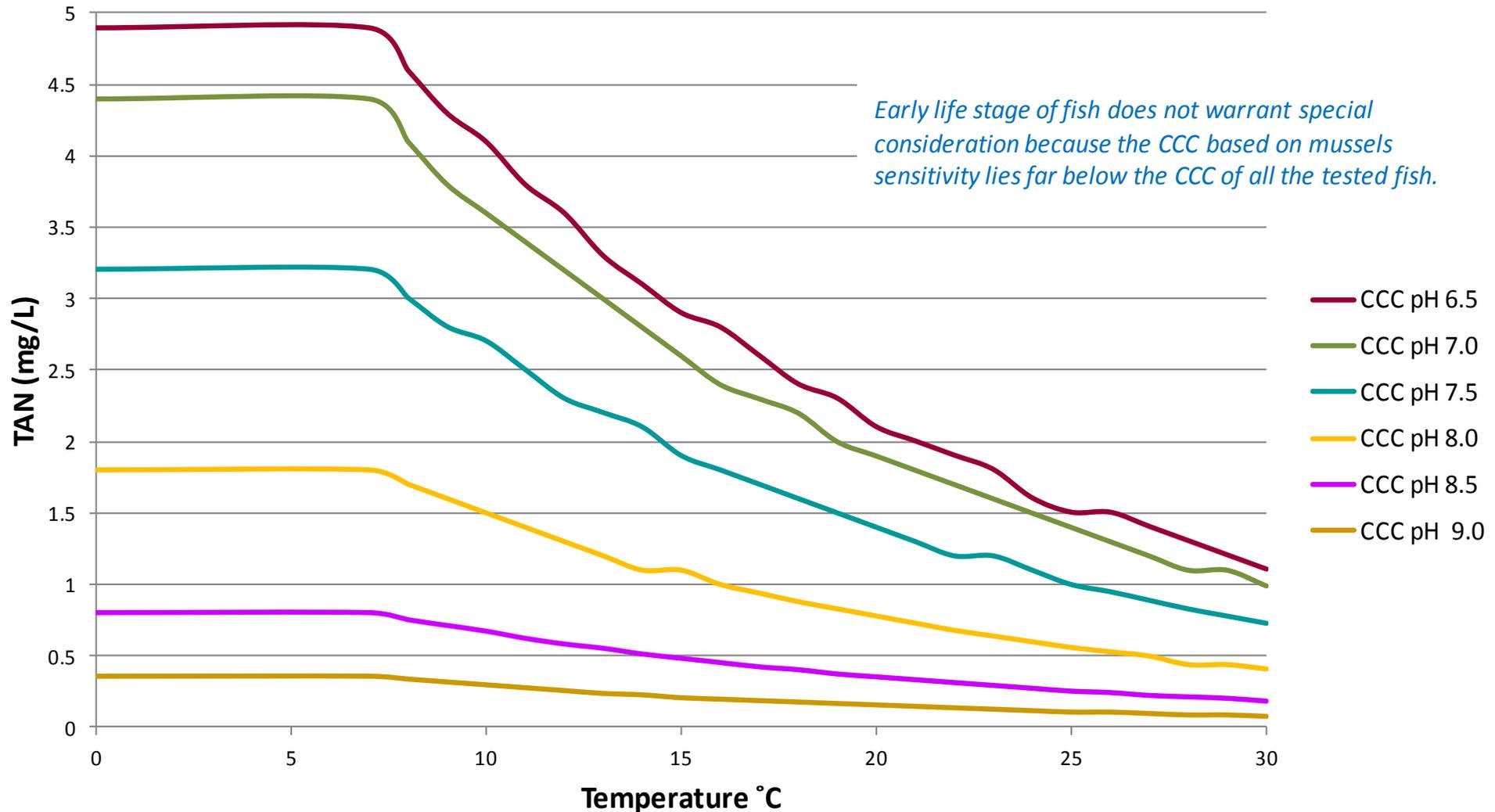
EPA chronic/CCC criteria

- EPA included data for 21 species: 10 invertebrate species (mussels, clam, snail, cladocerans, daphnid and insect) and 11 fish species
- Must meet both a 30-day rolling average **AND** a highest 4-day average (not more than 2.5X the CCC)
Example: CCC @pH 7.4 and temp 22° C = 1.3 mg/L, then $1.3 \times 2.5 = \underline{\underline{3.25 \text{ mg/L TAN}}}$
