



STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

PO Box 47600 • Olympia, WA 98504-7600 • 360-407-6000

711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

**WAC 197-11-980 Determination of significance and scoping notice (DS).**

**Revisions to the Sediment Management Standards (Chapter 173-204 WAC)**

**DETERMINATION OF SIGNIFICANCE**

**AND REQUEST FOR COMMENTS ON SCOPE OF EIS**

**Description of proposal**

Sediments in areas of Puget Sound and in freshwater bodies throughout Washington State are known to be contaminated with toxic substances such as petroleum-derived compounds, chlorinated organic compounds, and metals. Many contaminants are present at higher concentrations in sediment than in the associated water column because the contaminants do not dissolve easily and tend to adhere to sediment particles. Most of the impacted sediments are located in productive near shore and estuarine areas where they pose risks to human health and the environment.

The Sediment Management Standards (SMS) have provided a solid foundation for making decisions to cleanup and manage sediments throughout the state. Ecology has found that the SMS decision framework works well when making decisions based on acute and chronic ecological risks to the benthic community (sediment toxicity) in marine environments. However, the current SMS rule does not work as well when making decisions at sites located in freshwater and/or where bioaccumulatives are chemicals of concern. Thus, Ecology has felt the need to undertake revisions to the current SMS rule with the following overarching objectives in mind:

- Establish clear methods and policies for selecting sediment cleanup standards based on human health risks.



- Establish clear requirements for sediment cleanup standards at freshwater sediment sites by adopting biological and chemical criteria for the protection of freshwater benthic communities.
- Establish a clear path for reaching cleanup decisions and liability resolution that takes into account background concentrations and ongoing discharges.
- Update the procedures for synchronizing cleanup actions and source control requirements at sites where cleanup requirements are based on human health protection.

The State Environmental Policy Act (SEPA, Chapter 43.21C RCW) and SEPA rules (Chapter 197-11 WAC) requires that an Environmental Impact Statement be prepared for proposed rulemaking with probable significant adverse effects on the quality of the environment. Ecology has determined that because of the controversial nature of the rule making and in order to provide as much information as possible to aid in decision making, an Environmental Impact Statement (EIS) would be necessary. The proposal therefore is for Ecology to prepare an EIS to assess the impacts associated with Ecology's proposal to amend the Washington Sediment Management Standards (SMS, Chapter 173-204 WAC). The amendments define procedures for establishing cleanup standards and conducting cleanup actions for both freshwater and marine sediments, based on protection of both human health and the environment. The EIS will evaluate the potential adverse environmental impacts associated with implementing sediment cleanup actions under several alternate approaches. The choice of approach will influence the nature, magnitude and probability for adverse requirements by specifying requirements for sediment cleanup standards. Adverse impacts fall into two broad categories:

- Impacts Due to Residual Concentrations. Environmental impacts may be caused by residual sediment concentrations that remain following the completion of cleanup actions. The long term impacts are associated with residual contamination levels are directly related to the relative stringency of the cleanup standards for a particular site.
- Impacts Due to Cleanup Actions. Environmental impacts may also be caused by the cleanup technologies used to complete cleanup actions. Short-term impacts associated with completing a cleanup action are generally inversely related to the relative stringency of the cleanup standards for a particular site.

The document will also present an analysis of how the alternatives would affect cleanup levels through evaluation of case studies.

## **Proponent**

Department of Ecology

## **Location of proposal**

statewide

## **Lead agency**

Department of Ecology

*EIS Required. The lead agency has determined this proposal is likely to have a significant adverse impact on the environment. An environmental impact statement (EIS) is required under RCW 43.21C.030 (2)(c) and will be prepared. An environmental checklist or other materials indicating likely environmental impacts can be reviewed at our offices.*

## **The lead agency has identified the following areas for discussion in the EIS:**

Ecology is proposing that five alternative approaches be evaluated to establish cleanup standards based on human health risks, and five alternative approaches to establish requirements for cleanup standards for freshwater sediment sites, are in the EIS. The alternatives considered are described below:

### Human Health Alternatives

Alternative 1: Current rule (the No Action Alternative). Ecology would not adopt new sediment cleanup standards. Sediment cleanup standards would continue to be based on benthic toxicity (existing chemical and biological criteria in the SMS), the SMS human health narrative standard ("no significant human health risk"), legally applicable requirements (including MTCA and the Water Quality Standards for Surface Waters).

Alternative 2: Risk-Based Concentrations Based on Reasonable Maximum Exposure. Sediment cleanup standards for human health protection would be similar to those in the MTCA Cleanup Regulation. However, risk based concentrations would not be adjusted to reflect non-anthropogenic background concentrations, MTCA natural background, or a practical quantitation limit (PQL). Also, risk based concentrations would not be adjusted to reflect cost, technical feasibility or net environmental protection.

