

McCORMICK & BAXTER, OR

KEVIN PARRETT

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY

Summary of Completed Early or Final Remedy

- Creosote extraction (6,600 gal) – 1990 thru 2011
- Soil hot spot removal (34,000 tons) – 1999
- Groundwater barrier wall (18 ac) – 2003
- Sediment cap (23 ac) – 2004/2005
- Soil cap (15 ac impermeable & 25 permeable) – 2005



Significant Remedy Scope or Schedule Deviations from What Was Originally Envisioned?

- Remedial Design – ESA and PHSS
- Construction
 - BiOp delay
 - Fish exclusion
 - Submerged debris and structures
 - Residual NAPL
 - Contractor management
- Post-Construction
 - Ebullition-induced sheen
 - ACB voids and buckling

Endangered Species Act - Section 7
Consultation
&
Magnuson-Stevens Act
Essential Fish Habitat Consultation

BIOLOGICAL OPINION

Construction of the Barrier Wall at the McCormick and Baxter Creosoting Company
Superfund Site, Willamette River,
Portland, Oregon.

Significant Remedy Scope or Schedule Deviations from What Was Originally Envisioned?

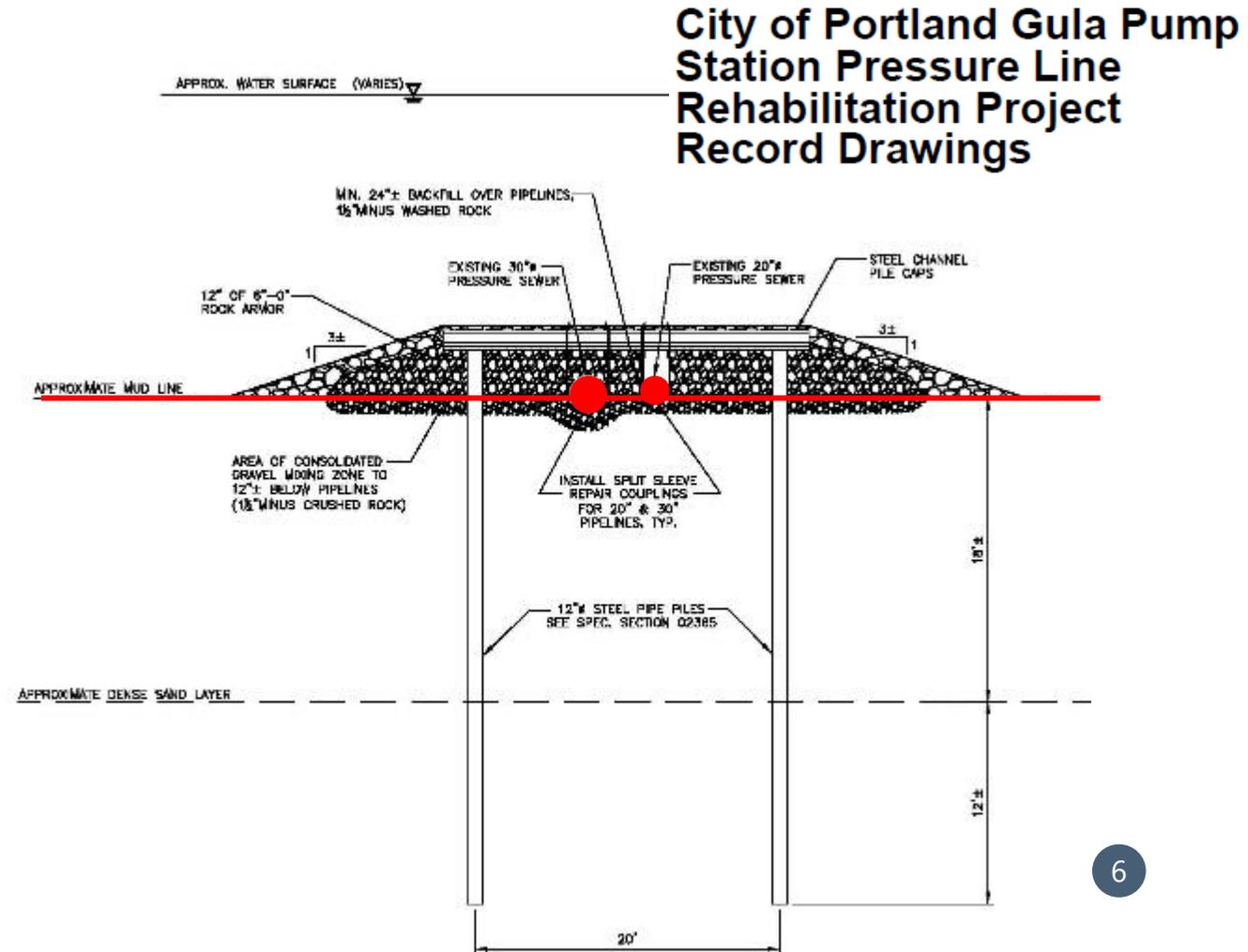
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Sediment Remedy Effectiveness Symposium



