Preventing Sediment Recontamination by Leveraging National Policies on CERCLA/CWA Cross-Program Coordination Strategies & the Portland Harbor Stormwater Strategy

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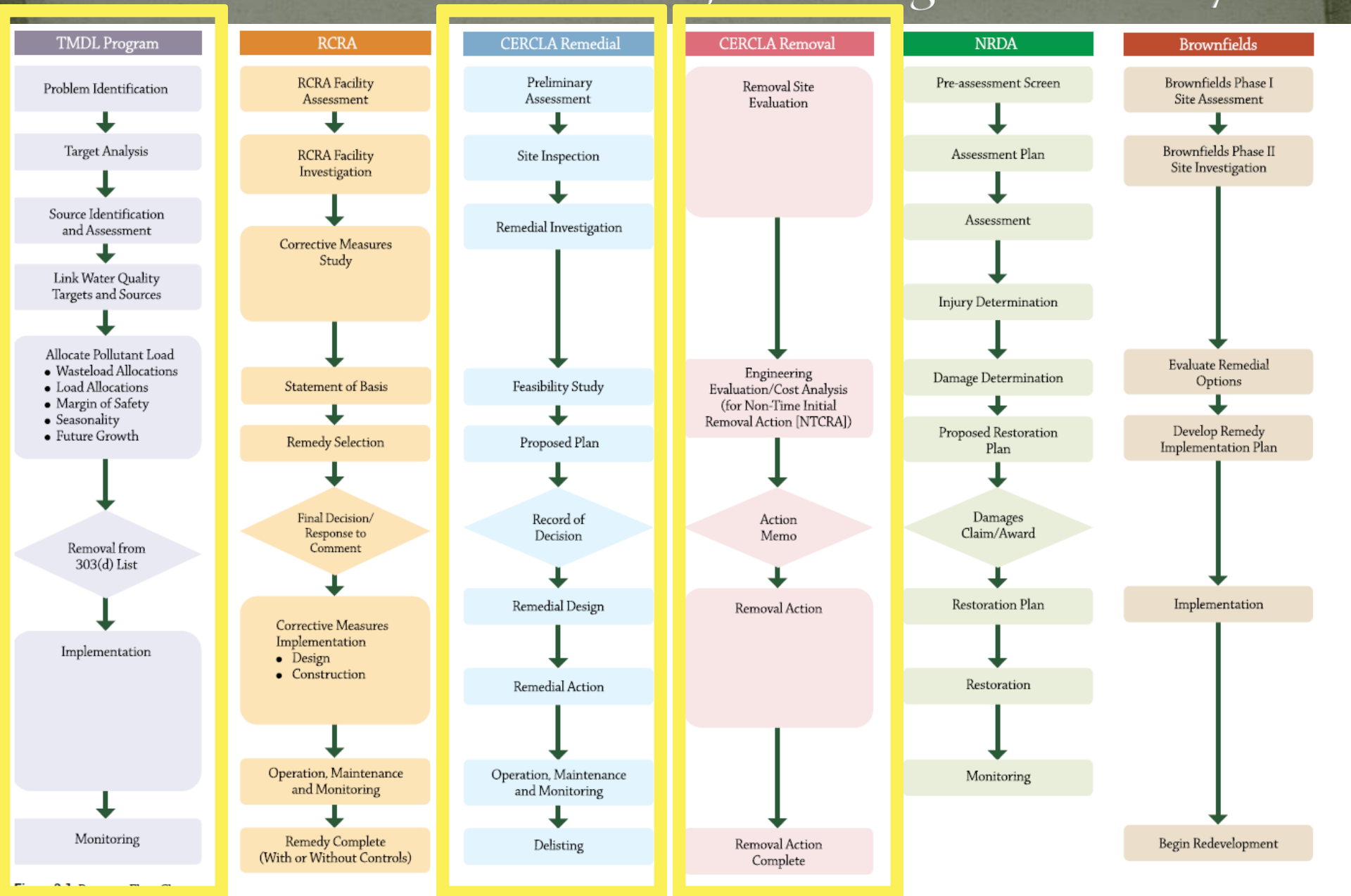
Environmental Law Education Center
Oregon Source Control Conference
May 19, 2017