 - * Oregon's chronic criteria duration is 4-days
- Generally, less stringent than Oregon's criteria
- Not necessary to account for early life stages of fish, since mussels are more sensitive than any early life stage of fish, regardless of temperature
 - * Oregon's chronic criteria are based on presence and absence of salmonids or other sensitive coldwater species

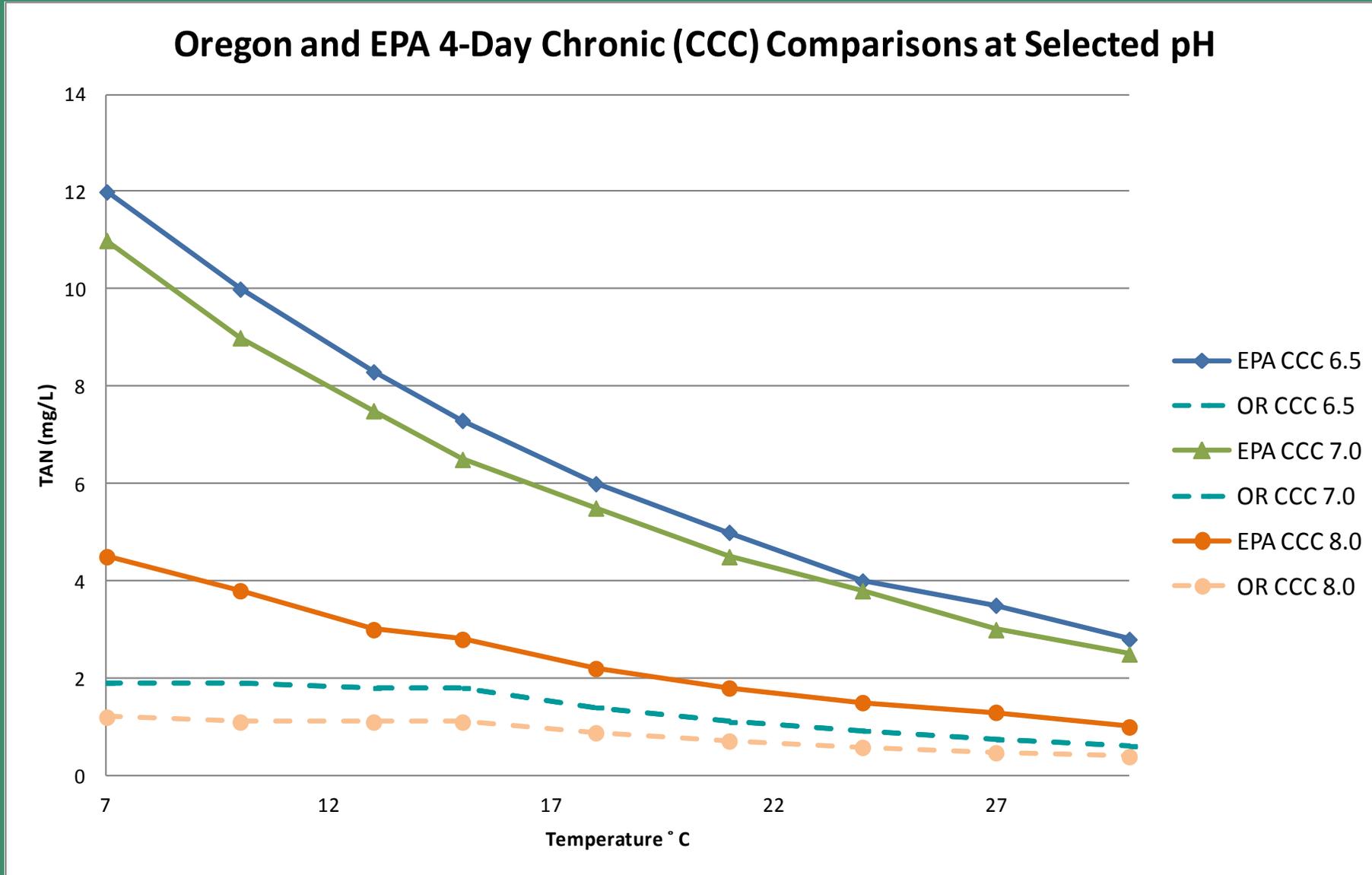
Proposed chronic criteria at selected pH values

