

# SEDIMENT CLEANUP LESSONS LEARNED

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SEPTEMBER 30, 2020



# Expanding Sediment Cleanup Case Studies

- Collaborative evaluations of completed sediment cleanup remedies to broadly inform future remedy decisions
- June 2019 Seattle remedy effectiveness workshop
  - 66 participants
    - 28 federal agency representatives
    - 21 industry representatives
    - 17 state/local agency representatives
  - Workshop materials posted on <http://www.smwg.org/presentations>
- May 2020 SETAC conference (Europe & PNW) presentations
- February 2021 Battelle sediment conference session
- Spring/fall 2021 SMWG symposium

# Twelve Case Studies Reviewed at 2019 Seattle Workshop

*(each with robust monitoring data)*

1. Bellingham Bay, WA | Pete Adolphson, WA State Department of Ecology
2. St. Paul Waterway, WA | Dave McEntee, Simpson Lumber Co.
3. Eagle Harbor, WA | Helen Bottcher, EPA R10
4. Sinclair Inlet, WA | Bob Johnston, Applied Ecological Solutions (Navy SPAWAR, Ret.)
5. McCormick & Baxter, OR | Kevin Parrett, Oregon Department of Environmental Quality
6. Lavaca Bay, TX | Gary Baumgarten, EPA R6
7. Ottawa River, OH | Scott Cieniawski, EPA GLNPO and Marc Mills, EPA ORD
8. Fox River, WI | Paul Montney, Georgia-Pacific Consumer Products
9. Hudson River, NY | Marc Greenberg, EPA OLEM/OSRTI/TIFSD/ERT
10. Onondaga Lake, NY | Betsy Henry, Anchor QEA
11. Duwamish Waterway, WA | Elly Hale, EPA R10 and Kathy Gottfredson, Windward Env.
12. Puget Sound Biota/Sediment | Clay Patmont, Anchor QEA and Jeff Stern, King County

# Eight Common Remedy Effectiveness Case Study Topics

1. Objectives of remediation
2. Summary of completed early actions and/or final remedy
3. Significant remedy scope or schedule deviations
4. When were external sources characterized and addressed?
5. Primary pre- and post-remedy effectiveness monitoring elements
6. Did the remedy achieve short- and/or long-term remediation objectives for surface sediment?
7. Is the remedy on track to achieve long-term remediation objectives for water and/or biota?
8. Key take-home messages on overall lessons learned

# Common Case Study Lessons Learned Themes

- Cooperative projects lead to more action and results
- Source control of primary importance
- Early actions can yield significant progress toward objectives
- Remedy modifications can deal with evolving conceptual site model and changing site conditions
- Remedial technologies effective at reducing sediment concentrations
- But mixed remedy effectiveness at reducing water and biota exposures
  - Variable understanding of what controls biota contaminant exposure
  - Ongoing sources can be important
- Robust, long-term monitoring data needed to understand linkages

# 2020 SMARM Lessons Learned Case Studies

- Commencement Bay Nearshore/Tideflats | Kristine Koch, EPA R10
- Whatcom Waterway | Brian Gouran, Port of Bellingham

