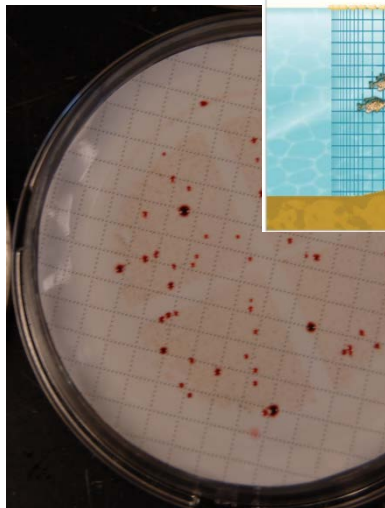
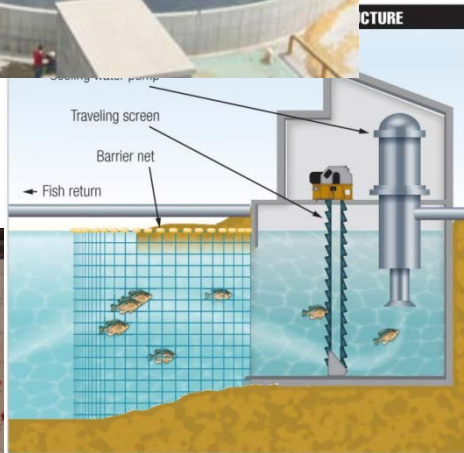


Water Regulatory Developments and Other Issues of Regional Interest

**NCASI 2016 West Coast Regional Meeting
Vancouver, Washington**

Paul Wiegand, Vice President Water Resources & Director,
Northern and Western Regions

Water-Related Regulatory Developments



- effluent guidelines review and planning
- EPA Water Quality Standards Regulation Revisions
- EPA HHWQC Recommendations
- cooling water intake structures: NCASI – Q/A Document
- criteria for indicator bacteria
- select NCASI work products
- Agenda 2020 on Water Reduction

Effluent Limitations Guidelines



- EPA conducts an annual review and prepares ELG plans every 2 years
- pulp and paper figures prominently because of TRI and DMR reports and relatively large wastewater volumes
- EPA's current interest:
 - lead
 - manganese
 - mercury
 - hydrogen sulfide
 - cadmium
 - selenium

Effluent Limitations Guidelines



- EPA's 2016 Program Plan will indicate that further review of pulp, paper, paperboard category is underway. Results reported in 2017 Review.
- EPA appears to:
 - ✓ have sufficient information: lead, mercury, and H₂S
 - ? need more information: manganese, cadmium, selenium
- EPA interested in sources, fate, treatment technology
- NCASI staff preparing information to share with EPA

EPA Water Quality Standards Regulatory Revisions

Finalized in August 2015 (CC 15-012)



- Administrator's determination
- designated uses
- triennial reviews

- anti-degradation
- variance provisions
- compliance schedules

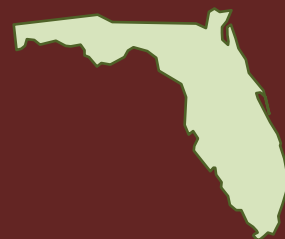
Watch for possible changes to State Water Quality Programs

EPA Human Health-based Water Quality Criteria

$$AWQC = R_{fd} \cdot RSC \cdot \left(\frac{BW}{DI + \sum_{i=2}^4 (FI_i \cdot BAF_i)} \right)$$

$$AWQC = RSD \cdot \left(\frac{BW}{DI + \sum_{i=2}^4 (FI_i \cdot BAF_i)} \right)$$