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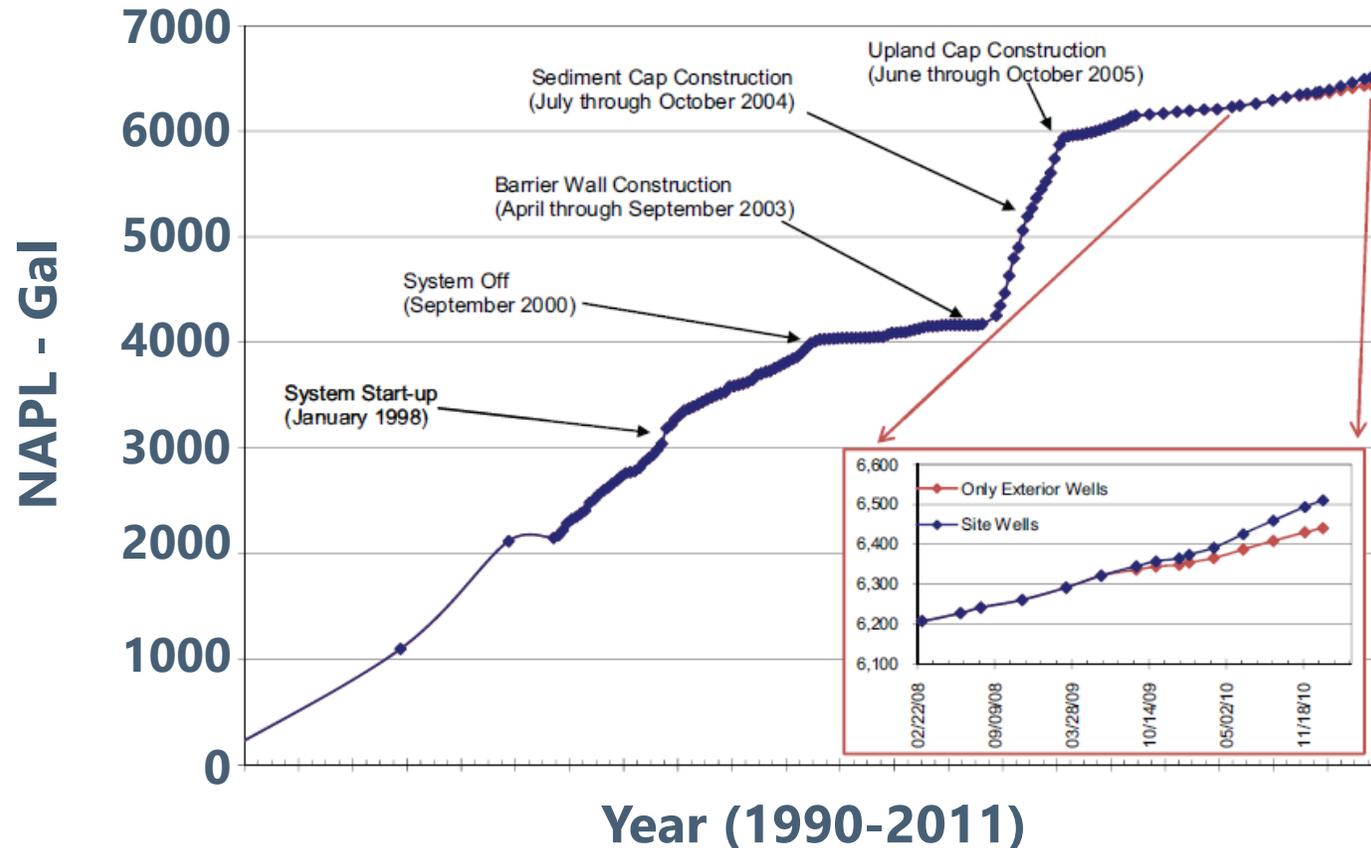
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When Were External Sources Characterized and Addressed?

