

Historic Operation



- Wood treatment facility operating 47 years - 1944 to 1991
- Process wastes and waste water discharges: creosote, PCP, and metals on land and in the Willamette River
- Site footprint:
40 acres upland soil
22 acres sediment

Remedial Investigation/Feasibility Study

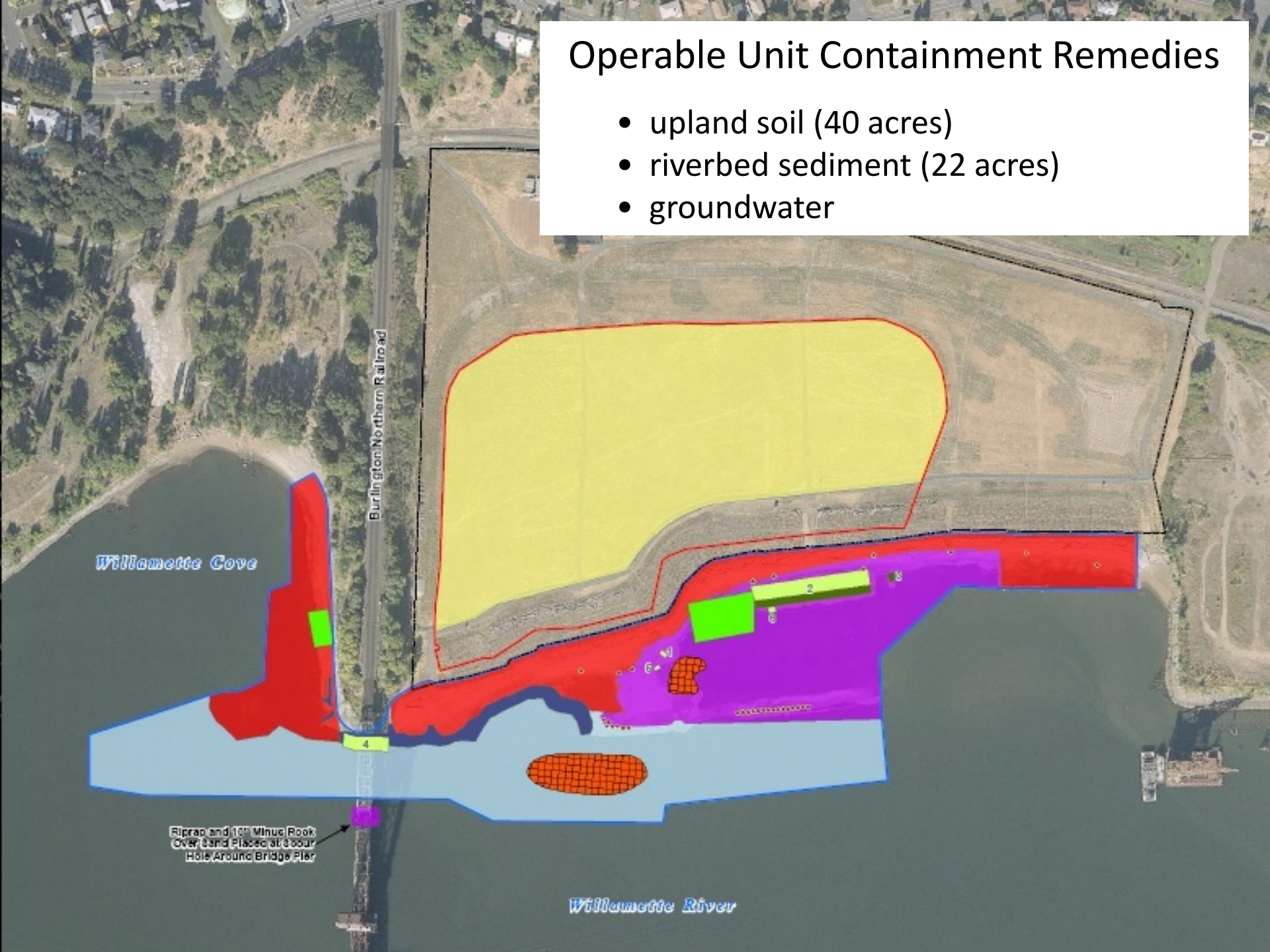
- 1983: Remedial Investigations Begin
- 1992: RI complete
- 1994: NPL Listing by EPA
- 1995: Feasibility Study Complete
- 1996: Record of Decision (amended in 1998)



Operable Unit Containment Remedies

- upland soil (40 acres)
- riverbed sediment (22 acres)
- groundwater

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Upland Soils Operable Unit

Status: O&M



- **Soils** ⇔ no human contact with contaminated soils, no stormwater/contaminated soil > RBCs to Willamette River
- 33,000 tons soil removed, replaced by 2 feet clean soil and RCRA cap (16 acres) w/stormwater discharge system **complete in September 2005**



Groundwater OU

Status: O&F

- **Groundwater** ⇔ remove mobile NAPL, prevent discharges to Willamette River > background or AWQCs, minimize further contamination to intermediate/deep aquifers, **ACLs**
- Impermeable barrier wall surrounding 18 acres **complete in July 2004; ongoing** performance monitoring
- **Ongoing** NAPL removal (≈6500 gallons recovered since 1989)



Sediment OU

Status: O&F

- **Sediment** ⇔ prevent human and aquatic organisms for direct contact > risk-based concentrations, minimize releases to Willamette River > AWQCs
- 22 acre, 2-foot sand cap, granular organoclay, RCM, and armoring isolate contaminated sediments and groundwater from Willamette River **complete in September 2005, ongoing** performance monitoring

What is O&F and O&M?

