

Sediment Management Standards Rule Revisions

Freshwater Sediment Standards

*How can the SMS be revised to provide
sediment cleanup standards in fresh water
environments?*

**Russ McMillan
Sediments Unit**

Freshwater Standards

Goals for the group

- **For Today - Comments on the proposed:**
 - **Bioassays**
 - **End points**
 - **Interpretive criteria**
- **For the Future:**
 - **Topics for further discussion**

Freshwater Standards Issue

- **Lack of freshwater chemical or biological criteria.**
- **Limited to a narrative standard.**
- **Developmental documents available.**
- **Use of BPJ and BAS – site specific, no predictability for PLP.**

Freshwater Standards History

1997 – 1st FW Sediment Quality Values

2003 – Next set of SQVs generated

- **Evaluated reliability**
- **Data lacked desired geographic scope, range of chemicals & chronic endpoints**
- **Represented the best available science, used on case by case**

Freshwater Standards History

- **Program renewed in 2007 by RSET**
 - **Oregon, Idaho & Washington**
 - **Sediment Evaluation Framework for Dredging Disposal**
 - **Targeted resolution of 2003 data problems**
 - **Re-examined Reliability Testing**
 - **Looked at data from east & west of Cascades**

Freshwater Standards History

- **2008 SQVs presented**
- **AETs using Floating Percentile Method**
- **Continuing Discussions**
 - **Level of protection (organism vs community)**
 - **Predictive ability diff. bioassays/endpoints**
 - **Include all or only reliable bioassays**
 - **Recent movement has occurred**

Freshwater Standards

Where are we now?

- **Ecology reviewed SQGs progress**
 - **Numeric criteria development and review are still in process**
 - **Choice of bioassay organisms and endpoints well established**

Freshwater Standards

Where are we now?

Options:

- **Promulgate chemical criteria.**
- **Promulgate biological criteria.**
- **Promulgate both chemical and biological criteria.**
- **Clarify where in SMS chemical and biological criteria apply.**

Freshwater Standards Discussion

- **Comments on the proposed:**
 - **Bioassays**
 - **End points**
 - **Interpretive criteria**
- **For the Future:**
 - **Topics for further discussion**

Test	QA limits Control	QA limits Reference	SQS	CSL
<i>Hyalella azteca</i> *10-day mortality	$C \leq 20\%$	$R \leq 25\%$	$T - R > 10\%$	$T - R > 25\%$
<i>Hyalella azteca</i> *28-day mortality	$C \leq 20\%$	$R \leq 30\%$	$T - R > 10\%$	$T - R > 25\%$
<i>Hyalella azteca</i> **28-day growth	$CF \geq 0.15 \text{ mg/}$	$RF \geq 0.15 \text{ mg/}$	$T/R < 0.75$	$T/R < 0.6$
<i>Chironomus tentans</i> *10-day mortality	$C \leq 30\%$	$R \leq 30\%$	$T - R > 10\%$	$T - R > 25\%$
<i>Chironomus tentans</i> **10-day growth	$CF \geq 0.48 \text{ mg/}$	$RF/CF \geq 0.8$	$T/R < 0.8$	$T/R < 0.7$
<i>Chironomus tentans</i> *20-day mortality	$C \leq 32\%$	$R \leq 35\%$	$T - R > 15\%$	$T - R > 25\%$
<i>Chironomus tentans</i> **20-day growth	$CF \geq 0.48 \text{ mg/}$	$RF/CF \geq 0.8$	$T/R < 0.75$	$T/R < 0.6$
Microtox® **15min decrease in luminescence	$CF/CI \geq 0.72$	$RF/CF \geq 0.8$	$T/R < 0.85$	$T/R < 0.75$

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Next Steps

- Topics
- Date for follow-up on FW