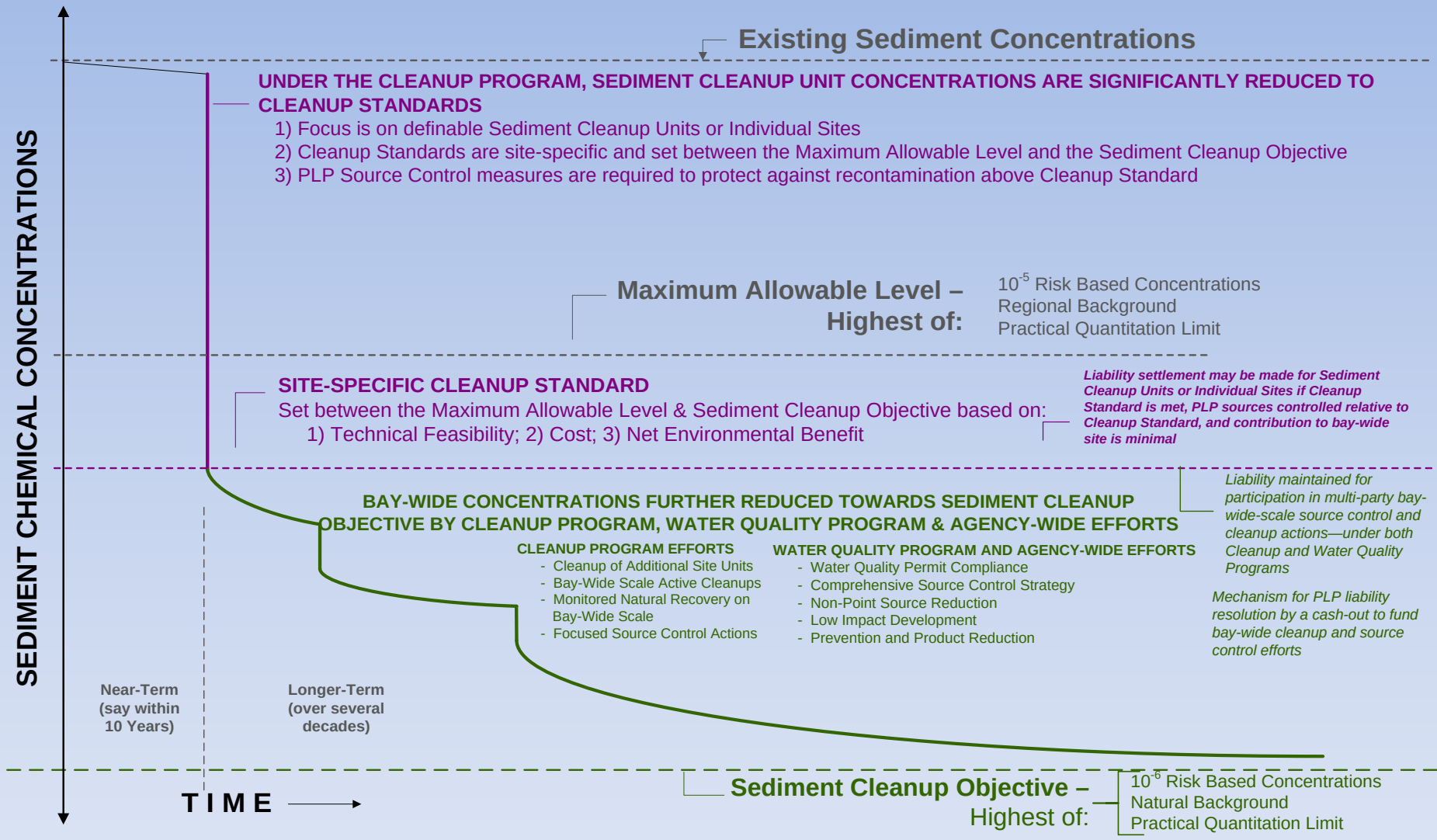
Source Control Issues Associated With SMS Rule Revisions

December 9, 2011

Ecology Cleanup Program Proposal



Operating Premises

- Wide range of actions will be needed over several decades to achieve sediment quality goals
- Source control measures are critical components of both short- and long-term strategies
  - Near-term – Reduce ongoing discharges and protect cleanup investments by minimizing recontamination
  - Long-term – Attain/maintain sediment quality standards
- Most early cleanup actions will become recontam-inated with lower levels of hazardous substances
- Early sediment cleanup actions can provide important environmental benefits
  - Five steps forward is worthwhile even if recontamination eventually results in one step back.

Source Control Concerns/Feedback (Meetings #1 and #2)

- Importance: Source control is a critical part of a successful program.
- Multiple Rule Processes: It is unclear whether and where various source control issues are being addressed.
- Cross-Program Coordination: It is unclear how the Water Quality and Toxics Cleanup Programs are working together.
- Willy-Nilly Approach to Source Control: Cleanup should be integrated with a comprehensive source control approach .
- Rule Ambiguity: Many general source control concepts and limited details in SMS rule. For examples:
  - Basic definition of terms such as source, pathway, control.
  - Investigations
  - Recontamination

Purpose of December 9 Discussion

- Discuss relationship between SMS rule revisions and current and future revisions to Water Quality Standards (WQS) rule.
- Discuss how the Water Quality Program and Toxics Cleanup Program are working together on these issues.
- Feedback on broader activities that Ecology needs to be considering to minimize recontamination and further reduce regional sediment concentrations.
- Feedback on source control issues and information that Ecology/PLPs need to be considering when making decisions on sediment cleanup units.

