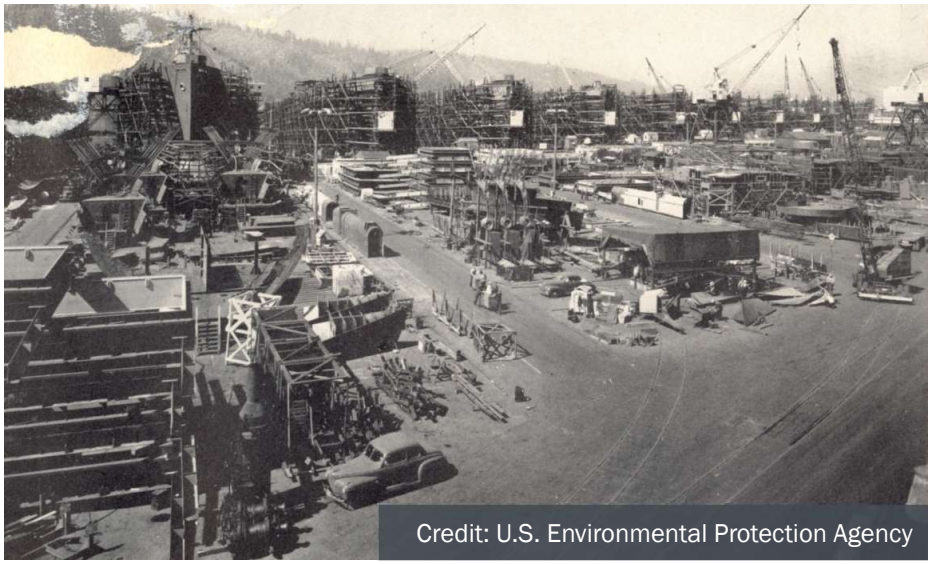
Portland Harbor Superfund Site Overview

NEBC Northwest Remediation Conference

October 2022

GSI Water Solutions, Inc.

Overview of Portland Harbor Superfund Site


Credit: U.S. Environmental Protection Agency

- Located in Portland, Oregon and includes 10 miles of the Lower Willamette River (RM 1.9 to RM 11.8)
- Long history of industrial use of the waterway
- Popular area for fishing and recreational boating
- Critical migratory corridor and rearing habitat for salmon and steelhead
- Holds great importance to several tribes as a natural and cultural resource
- In December 2000, the PHSS was added to EPA's National Priority List
- EPA identified over 150 Potentially Responsible Parties (PRPs)

Contaminants of Concern (COCs)

- Primary COCs:
  - PCBs
  - PAHs
  - Dioxins/Furans
  - DDx Pesticides (DDT, DDD, and DDE)
- Additional COCs:
  - Metals
  - VOCs and SVOCs
  - Petroleum hydrocarbons
  - Pesticides and herbicides
  - Pentachlorophenol
  - Polybrominated diphenyl ethers (PBDEs)
  - Perchlorate
  - Tributyltin
  - Bis(2-ethylhexyl) phthalate (BEHP)

Overall Remedial Approach

- Active Remediation driven by:
  - Exceedances of Remedial Action Levels (RALs) and/or Principal Threat Waste (PTW) Thresholds in bulk sediment
  - Based on limited COC list (see compounds at right)
  - Expectation that active remediation will reduce concentrations of all COCs below Cleanup Levels (CULs) over time
- Primary Remedial Technologies
  - Dredging in-water and/or soil removal on riverbanks
  - Capping (isolation only)
  - In-Situ Treatment (amended/reactive caps)
  - Enhanced Natural Recovery
  - Monitored Natural Recovery