EPA Aug. 2013 Chronic (CCC) 30-day Rolling Average* Criteria

*the highest four-day average within the 30-day averaging period should not be more than 2.5 times the CCC



Comparison between current and proposed chronic ammonia criteria



Note: The graph above shows Oregon's ammonia chronic criteria at pH of 6.5 and 7.0 on one line because they are almost identical. The graph shows Oregon's criteria based on salmonid presence. Presence or absence of salmonids is not applicable for the proposed chronic criteria. 30

Site-Specific Criteria for Ammonia

- May be developed where there are differences in sensitivity between the aquatic species that occur at a site and those used to derive the national criteria recommendations— “EPA’s Revised Deletion Process”
- Oregon is NOT proposing site-specific criteria for ammonia in waterbodies where mussels or snails are not present
 - Available information indicates that the current and historical presence of mussels and snails throughout Oregon is expansive
- DEQ’s proposal does not preclude the development of site-specific criteria

Site-Specific Criteria for Ammonia

- Mussels not present determination
 - Must use a scientifically robust survey method for mussels
 - EPA's *Technical Support Document for Conducting and Reviewing Freshwater Mussel Occurrence Surveys for the Development of Site-specific Water Quality Criteria for Ammonia*
- Site-specific criteria require EPA approval and are subject to ESA consultation requirements

Proposed Revisions to Toxics Rule OAR 340-041-0033

Toxics Substances

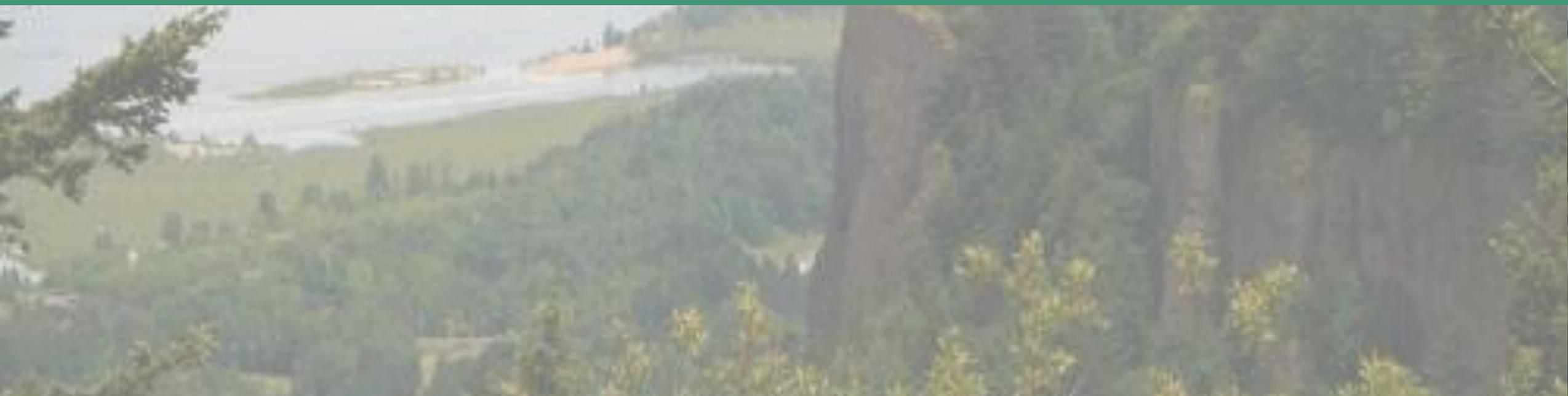
- Effectiveness Date: Following Environmental Quality Commission adoption and EPA approval.
 - Until then, ammonia criteria based on EPA 1985 recommendations continue to be effective
- DEQ is proposing to move Tables 30 (Aquatic Life Criteria), 31 (Guidance Values for Aquatic Life) and 40 (Human Health Criteria) to a separate rule in **OAR 340-041-8033**.
 - Table 30: edits to ammonia criteria and addition of three ammonia criteria tables
 - Minor non-substantive edits to Table 31 and no amendments to Table 40.
- Incorporate plain language into -0033 consistent with the Oregon Administrative Procedures Act.