Alternative 3: Risk-Based Concentration Based on Federal CERCLA Requirements. Sediment cleanup standards for human health protection would be set using the policies and methods specified in the National Contingency Plan and relevant EPA risk assessment guidance.

Alternative 4: Regional Background and Practical Quantitation Limit. Sediment cleanup standards for human health protection would be set at concentrations equal to the highest of regional background or PQL.

Alternative 5: Combination. Sediment cleanup standards for human health protection would be set in a manner that assures protection of human health and compliance with ARARs, and allows for consideration of both natural and regional background concentrations of hazardous substances in the environment. This alternative would be established within the current two-tier SMS framework that allows sediment cleanup standards to be set within a range between an upper and lower bound. The upper bound would be the highest of risk based concentrations, regional background, and the PQL. The lower bound would be the highest of a risk based concentration, natural background, and the PQL. This alternative would allow PLPs to reach a liability settlement for their site if the cleanup standard for their site is met and sources controlled.

#### Freshwater Sediment Alternatives

Alternative 1: Current Rule (the No Action Alternative). Under this alternative, Ecology would not adopt new standards for the protection of the freshwater benthic community. Sediment cleanup standards for freshwater sediments would continue to use Ecology's 2003 guidance values or establish standards on a site specific basis using the current SMS framework for SQS ("no adverse effects") and CSL/MCUL (minor adverse effects), or using other sediment quality values in published literature.. Evaluation of freshwater sediments would rely on biological testing for confirmation of sediment quality.

Alternative 2: Minimize False Negatives (10% False Negative Rate). Freshwater sediment standards would be based on both chemical and biological criteria. Chemical criteria would be based on an expanded data set of over 500 paired chemical and biological sampling stations from a wide geographic area and summarized in the 2011 Michelsen report. Individual criteria would be based on the floating percentile method using a false negative rate of 10%. Biological criteria would be based on expanded suite of freshwater sediment bioassays.

Alternative 3: Minimize False Positives (30% False Negative Rate). The same methods would be used to establish freshwater sediment standards under this alternative as described for Alternative 2; however, chemical criteria would be based on the floating percentile method using a false negative rate of 30%.

Alternative 4: Balance False Negative and False Positive Rates (20% False Negative Rate). The same methods would be used to establish freshwater sediment standards under this alternative as described for Alternative 2; however, chemical criteria would be based on the floating percentile method using a false negative rate of 20%.

Alternative 5: Establish Only Biological Criteria. Cleanup standards for freshwater sediments would continue to be established on a site-specific basis using the current SMS narrative standard for SQS ("no adverse impacts") and CSL/MCUL (minor adverse impacts). However, biological criteria for a standard suite of biological tests would be established and provide consistency across the state for the types of tests required and interpretive criteria that are applied. Biological criteria would be established using the expanded suite of biological tests developed for freshwater Alternatives 1 through 4.

**Scoping.** *Agencies, affected tribes, and members of the public are invited to comment on the scope of the EIS. You may comment on alternatives, mitigation measures, probable significant adverse impacts, and licenses or other approvals that may be required. The method and deadline for giving us your comments is:*

**Submit Your Comments**

The public comment period ends May 31, 2012.

You can give us your official comments in the following ways:

1. Email your comments to: [ador461@ecy.wa.gov](mailto:ador461@ecy.wa.gov)
2. Fax your comments to: (360) 407-7154
3. Mail comments to: Department of Ecology

Toxics Cleanup Program  
Adrienne Dorrah  
PO Box 47600  
Olympia, WA 98504-7600

**Responsible official:** Jim Pendowski

**Position/title:** Program Manager

**Phone :** (360) 407-7177

**Address :** Department of Ecology  
Toxics Cleanup Program  
PO Box 47600  
Olympia, WA 98504-7600

**Date & Signature:**

5/14/12 

**(optional)**

You may appeal this determination of significance

to Chance Asher at Department of Ecology  
Toxics Cleanup Program  
PO Box 47600  
Olympia, WA 98504-7600

no later than May 31, 2012

by Email to: [cash461@ecy.wa.gov](mailto:cash461@ecy.wa.gov)

Fax : (360) 407-7154 Attention: Chance Asher

You should be prepared to make specific factual objections.

**Contact to read or ask about the procedures for SEPA appeals.**

Bari Schreiner: (360) 407-6998. There is no agency appeal.

[Statutory Authority: RCW 43.21C.110. 84-05-020 (Order DE 83-39), § 197-11-980, filed 2/10/84, effective 4/4/84.]