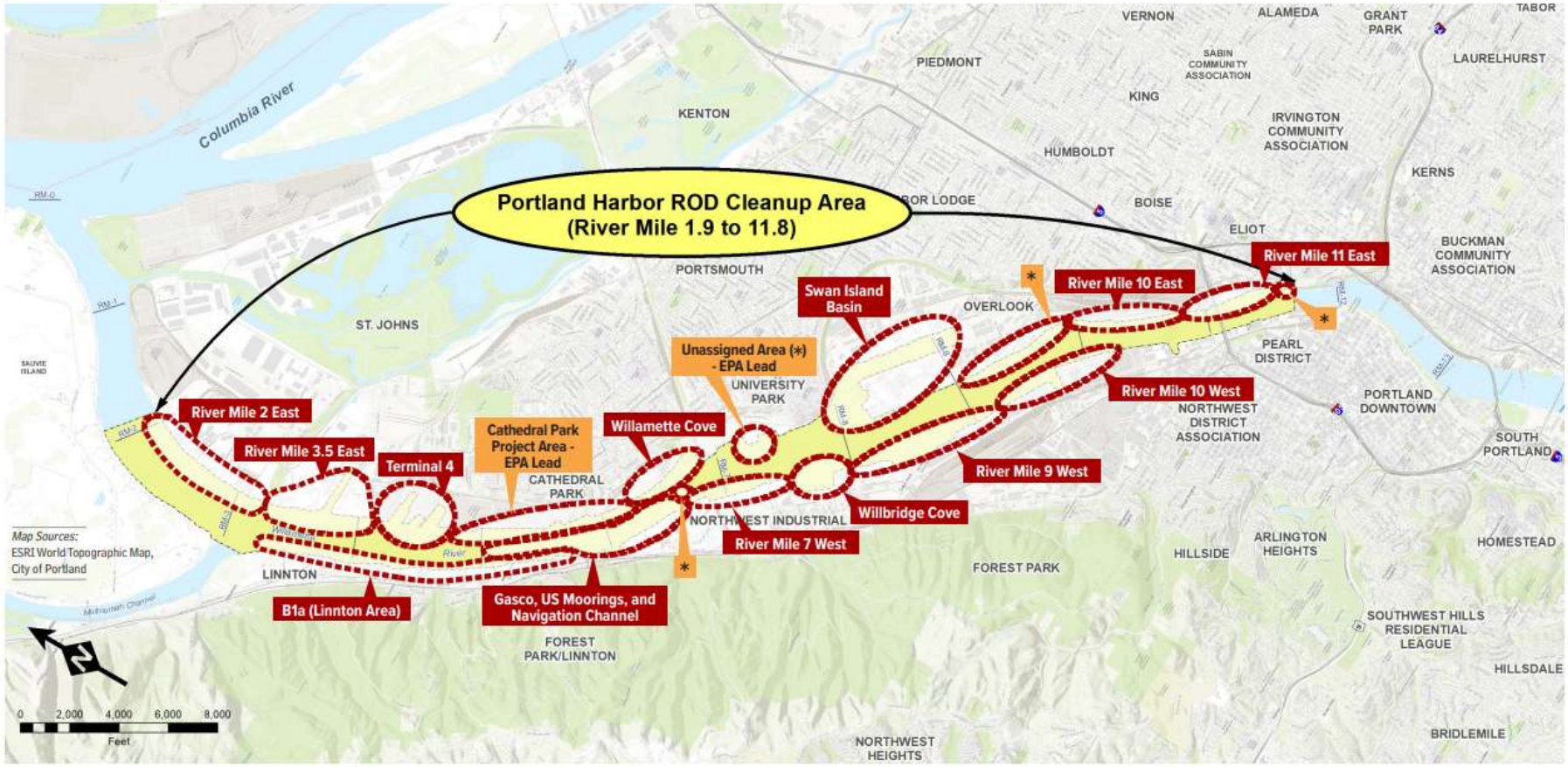
Focused COCs	
PCBs	
Total PAHs	
2,3,7,8-TCDD	
1,2,3,7,8-PeCDD	
2,3,4,7,8-PeCDF	
DDx	
Additional Contaminants	
2,3,7,8-TCDF	
1,2,3,4,7,8-HxCDF	
cPAHs (BaP Eq)	
Chlorobenzene	
Naphthalene	

PORTLAND HARBOR SUPERFUND SITE UPDATES

SEPTEMBER 2022

OVERVIEW The in-river portion of the Portland Harbor Superfund Site spans about 10 miles of the Lower Willamette River in Portland, OR. EPA released a final cleanup plan (also called the Record of Decision or ROD) in January 2017 to address contamination in the sediment, surface water, and groundwater that poses an unacceptable risk to human health and the environment. All of the acres designated for active in-water remediation at the Site are now in remedial design. This document provides a general project update.

United States Environmental Protection Agency



Map Sources:
ESRI World Topographic Map,
City of Portland

Red outlines signify that working parties are conducting remedial design with EPA oversight. For unassigned areas and the Cathedral Park Project Area (labeled in orange), EPA is implementing full remedial design. *Please see reverse page for more information.*

This shaded area indicates areas where only monitored natural recovery is planned to occur, per the Record of Decision.