Operation and Maintenance (O&M): NCP, 40 CFR 300.435(f)(1) measures “initiated after the *remedy has achieved the remedial action objectives and remediation goals in the ROD*, and is determined to be operational and functional. State responsibility for future maintenance, EPA conducts 5-year Reviews

Operational and Functional (O&F) Determination: NCP, 40 CFR 300.435(f)(2) - remedy becomes operational and functional either **one year after construction is complete**, or when the remedy is determined concurrently by EPA and the State to be *functioning properly and performing as designed*.

Post Remedy Construction Activity

- September 2005: EPA/DEQ Construction Complete Determination for entire - starts the clock for Operational and Functional transition or “shakeout” period
- September 2006: Second Five-year Review
 - ACL cleanup goals invalidated for Groundwater OU
 - Shoreline sheening
 - Protectiveness determination delayed
 - O&F transition period extended
- Additional investigation and data gathering
- O&M activities, including NAPL recovery

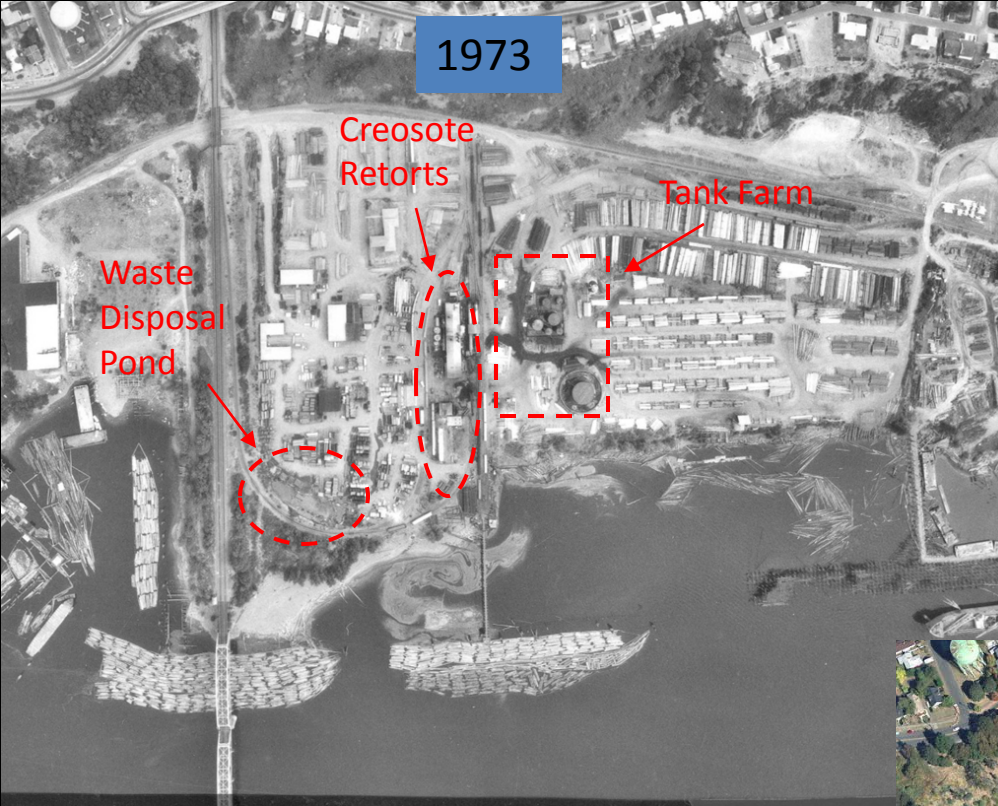
Preparing for O&M

DEQ/EPA Cooperative Agreement through September 2011

- Site Monitoring and Maintenance for O&F Activities
- Third 5 year Review in 2011 - Remedy Protectiveness
- Long term O&M Plan
- Need for Continued NAPL Recovery

Streamlined O&F Determination

- DEQ EPA meeting January 2009
- Cleanup goals specified in the ROD have been achieved
- Cleanup goals for Groundwater OU is the issue
- TI waiver necessary?
- Revisit ACL invalidation after Portland Harbor ROD
- EPA and DEQ legal review – look at alternatives



*Then
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Now*



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August 2001



Then & Now



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