States that are currently very active



Florida



Idaho

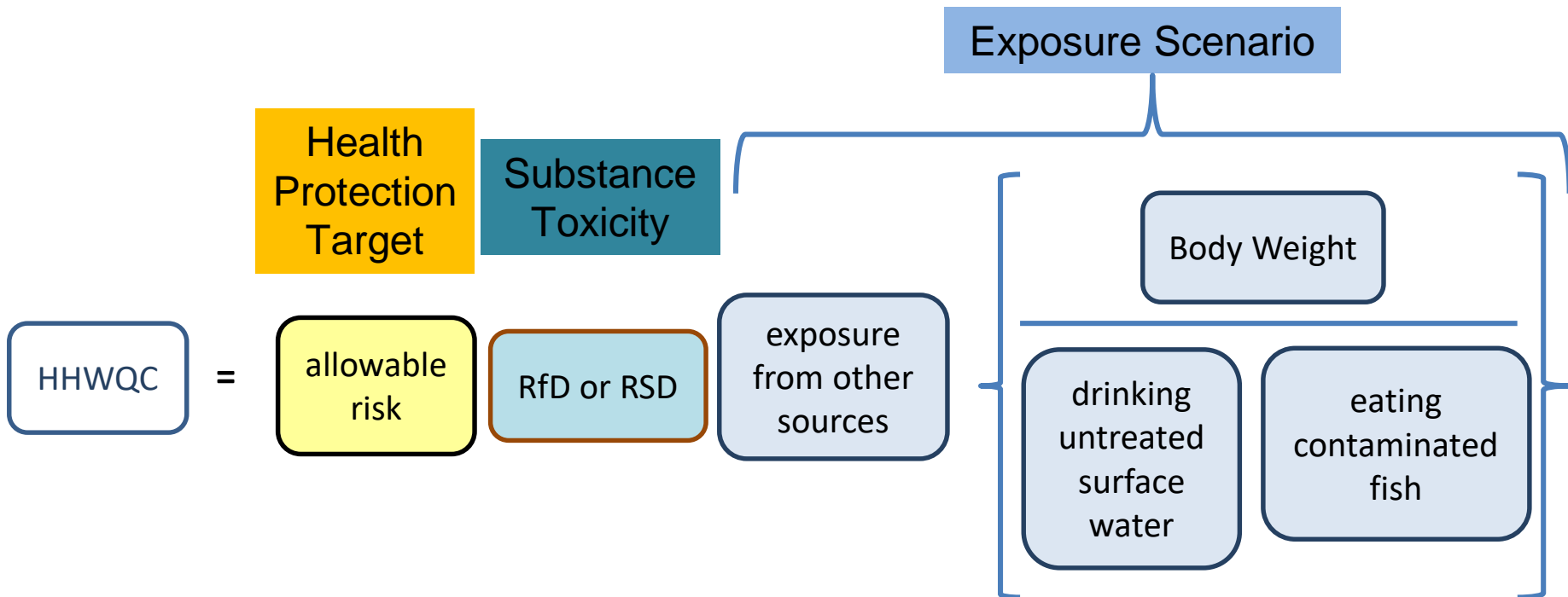


Maine



Washington

HHWQC Derivation



Examples of Risk Choices

State	risk level	population target
FL	10^{-6} 10^{-5} 10^{-4}	general population (avg.) high exposure (90 th %) subsistence fisher
WA	10^{-6}	higher tribal exposure
ID	10^{-5}	medium tribal exposure
OR	10^{-6}	higher tribal exposure
EPA default (2015)	(10^{-6}) 10^{-7} to 10^{-4}	general population to subsistence fisher

Some Fish Consumption Rates

State/Tribe	FCR, grams/day	Comment
WA	6.5	proposing 175 g/day
FL	24 (90 th %ile)	rule being challenged
ME	32.4	EPA proposing 286 g/d (unsuppressed)
NY	33	
ID	66.5	proposed tribal rate
OR	175	
EPA default (2015)	22	Based on USDA survey
EPA (subsistence fishers)	142.4	
Spokane Tribe	865	Federally recognized tribe

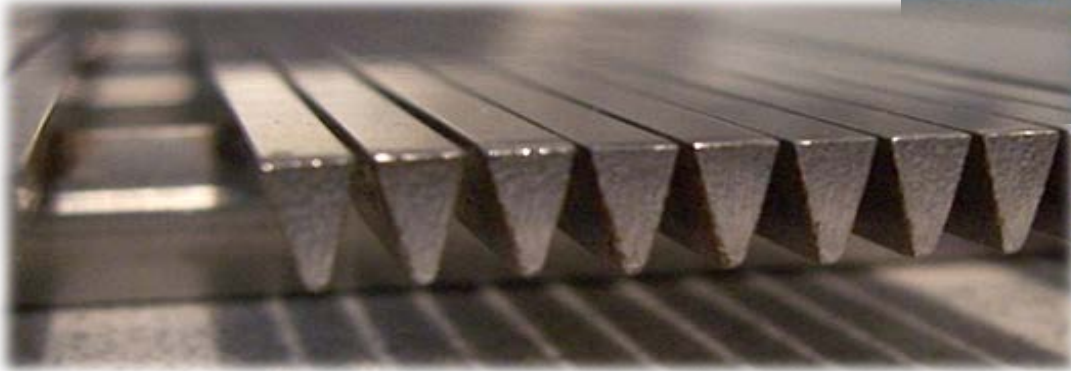
Accounting for other exposure Relative Source Contribution (RSC) (non-water/drinking water)

State/Tribe	RSC	Comment
EPA default (2000)	mostly 1.0	
EPA default (2015)	mostly 0.2	
WA	1.0	
FL	mostly 0.2	rule being challenged
OR	1.0	
ID	mostly 0.2	proposed

Accounting for bioaccumulation

State/Tribe	BAF or BCF	Comment
EPA default (2000)	BCF	
EPA default (2015)	BAF	
WA	BCF	
FL	BAF	some minor modifications rule being challenged
OR	BCF	
ID	BAF	proposed