Additional Considerations: NMFS and EPA Discussions

- NMFS and EPA are currently discussing whether EPA's 2013 criteria are protective of T&E salmon and trout in Oregon
- A “no jeopardy” decision from NMFS would likely lead to EPA approval of Oregon's proposed ammonia criteria



Implementation and Permitting Considerations

The image is a composite of two landscape photographs. The top photograph shows a wide view of a large, calm lake with a range of blue-toned mountains in the background. A small, light-colored building is visible on a hillside to the right. The bottom photograph provides a closer view of a lush green forested valley. In the distance, a lake is visible with a small island or peninsula in the middle. The overall scene is a natural, scenic environment.

Integrated Report

- Report on the condition of Oregon's waters
 - Section 305(b): overall condition of waters
 - Section 303(d): Impaired waters needing a TMDL
- 2010 Integrated Report
 - 15 waterbodies impaired for ammonia—5 need TMDLs, 10 approved TMDLs
- Following approval of ammonia criteria, DEQ will re-assess listings in the next cycle of the Integrated Report
 - DEQ may de-list waterbodies impaired for ammonia

Total Maximum Daily Loads (TMDLs)

- If a waterbody is listed for ammonia, DEQ must develop a TMDL
- DEQ may need to re-assess current TMDL wasteload and load allocations that DEQ developed for existing ammonia TMDLs
 - Could be based on the chronic 30-day rolling average, the 2.5 times the chronic criterion four-day average within the 30-day rolling average, or even the acute criteria duration based on a one-hour average

General Permits, Stormwater Permits, Construction Permits, MS4s, or 401 certifications

- Would likely not be impacted by the proposed ammonia criteria because they do not require ammonia monitoring

Overview of Impacts and Considerations

- Generally, facilities already with effluent limits for ammonia will not be greatly impacted
 - Most impacts are associated with increased monitoring requirements or additional water quality studies
- Some smaller facilities without effluent limits might have additional monitoring requirements that might result in effluent limits
- Ammonia criteria are multi variant
 - Ammonia criteria are temperature and pH sensitive
 - Ammonia criteria are lower at higher temperatures
- Due to anti-backsliding rules, in cases where the proposed ammonia criteria result in effluent limits that are less stringent than the current limits, DEQ would typically preserve the more stringent limits.

Characterization and Design Flow

- DEQ uses Reasonable Potential Analyses to model the potential impacts of the ammonia in the effluent upon the receiving waterbody
- When conducting water quality modeling, EPA recommends the use of one of the following design flows: 30Q5, 30Q10 or 30B3
- DEQ currently requires the use of 30Q5 and 7Q10 design conditions for human and aquatic criteria, respectively
- If the permit writer uses the 30Q5, DEQ must also demonstrate that a 7Q10 (the lowest average 7-day once-in-ten-year) is protective of 2.5 times the chronic criteria, to ensure that any short term (4-day) flow variability does not lead to shorter-term chronic toxicity.
- Permit Writers have discretion to select the appropriate design flow
- This might require some facilities to update their Mixing Zone/Water Quality Studies to reflect the appropriate design flow