CERCLA & Clean Water Act Coordination: A Short EPA Guidance History

- *CERCLA Compliance with Other Laws Manual. Volumes 1 & 2.* (1988 & 1989).
- *Contaminated Sediment Management Strategy.* OW. (1998).
- *Contaminated Sediment Remediation Guidance for Hazardous Waste Sites.* OSWER. (2005).
- Integrating Water and Waste Programs to Restore Watersheds: A Guide for Federal and State Project Managers. OSWER. (2007).
- Directive: Sediment Assessment and Monitoring Sheet (SAMS) #4: A Primer for Remedial Project Managers on Water Quality Standards and the Regulation of Combined Sewage Overflows under the Clean Water Act. OSWER. (2013).
- *Memorandum: Promoting Water, Superfund and Enforcement Collaboration on Contaminated Sediments.* OECA, OW & OSWER. (2015). ("The 3 AA's Memo")

Integrating Water and Waste Programs to Restore Watersheds: A Guide for Federal and State Project Managers - EPA 2007



Contrasting Approaches

CERCLA	CWA
EPA authority	States delegated authority
Orders	Regulatory permits & orders & 3rd party lawsuits
Sediment (indirect pore, ground & surface water)	Water column
Specific, risk-based limits	Water Quality Criteria (acute & chronic), Maximum Extent Practicable
Responsive	Preventative
One-time action, with specific limits & timing (years)	Phased/iterative implementation for on-going regulation (decades)

"The 3 AA's Memo"

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

FEB 12 2015

MEMORANDUM

SUBJECT: Promoting Water, Superfund and Enforcement Collaboration on Contaminated Sediments

FROM: Cynthia Giles
Assistant Administrator
Office of Enforcement and Compliance Assurance (OECA)

Mathy Stanislaus
Assistant Administrator
Office of Solid Waste and Emergency Response (OSWER)

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Deputy Assistant Administrator
Office of Water (OW)

TO: Regional Administrators, I-X

"The 3 AA's Memo" Recommendations

1/5 – Sharing Data and Knowledge

2/4 – Cross-Program Watershed Coordination

3 – Stakeholder Engagement

6 – Remediate to Also Address Water Quality

7 – Use NPDES to Also Address CERCLA Contaminants

8 – TMDLs Reflective of Remediation and Recontamination Prevention

9 – Enforcement Coordination

ASTSWMO Sediment Group Paper Concepts

- Identify "case studies" – sediment CERCLA sites
  - Completed or active
  - From all 10 EPA Regions
- Evaluate if any of the 3 AA's Memo cross-program recommendations were/are being applied at the sites TO PREVENT RECONTAMINATION
- Recommend ways to improve implementation potential of cross-program coordination

Sites Investigated

	SEDIMENT SITE	LOCATION
Region 1	Rose Hill Landfill	South Kingstown, RI
	Pine Street Canal (Maltex Pond)	Burlington, VT
	New Bedford Harbor	Fairhaven, MA
	Peterson/Puritan	Cumberland & Lincoln, RI
Region 2	Gowanus Canal	Brooklyn, NY
	Onondoga Lake	Syracuse, NY
	Passaic River	Newark, NJ
Region 3	Peck Iron & Metal	Portsmouth, VA
Region 4	Solutia/(Monsanto), Anniston PCB Site	Anniston, AL
Region 5	Allied Paper Inc/Portage Creek/Kalamazoo River	Allegan and Kalamazoo Counties, MI
	Ten Mile Drain Site	St. Clair Shores, MI
Region 6	Vertac Site	Jacksonville, AR
Region 7	Tri-State Mining District	KS, MO, OK
Region 8	Silver Bow Creek/Butte Area	Butte, MT
Region 9	Montrose & Del Amo	Los Angeles, CA
Region 10	Eastern Michaud Flats	Pocatello, ID
	Portland Harbor	Portland, OR
	North Boeing Field/Georgetown Steam Plant/Slip 4 (part of Lower Duwamish)	Seattle, WA

Ten Mile Drain – St Clair Shores, MI

- 2001 PCBs found Ten Mile Drain
  - Site includes storm sewer system & Lange and Revere Street canals to Lake St. Clair
- 2002-2004 time-critical removal of high concentration storm sewer and canal sediment
- 2004-2008 Recontamination and investigations
- 2010 site added to the NPL
- 2011 Interim actions - monitoring and clean out of storm lines
- 2012-2013 source id - former factory disposed PCBs into the drain system
- 2015 interim removal of pooled PCB oil and associated soils and replace vaults and piping

Ten Mile Drain – Take-Aways

- Recontamination happened
- Incomplete initial investigations and source control – stormwater pathway left out
- CWA NPDES could have been used to trace and control the source and detect potential recontamination
- Enforcement alignment could have been efficient and compelling

What are we finding?