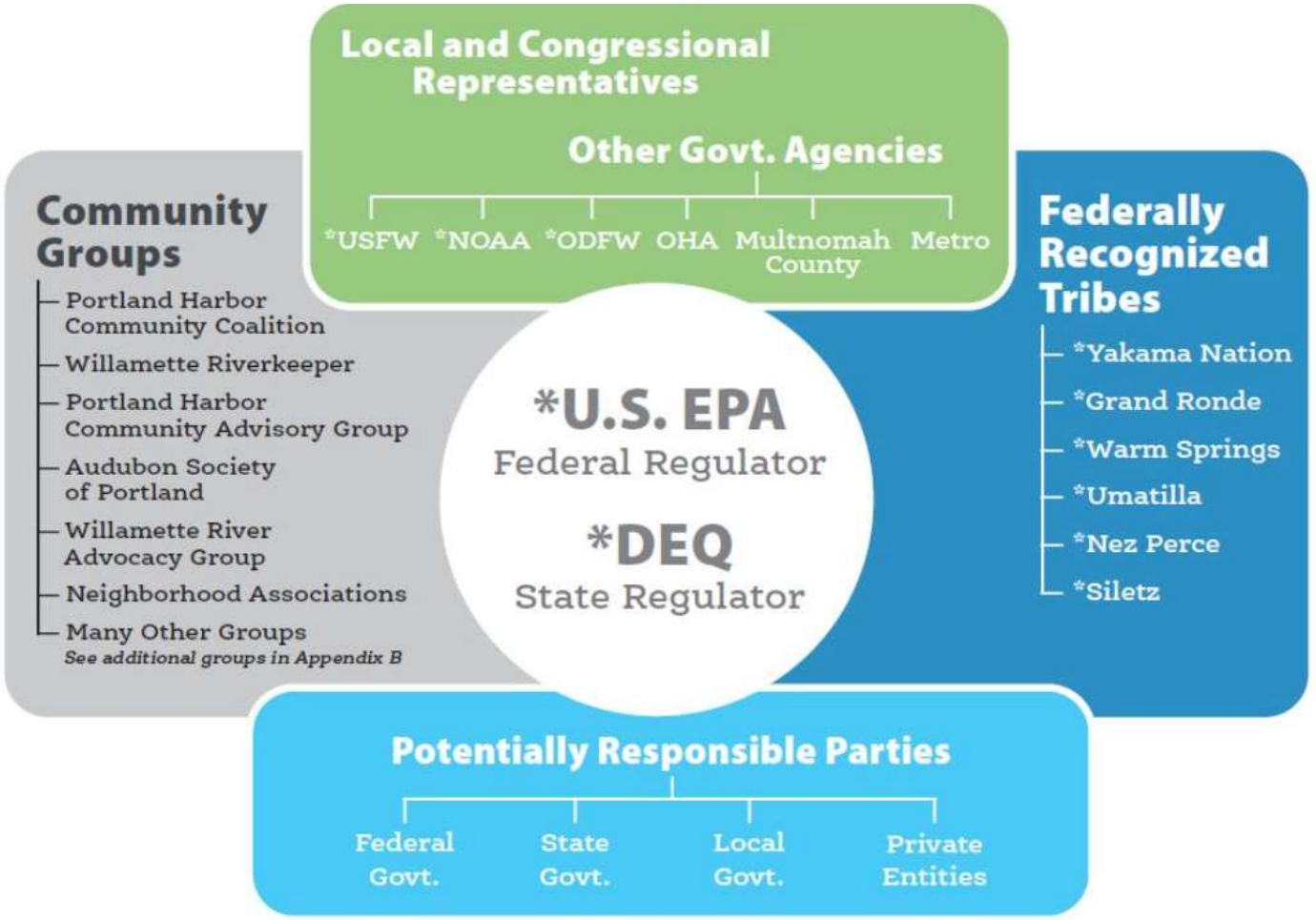
QUESTIONS?

Please visit EPA's Portland Harbor website at www.epa.gov/superfund/portland-harbor

Contact Laura Knudsen (EPA Community Involvement Coordinator) at knudsen.laura@epa.gov or **206-553-1838**.