Compliance Monitoring Requirements

- Compliance monitoring is used to ensure effluent limits for ammonia are met
- Currently, the amount of monitoring required is based upon a facility's flow capacity
 - larger facilities (4 per month) require more monitoring than smaller facilities (1-2 per month)
- Some smaller facilities might require additional monitoring requirements (up to 4 per month) to address the 30 day averaging period
 - <http://www.deq.state.or.us/wq/wqpermit/docs/TemplateGuidance/MonitorMatrix.pdf>

Characterization Monitoring Requirements

- Characterization monitoring is used to determine the amount of ammonia in the effluent and receiving waterbody
- Will require ammonia, pH and temperature data to complete water quality model
- Some smaller facilities might have additional monitoring requirements to ensure that there is sufficient data to adequately characterize the effluent and allow for averaging within a 30 day period.
- Currently, larger facilities typically have adequate amounts of characterization effluent monitoring although some additional ambient monitoring might be required
- DEQ permit writer will determine monitoring on a case by case basis
 - In some cases existing or extrapolated data sets would suffice

Implementation and Permitting Considerations

Water Quality Modeling

- DEQ will update RPA spreadsheet to incorporate new criteria
- <http://www.deq.state.or.us/pubs/reports.htm>
- Multiple design flow options (30Q5, 30Q10, 30B3, 7Q10)

RPA Spreadsheet domestic rev 3_5 with EDD - Microsoft Excel

Facility Name: Date: 8/9/2006

Dilution Values? (Y/N)			Rearing data				Effluent		Stream		Mixed				
Rearing Dilution @ ZID (1Q10)	Y	calculated								ZID	MZ				
Rearing Dilution @ MZ (7Q10)	4	*								1Q10	7Q10				
Spawning Dilution @ ZID (1Q10)	*	*								pH * =	7	7	7.0	7.0	(6.5-9)
Spawning Dilution @ MZ (7Q10)	*	*								Temp * =	22	22	22.0	22.0	° C
If no dilution values Enter flow rates here			Summer	Winter						Alkalinity =	75	25			
Effluent Flow (MGD)	*	*								Salmonids Present? (Y/N)	n/a	Y			
1Q10 (CFS)	*	*								Salmonid Spawning? (Y/N)	n/a	N			
7Q10 (CFS)	*	*								Fresh Water ? (Y/N)	n/a	Y			
% dilution at MZ	*	*								Salinity	*	*	*	*	
% dilution at ZID	*	*								Spawning data					
probability basis (WLA multipliers)	99%									pH * =	*	*	*	*	(6.5-9)
										Temp * =	*	*	*	*	° C
										Alkalinity =	*	*	*	*	
										Salmonids Present? (Y/N)	n/a	Y			
										Salmonid Spawning (Y/N)	n/a	Y			
										Fresh Water ? (Y/N)	n/a	*			
										Salinity	*	*	*	*	