Relationships Between Multiple Processes

SMS Rule Revisions	WQS Rule Revisions	Guidance/implementation
Focus on cleanup sites	**All Washington waters**	**Both**
Establish decision framework for bioaccumulative chemicals that considers health risks and background	**Phase I – Implementation Tools (2012)**	Cross-program coordination on implementing current programs and longer-term programs/requirements
Update fish consumption rates (informed by FCR process)	Update implementation tools (e.g. variances and compliance schedules).	Options for using the cleanup action plan to define source control requirements
Chemical & biological criteria for freshwater sediments.	**Phase II – Update WQ Criteria (2012-2014)**	Relationship between TMDL & sediment cleanup actions
Clarify coordination between source control and cleanup actions. • RI requirements to identify ongoing sources/ pathways to cleanup sites • PLP source control during remedy selection	Place HHCriteria into WQS (FCR and Risk level decisions will drive criteria calculation) (informed by results from FCR and SMS rule process)	Administrative tools for source control at cleanup sites (permits vs MTCA)
		Other guidance materials - Human health risk, compliance methods, background levels

Cross-Program Coordination

- Programmatic:
  - Rule coordination/information sharing
  - Explore options for using the cleanup action plan to define source control requirements needed to prevent or minimize recontamination
  - Review the procedures and policies relevant to listing water bodies on the 303(d) list
- Ongoing site-specific work:
  - Lower Duwamish Waterway - Source Control Strategy
  - Commencement Bay – 20 years of experience
  - Spokane River – Urban Waters Initiative

Cross-Program Issues and Concerns

- Implementation of current rules
  - How can we incorporate sediment-related source control requirements into permits?
  - Who writes NPDES permits at cleanup sites?
  - Procedures and policies relevant to listing water bodies on the 303(d) list
- Rule revisions
  - Differences and similarities in fish consumption rates and other risk parameters.
  - Definition and role of background levels.
  - Future impacts of water quality rules on sediment cleanup actions.
  - Compliance time frames under the two rules.

Advisory Committee Ideas on Broader Source Control Strategies

- TMDL
  - More comprehensive approach for identifying sources – foundation for unit cleanups
  - Revisions to procedures for placing sediment cleanup sites into Category 4(b) of the 303(d) list
  - Resources
- Source tracing/identification
  - Tacoma
  - Spokane
  - Lower Duwamish Waterway

Advisory Committee Ideas on Broader Source Control Strategies (cont.)

- Product bans
  - National level – TSCA reform
  - State level – PBT chemical action plans and chemical-by-chemical legislation.
  - Local??
- Indirect dischargers to POTWs
  - Source tracing/identification
  - Inspections/technical assistance
  - Revisions to state or local rules
- Air deposition
  - Studies
  - Regulation of sources

Source Control Issues for Sediment Cleanup Units

- Rule and agency implementation needs to reflect a sophisticated understanding of sources and pathways.
- Rule and agency implementation needs to acknowledge the realities of recontamination and the trade-offs involved with pursuing sediment cleanups in the face of ongoing releases.
  - Information and decisions
  - Liability implications
- Rule and agency implementation need have a more systematic and transparent strategy for translating source control needed for cleanup sites or units into source control actions.
  - Bottom-up
  - Top-down

Source and Pathway Categories

Categories	Sources	Pathways	Control Options	Regulatory Options
MTCA upland sites – adjacent to sediment site	MTCA Site	soil- > GW or SW > sediments	Removal, treatment, contain	MTCA agreed order or decree
Industrial point sources				NPDES permit
Contaminated soils	Soil	Soil > surface runoff > storm drains > sediments	Soil removal or capping, street sweeping, storm drain cleaning, etc.	Local ordinances, MTCA, NPDES
Consumer products (such as phthalates in plastics)	Product	Product > air > particulate > surface runoff > stormwater > sediments	Product ban, air controls, surface water controls, etc.	National, state or local legislation, air controls, etc.

Recontamination – Phthalate Example

- Phthalates move from PVC products into the air and eventually to sediments where they can build up to levels above SMS criteria.
- Studies found that phthalates reaccumulated to levels above SMS criteria after cleanup actions were completed in the Thea Foss and Lower Duwamish.
- Sediment Phthalate Work Group report and recommendations include:
  - Confirmed research and identified information needs.
  - Recommended that initial sediment cleanups should not be delayed due to concerns about potential phthalate contamination.
  - Recommended that agencies develop and/or modify current regulatory framework to address unavoidable impacts that can not be controlled or mitigated.

Next Steps

- Review comments from meetings and written comments
- Agency plans:
  - TCP/WQP will explore options for using the cleanup action plan to define source control requirements needed to prevent or minimize recontamination
  - WQP/TCP will review the procedures and policies relevant to listing water bodies on the 303(d) list
  - Continued cross-program work in multiple areas