WHAT ABOUT SOURCE CONTROL? The term source control refers to controlling sources of contamination that are entering the Portland Harbor Superfund Site from upriver and lands along the river. **The Oregon Department of Environmental Quality (DEQ)** oversees source control and works closely with EPA. To date, DEQ has completed work on 112 of 175 sites identified as requiring source control within the study area and is currently working on 54 other sites. Visit DEQ's Portland Harbor Upland Source Control website here: https://www.oregon.gov/deq/Hazards-and-Cleanup/CleanupSites/Pages/Portland-Harbor-Strategy.aspx.

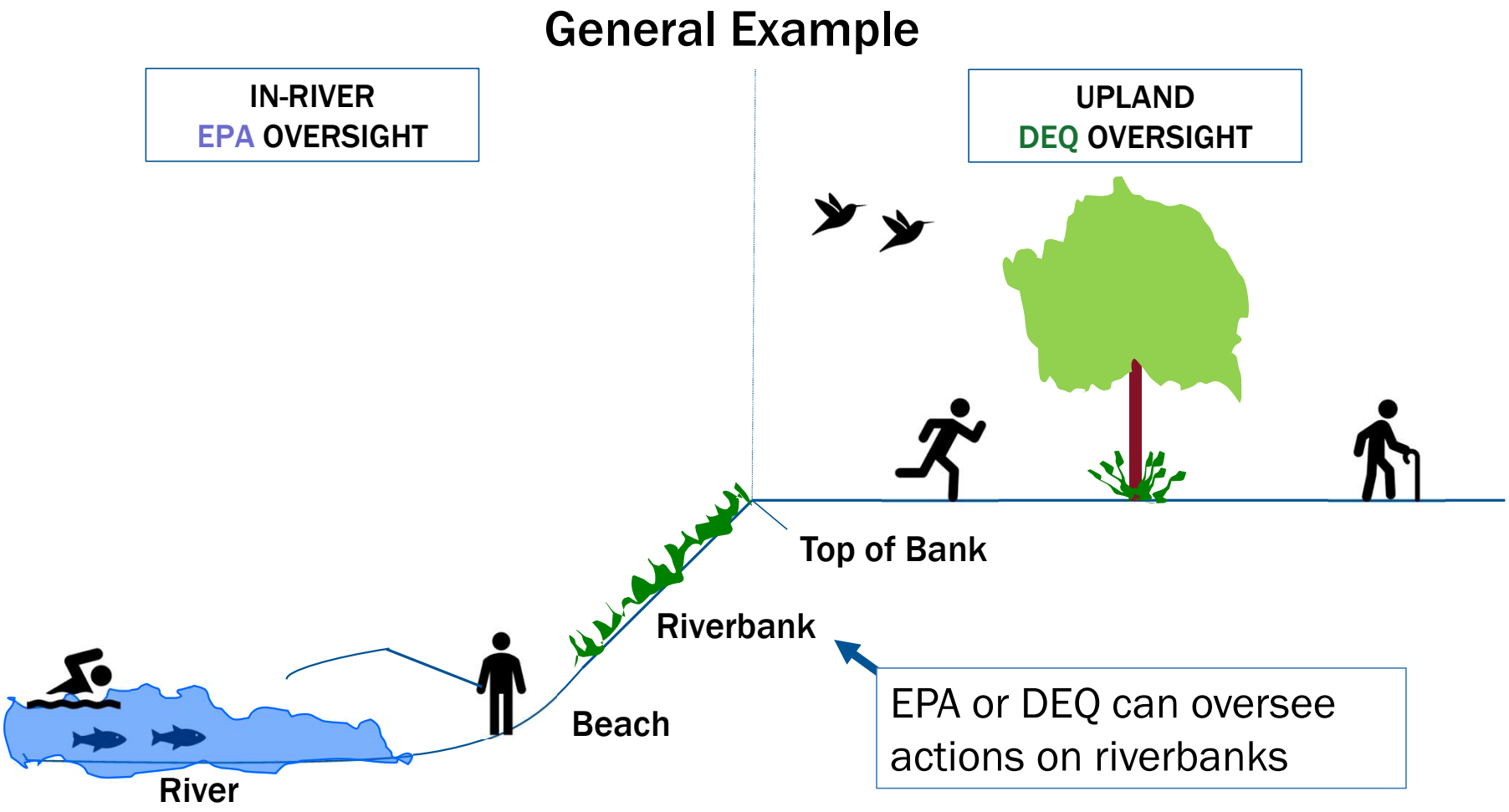
Stakeholders



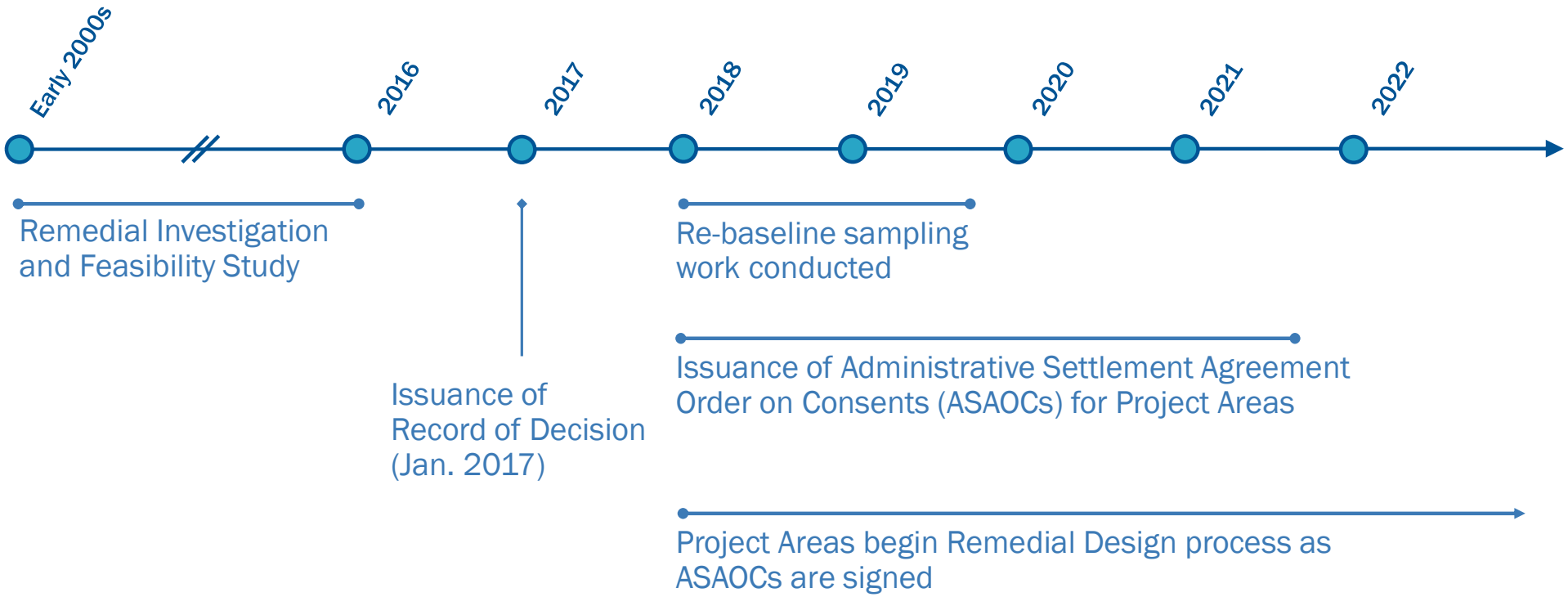
Technical Coordinating Team (TCT) and Legal Coordinating Team (LCT) members

USFW (U.S. Fish and Wildlife Service)
ODFW (Oregon Department of Fish and Wildlife)
NOAA (National Oceanic and Atmospheric Administration)
U.S. EPA (U.S. Environmental Protection Agency)
DEQ (Oregon Department of Environmental Quality)
OHA (Oregon Health Authority)

What are the roles of EPA & DEQ?