316(b) Cooling Water Intake Structure Rule



Finalized August 2014 (CC 14-008)

Possible requirements in next permit application

**Webcast: Cooling Water Intake Structure Rule Q&A,
November 2, 2015**

NCASI CWIS Q/A Document

Home > Programs > Water Quality & Aquatic Biology > Cooling Water Intake Structure Rule

Water Quality & Aquatic Biology

News & Notes

Cooling Water Intake Structure Rule

Wastewater & Effluent Constituents

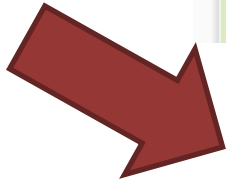
Treatment Plant

Cooling Water Intake Structure Rule

In 2014, EPA finalized its 316(b) cooling water intake structure rule applicable to manufacturing facilities. The rule is designed to protect fish and other aquatic species from impingement on screens associated with surface water intake structures and entrainment of species that might pass through screens and into cooling water systems. Specific rule provisions are found in 40 CFR Parts 122 and 125, and these are summarized in [NCASI Corporate Correspondent Memorandum No. 14-008](#).

Following promulgation of the rule, NCASI assembled a living [Q&A document](#) (currently version 1.0, released September 2015) intended to provide information about certain

[Download the latest version of Questions and Answers on EPA's Section 316\(b\) Rule for Cooling Water Intake Structures \(PDF\)](#)



Questions and Answers on EPA's Section 316(b) Rule for Cooling Water Intake Structures (CWIS)

Introduction

Important Definitions

What is actual intake flow and how is it measured?

What is the definition of cooling water?

What are the boundaries defining a cooling water intake structure (and how might this definition be affected by EPA's "waters of the United States" rulemaking)?

How are entrainment, entrapment and impingement defined in the rule?

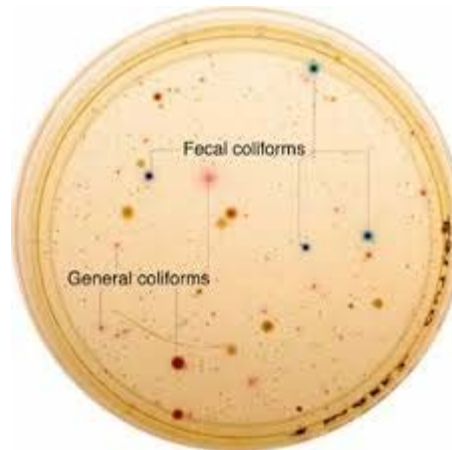
General Applicability

Controls for Cooling Water Intake Structures

etc., etc.

EPA's 2012 Recreational Water Quality Criteria

Criteria Elements	Recommendation 1 (estimated illness rate 36/1000)		Recommendation 2 (estimated illness rate 32/1000)	
	Indicator Bacteria	GM ^a (cfu/100 mL)	STV ^b (cfu/100 mL)	GM ^a (cfu/100 mL)
Enterococci (fresh and marine)	35	130	30	110
<i>E. coli</i> (fresh)	126	410	100	320



^a GM = geometric mean

^b STV = statistical threshold value

*More to Come
in the Session!*

Select NCASI Work Products

- Aerated Stabilization Basin (ASB) Operations (recorded webcasts)
 - Primer Workshop (September 21, 2015)
 - Advanced Workshop (June 20, 2016)
 - Contemporary Operational Issues (September 26, 2016)
- NCASI guidance ASB operation during and following extended mill process outages ([http://www.ncasi.org/News/NCASI-Bulletin-Board/42-04/NCASI-guidance-for-aerated-stabilization-basin-\(ASB\)-operation-during-and-following-extended-mill-process-outages.aspx](http://www.ncasi.org/News/NCASI-Bulletin-Board/42-04/NCASI-guidance-for-aerated-stabilization-basin-(ASB)-operation-during-and-following-extended-mill-process-outages.aspx))
- Effluent Color Management and Reduction Workshop (October 13, 2015 <http://www.ncasi.org/Events/Workshops/2015-10-13-Effluent-Color-Management-and-Reduction-Workshop.aspx>)
- Aquatic Toxicity Identification and Reduction Evaluations: Understanding Bioassay Results webcast (September 16, 2015 <http://www.ncasi.org/Events/Webcasts/2015-09-16-Aquatic-Toxicity-Identification-and-Reduction-Evaluations.aspx>)

Agenda 2020 Technology Alliance

- Sustainability—Fresh water goals:
 - Reduce fresh water use by 50% per ton, saving 480 billion gal annually
 - Accelerate rate of decline in P&P intake of fresh water
- Research Roadmap effort
 - Co-chaired by NCASI
 - Supported by companies
 - Grant from NIST
- Free for download at www.agenda2020.org
- Engage! Participate!