- All of the Recommendations are being applied, at least partially, at least at some sediment sites
- Significant barriers exist & may prevent implementation of some recommendations, as intended
  - Disparities in data collection, authorities & timing
- No case studies were identified of actual enforcement instruments involving both CERCLA and CWA
  - some CERCLA orders require TMDLs to be addressed

Conclusions & Recommendations

Develop guidance & tools to address the significant barriers to coordination:

- Funding & Resources
  - Incentivize efficiency between programs
  - Implement cross-training
  - Leverage stakeholder participation
- Data Communication
  - Cross program collection design
  - Merging of evaluative methodologies
  - Regional model databases

Next Steps

- ASTSWMO paper in review and anticipated to be published in June 2017
- Keeping engagement with EPA on this topic and assisting with development of guidance/tools
- ASTSWMO partnership with Association of Clean Water Agencies and Interstate Technology and Regulatory Council

Our Local Example: Portland Harbor

Used in the paper as an example for Recommendations:

- 3 - Stakeholder Engagement
- 6 - Remediate to Also Address Water Quality
- 7 - Use NPDES to Also Address CERCLA Contaminants

Portland Harbor Source Control

Lessons learned from sediment recontamination at other sites = incomplete source control, residual resuspension, CSO/storm discharges

- JSCS implemented comprehensively - controls/remedies implemented for gw, soil/banks & sw prior to in-water remedy (~125 completed & ~45 nearing completion)
- Stormwater-specific source control guidance implemented since 2009 (at ~85 sites)
- 1200Z permits monitor for PH CoCs (~90 sites + 30 more in 2017)
- CSOs in PH have not included industrial wastewater since 1950s
- CSOs in PH controlled 2000 – 2011

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Portland Harbor Stormwater Strategy Chronology

DATE	ACTION
April 2005	DEQ convened cross-program stormwater group to focus on preventing recontamination of Portland Harbor via stormwater
December 2005	Joint Source Control Strategy finalized with Appendix D: Framework for Portland Harbor Stormwater Screening
June/July 2006	DEQ presents draft PH stormwater strategy to EPA & joint stormwater group formalized (DEQ, EPA, City of Portland, LWG)
March 2009	DEQ Guidance for Evaluating the Stormwater Pathway at Upland Sites published (following public comment period and integration)
July 2010	**PH Stormwater Strategy settled around: 1) control of upland legacy sources (using DEQ Guidance); 2) PH permit for on-going sources; 3) adaptive management**
October 2010	DEQ Guidance updated with Appendix E: Rank Order Curves Tool
October 2015	DEQ Guidance Appendix E updated with data from 2009-2015

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Portland Harbor Stormwater Strategy Control of Legacy Upland Sources

- ~170 sites screened for stormwater pathway eval
  - 86 evaluating stormwater pathway for source control
  - 30 Source Control Decisions & 20 more within a year
- ~90 NPDES 1200Z or Individual Permits
- ~90 No Exposure Certifications

GEOREGION	DEQ SCEs	SCDs issued	SCDs pending
Albina	5	0	4
Pearl	7	4	2
Swan Island	6	2	3
St Johns	1	0	0
Guilds Lake	30	16	5
Doane Lake/Willbridge	13	4	1
T-4/International Slip	12	0	1
Linnton	8	4	1
Rivergate	2	0	2
Site-wide	2	0	1
totals	86	30	20

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Portland Harbor Stormwater Strategy Control of On-Going Sources

2017 1200Z with Portland Harbor Georegion

- Majority of Industrial sites in PH already regulated under 1200Z Industrial Stormwater General Permit
- 2017 Renewal of 1200Z to accommodate PH permit needs
  - Adding regulated industrial activities (not necessarily triggering SIC codes) – captures ~30 more sites
  - Reduced TSS benchmark to 30 mg/L – to continue improving on source control by preventing discharge of solids and contaminants associated with particulates
- Columbia Slough precedent
- NPDES 1200A renewal in 2018

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Portland Harbor Stormwater Strategy Adaptive Management

- Site level & Georegion level recontamination evaluations – DEQ, EPA, CoP, ODOT and other performing parties
- On-going data review (1200Z, SCEs, IPs, MS4s, EPA baseline…)
- Loading evaluation strategy
- On-going implementation of CWA programs
  - Fish consumption rate increased in 2011 from 17.5 to 175 grams/day
  - Willamette TMDLs (and Cat 4b McCormick & Baxter)
  - CWSRF loans & 319 Grants for WQ mitigation/restoration
  - WQ and Toxics monitoring
  - Toxics Reduction Strategy, Pesticide Stewardship Partnerships
- Willamette Watershed Toxics Reduction Partnership

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Questions?