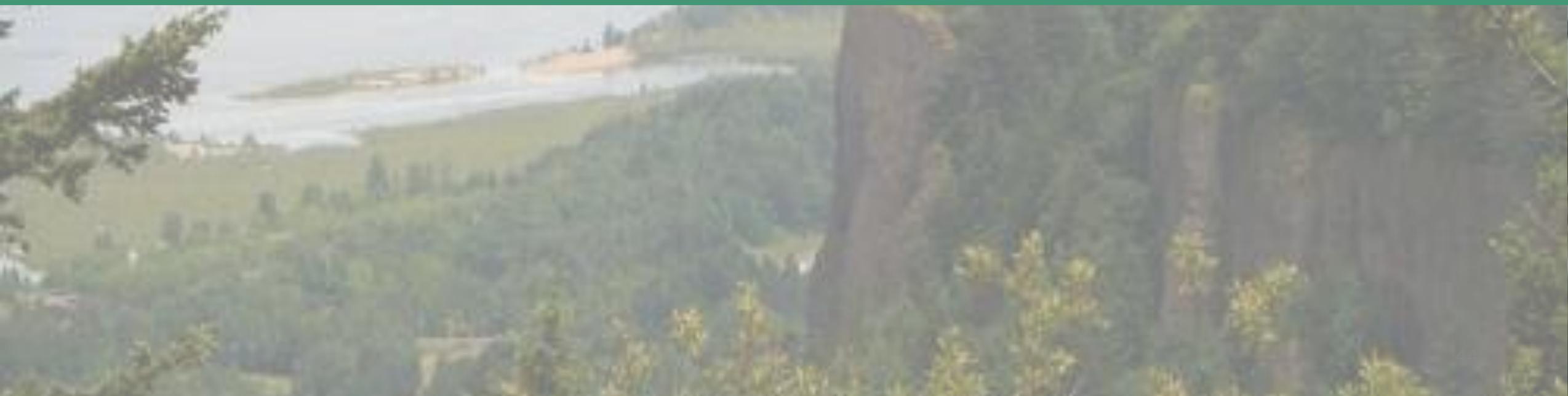
PARAMETER	WATER QUALITY CRITERIA			Back-ground mg/l	Allocations			CV	# Samples /Mo	Concentration Limits			Mass Limits		
	1 Hour (CMC) mg/l	4 Day (CCC) mg/l	30 Day (CCC) mg/l		Acute mg/l	4 Day mg/l	30 Day mg/L			Acute LTA mg/l	4 day LTA mg/l	30 day LTA mg/L	Min LTA mg/l	95% Monthly mg/l	99% Daily mg/l
Rearing Season															
CHLORINE	0.019	0.011	n/a	*	*	n/a	*	*	*	*	n/a	*	*	*	*
AMMONIA - Freshwater	16.7	1.1	n/a	0.10	33.29	3.95	n/a	*	*	*	n/a	*	*	#VALUE!	#VALUE!
AMMONIA - Saltwater	n/a	n/a	n/a	*	*	n/a	*	*	*	*	n/a	*	*	*	*
Spawning Season															
CHLORINE	0.019	0.011	n/a	*	*	n/a	*	*	*	*	n/a	*	*	*	*
AMMONIA - Freshwater	n/a	n/a	n/a	*	*	n/a	*	*	*	*	n/a	*	*	*	*
AMMONIA - Saltwater	n/a	n/a	n/a	*	*	n/a	*	*	*	*	n/a	*	*	*	*

NOTES :
 Temperature must be between 0 and 30 ° C
 pH must be between 6.5 and 9
 Ammonia is mg/l ammonia as N.

Saltwater Ammonia Criteria (taken from Ambient Water Quality Criteria for Ammonia (Saltwater) 1989)



Other Proposed Clarifications



Snake River pH Rule

- In 2003, DEQ inadvertently identified only certain river miles of Snake River for the pH criteria.
- Amending rule to correctly identify the entire main stem Snake River as DEQ has been implementing in practice.



West Division Main Canal Clarifications

- In 2012, EQC removed certain designated uses and adopted basin-specific criteria for irrigation canal in Umatilla Basin.
- EPA partially disapproved amendments for lower portion of canal.
- Revisions remove disapproved sections and reinstate designated uses and clarify those sections that only apply to upper canal.
- Also removed “modified aquatic habitat” from definitions section of standard.

Natural Conditions Criteria Clarifications

- In 2013, EPA disapproved the natural conditions criterion of the temperature standard and statewide natural conditions criterion.
- Adding notes clarifying that these rules are no longer effective for Clean Water Act purpose (e.g., permitting, TMDLs).