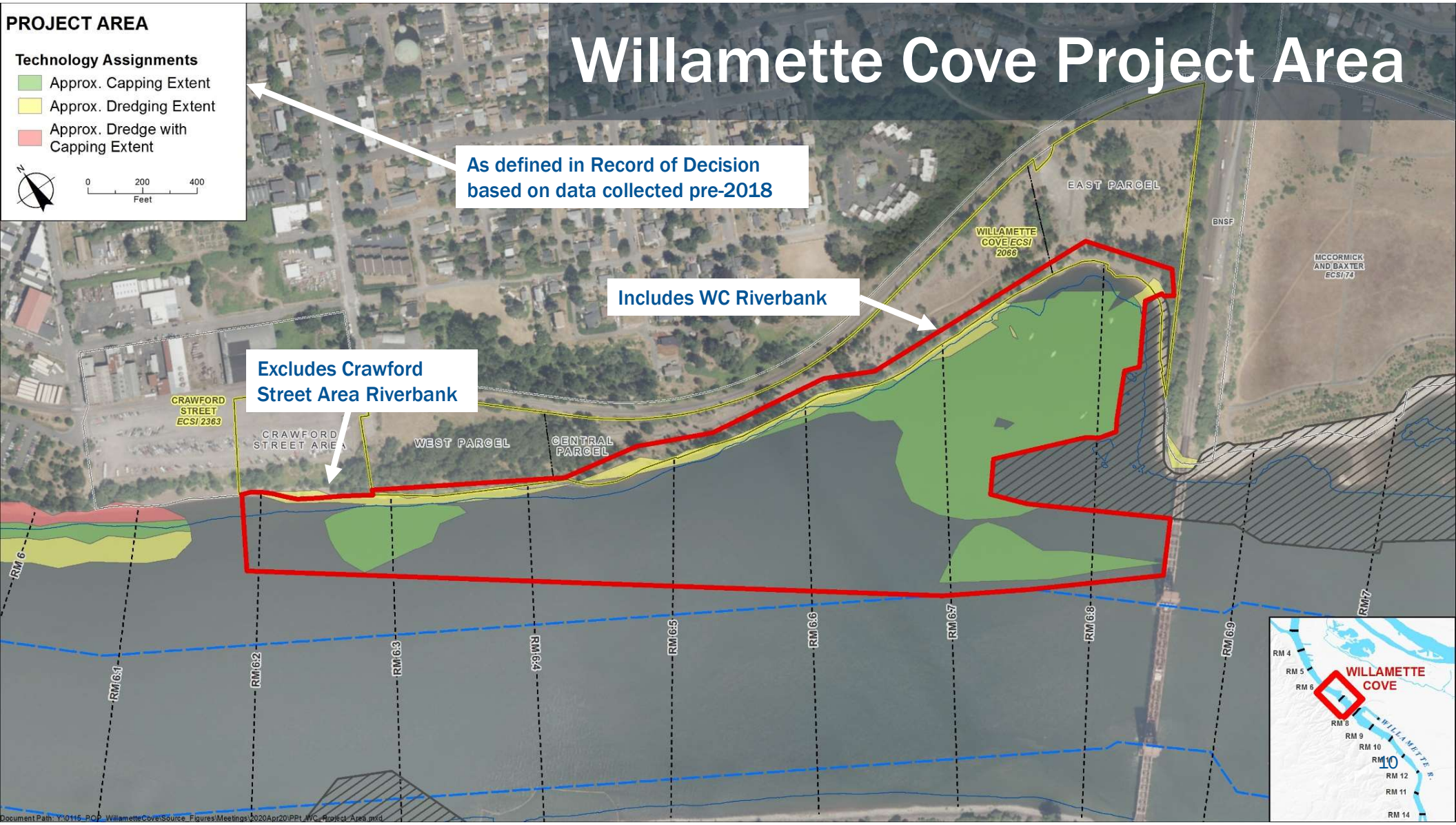
Portland Harbor Superfund Site Timeline



Remedial Design Components

- Sufficiency Assessment
- Pre-Design Investigation (PDI) / Supplemental PDI Work Plans, Investigations, and Data Evaluations Reports
- Basis of Design Report
- Remedial Design Work Plan
- Treatability Studies (as necessary)
- 30/60/95/100% Design Packages (which includes numerous support plans)

Willamette Cove Project Area



Willamette Cove Project Area Highlights

- 46-acre Project Area with Willamette Cove riverbank included
- Primary COCs: PCBs, dioxins/furans, and PAHs
- Anticipated remedy includes dredging/removal in near-shore and riverbank areas with capping in deeper areas
- In-water Performing Parties
  - City of Portland
  - Port of Portland
  - State of Oregon, acting by and through the Department of State Lands
  - Federal Settling Parties (not actively engaged in remedial decisions)
- Willamette Cove riverbank and adjacent uplands are publicly held by Metro with future public use (excluding Crawford Street Site)
- Upland and in-water designs are being developed concurrently
- Significant, early, and continuous engagement with the public
- Contains off-channel cove area that may provide unique habitat opportunity