- NAPL extraction - 6500 gallons



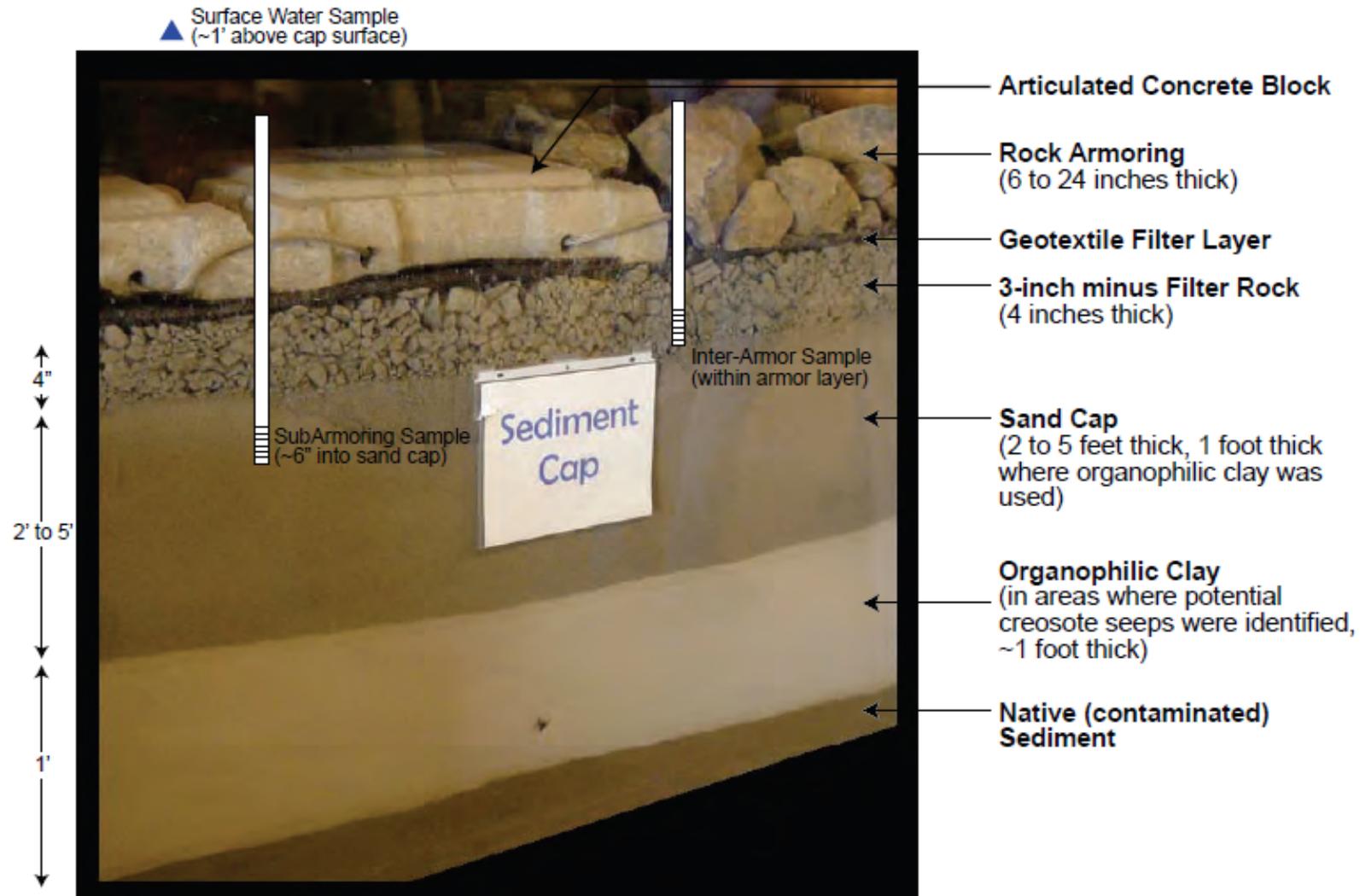
When Were External Sources Characterized and Addressed?