Contacts

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DEQ Water Quality

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<http://www.oregon.gov/deq/WQ/Pages/Standards/ammonia.aspx>

Water Quality Standards Revisions for Freshwater Ammonia 2014

Mark your calendars to hear more about these proposed revisions

Ammonia Webinar—September 10, 10-12 PDT

[Agenda and Instructions to Attend Webinar](#) **NEW**

Presentation - posted next week

DEQ is initiating a rulemaking to address [EPA's Jan. 31, 2013 disapproval of ammonia criteria](#) that DEQ adopted in 2004. Oregon's adopted criteria were based on EPA's 1999 recommended criteria, which did not take into consideration ammonia toxicity to certain kinds of freshwater mussels and snails. EPA has since updated its national recommendation for ammonia in response to new mussel and snail sensitivity data, and published final revised criteria in the [Federal Register on August 12, 2013](#). As part of the rulemaking, DEQ is also proposing to correct an error to the basin-specific criterion for pH for the main stem Snake River, which DEQ inadvertently limited to a portion of the basin during a rule update in 2003. In addition, DEQ is proposing to correct or clarify portions of water quality standards that EPA recently disapproved.





<http://www.oregon.gov/deq/RulesandRegulations/Pages/default.aspx>

Pendleton Round-Up
September 10-13, 2014

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Rules and Regulations



DEQ implements Oregon environmental laws through its rules, which make up Chapter 340 of the Oregon Administrative Rules. DEQ authority to develop rules and related programs comes from the Oregon Legislature. DEQ often seeks public involvement during rule development by establishing advisory committees, holding information meetings, holding public hearings and inviting public comment. The Environmental Quality Commission is the formal policy and rulemaking body for DEQ that adopts or repeals proposed rules before they become effective.

Proposed and Adopted Rules

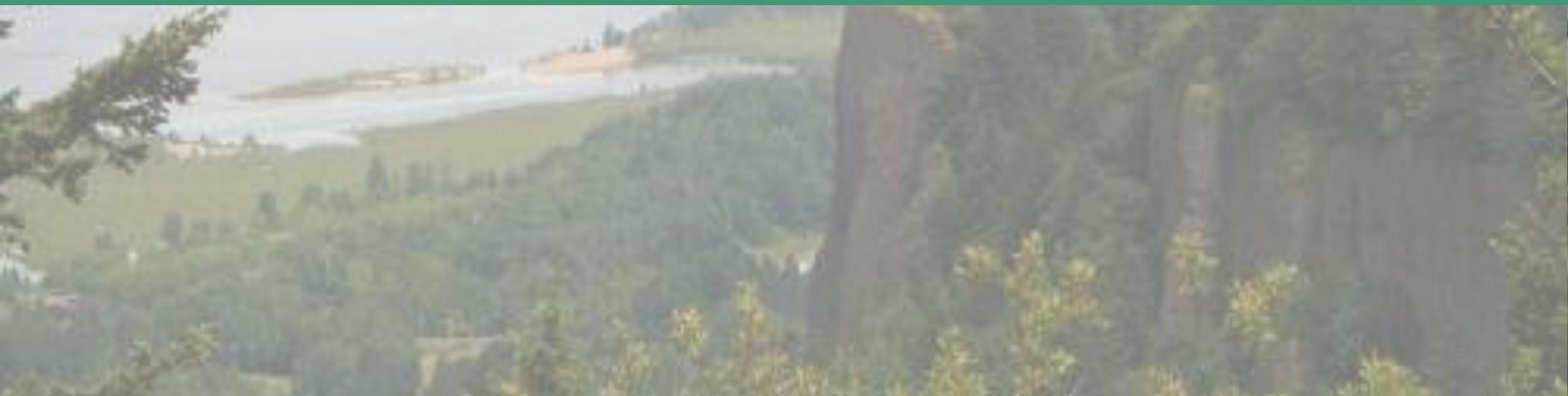
- [Rulemaking Advisory Committee](#)
- [Rulemaking Proposals](#)

Authorizations

- [Oregon Administrative Rules](#)
- [Oregon Revised Statutes](#)
- [Administrative Procedures Act](#)



Question and Answer Session



Overview and Objectives

To ask questions:

