Sediment Remedy Effectiveness Retrospective Workshop

Seattle, Washington | June 12, 2019

Objective of Workshop

- To collaboratively review robust sediment cleanup remedy effectiveness case studies to more broadly develop knowledge to inform future sediment cleanup remedies

Topics For Each Case Study

- Objectives of remediation
- Summary of completed early or final remedy (e.g., scope, date completed)
- Significant remedy scope or schedule deviations from what was originally envisioned?
- When were external sources characterized and addressed?
- Primary pre- and post-remedy effectiveness monitoring elements (for primary chemical of concern monitored)
- Did the remedy achieve short- and/or long-term remediation objectives for surface sediment?
- Is the remedy on track to achieve long-term remediation objectives for water and/or biota?
- Key take-home messages on overall lessons learned

Case Studies

- Bellingham Bay, WA – Pete Adolphson, WA State Department of Ecology
- St. Paul Waterway, WA – Dave McEntee, Simpson Lumber Co.
- Eagle Harbor, WA – Helen Bottcher, USEPA R10
- Sinclair Inlet, WA – Bob Johnston, Applied Ecological Solutions (US Navy SPAWAR, Retired)
- McCormick & Baxter, OR – Kevin Parrett, OR Department of Environmental Quality
- Lavaca Bay, TX – Gary Baumgarten, USEPA R6
- Ottawa River, OH – Scott Cieniawski, USEPA GLNPO and Marc Mills, USEPA ORD
- Hudson River, NY – Marc Greenberg, USEPA OLEM/OSRTI/TIFSD/ERT
- Fox River, WI – Paul Montney, Georgia-Pacific Consumer Products
- Onondaga Lake, NY – Betsy Henry, Anchor QEA
- Lower Duwamish Waterway, WA – Elly Hale, USEPA R10 and Kathy Gottfredson, Windward Environmental
- Regional Biological Receptor and Sediment Relationships – Clay Patmont, Anchor QEA and Jeff Stern, King Co.

Overview of Key Findings

- Source control was of primary importance
- Early or interim actions often resulted in significant progress toward meeting remedial objectives
- At several sites, adaptive management in various forms was an effective way to deal with an evolving conceptual site model or changing site conditions
- Remediation was found to be, in large part, effective at reducing contaminant concentrations in sediment
- Remedy effectiveness with respect to reductions in contaminant concentrations in biota was mixed with some sites showing reductions consistent with expectations while others did not
  - The latter was generally attributed to an incomplete understanding of what controls contaminant concentrations in biota, particularly the link between sediment and tissue concentrations
  - In some cases, ongoing sources to surface water (e.g., stormwater runoff) were considered responsible for maintaining tissue concentrations above remedial goals