- NAPL extraction alone was ineffective



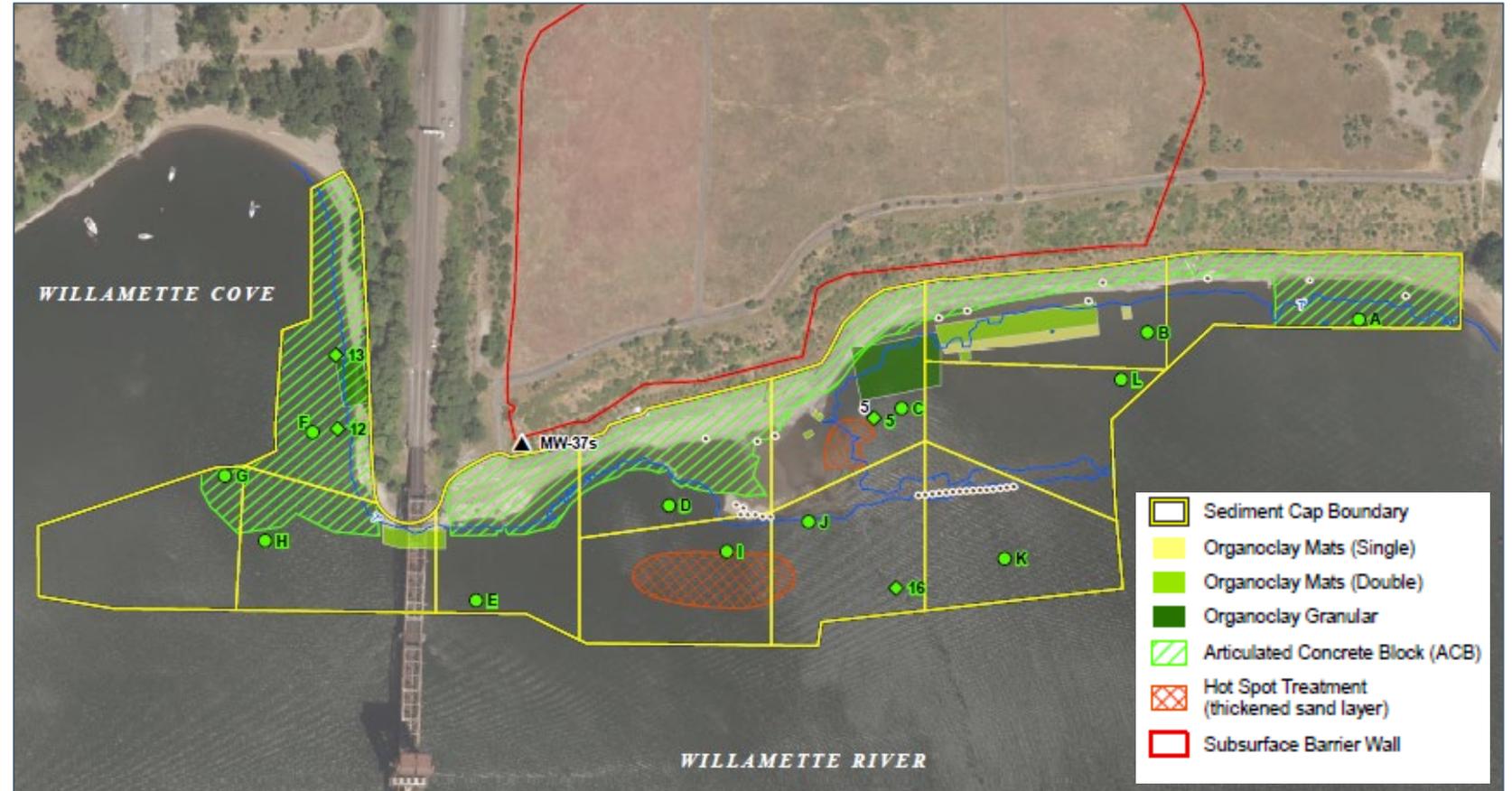
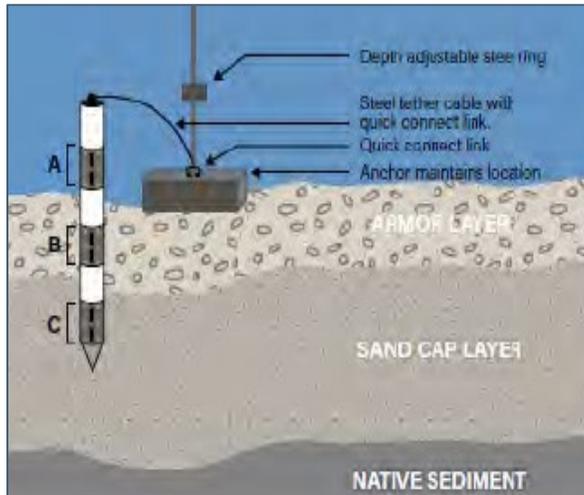
Primary Pre- and Post-Remedy Effectiveness Monitoring Elements

- Surface & Cap Pore Water
- PAHs, metals, PCP



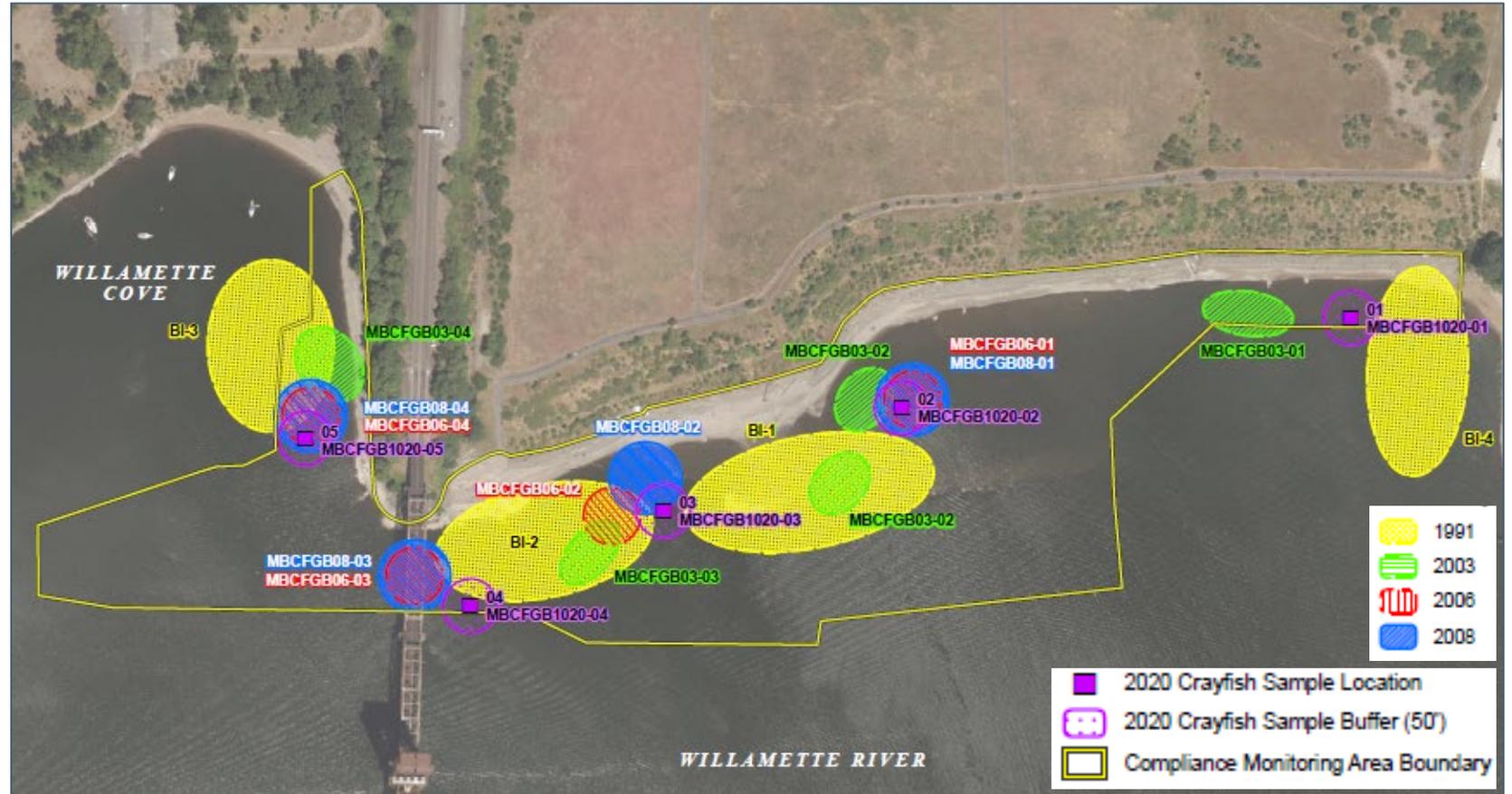
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Primary Pre- and Post-Remedy Effectiveness Monitoring Elements

- Crayfish
- Dioxins/furans, PAHs, metals, PCP



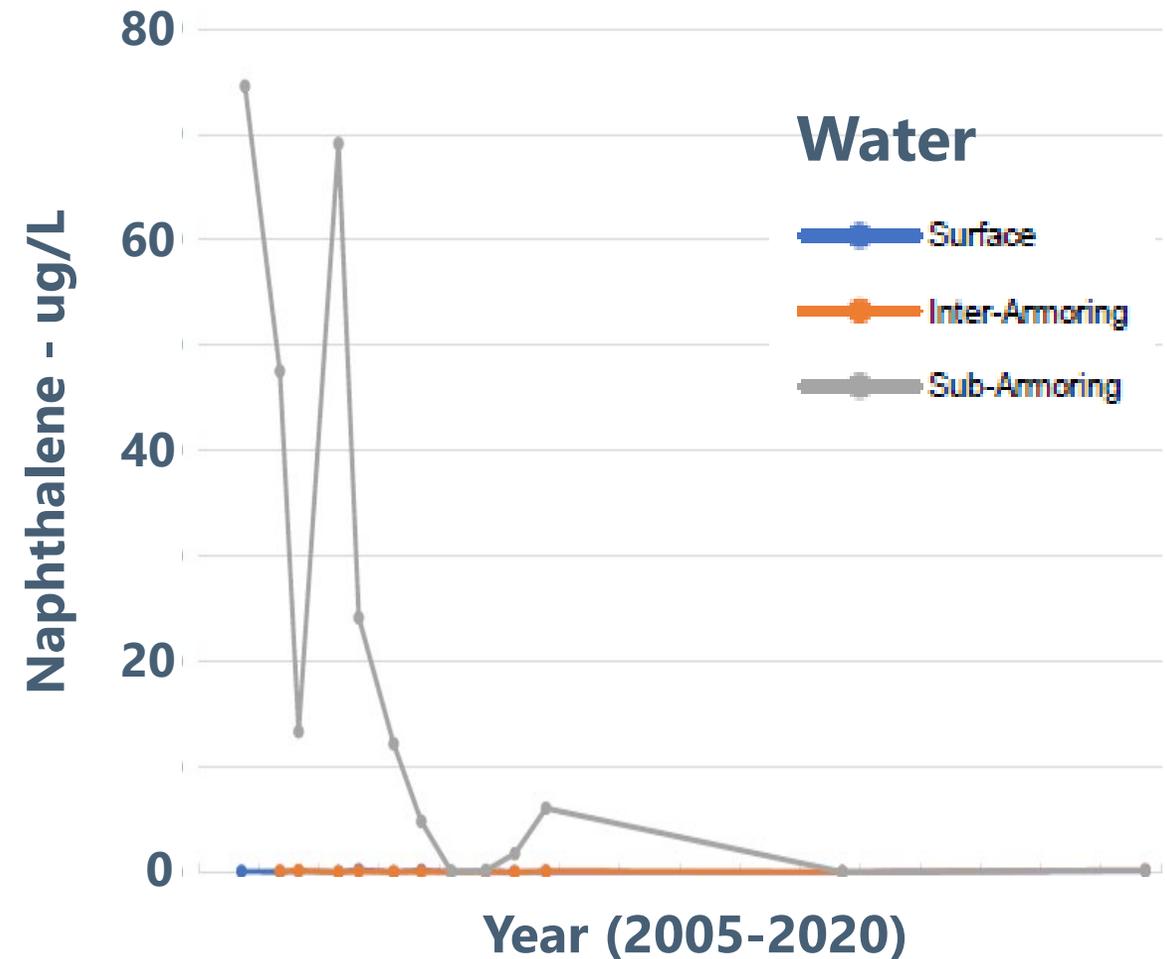
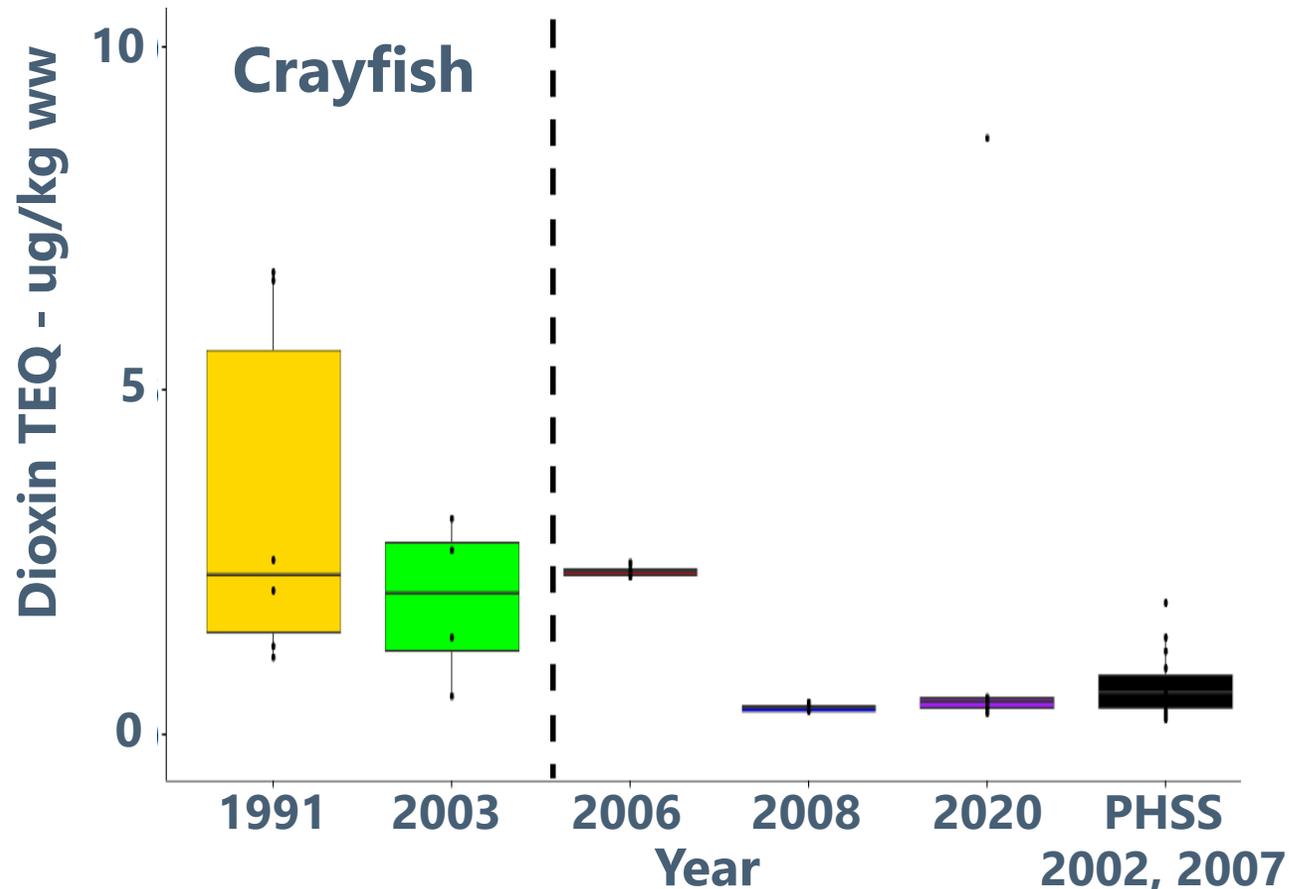
Did the Remedy Achieve Short- and/or Long-Term Remediation Objectives for Surface Sediment?



mpc

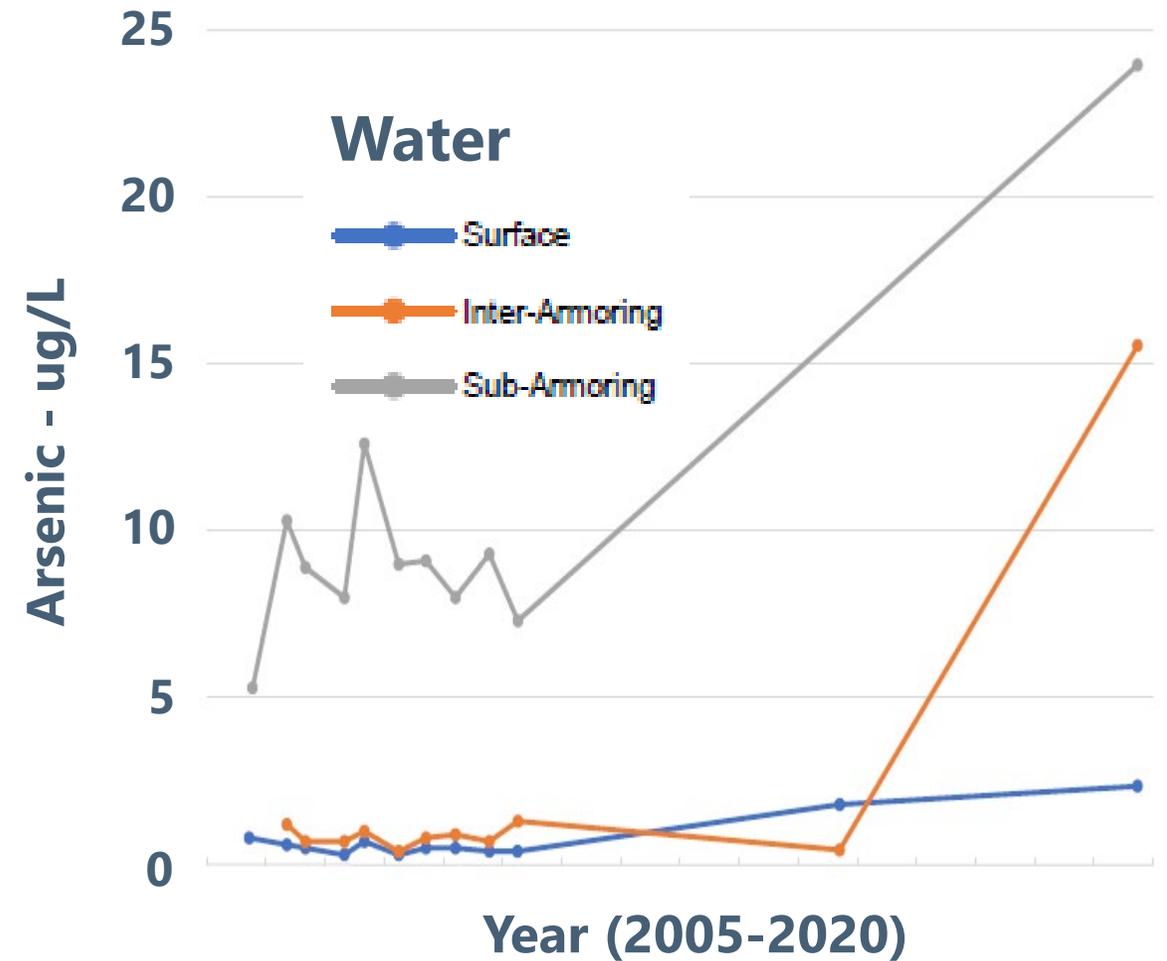
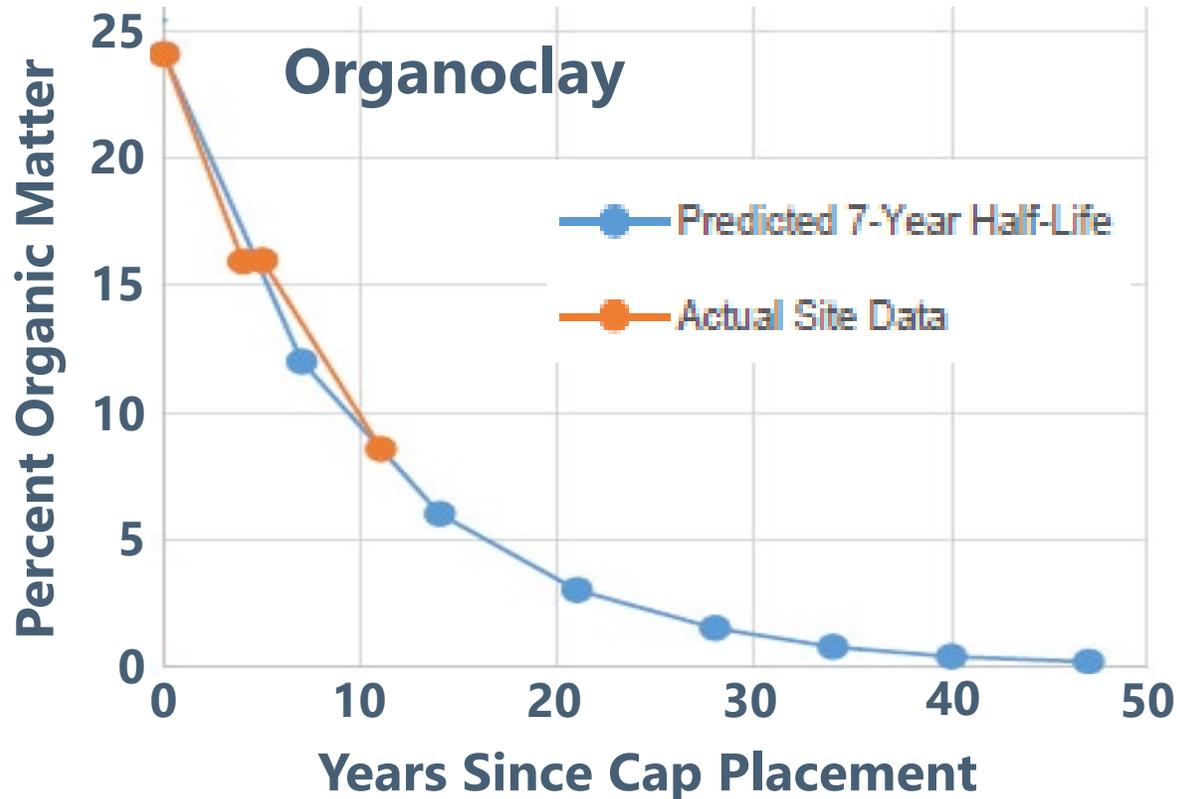
Is the Remedy on Track to Achieve Long-Term Remediation Objectives for Water and/or Biota?

- Mission accomplished – YES



Is the Remedy on Track to Achieve Long-Term Remediation Objectives for Water and/or Biota?

- Mission accomplished – YES, But...



Key Take-Home Messages

- Celebrate milestones
- Caps work
- NAPL is a nightmare
- Big rivers require armoring
- Think twice about Organoclay
- LTM needs serious planning



Sediment Remedy Effectiveness Symposium

Community Volunteer Wade Peerman
Oregon Governor Ted Kulongoski; City Commissioner Sam Adams
EPA R10 Administrator Michael Bogart; DEQ Director Stephanie Hallock