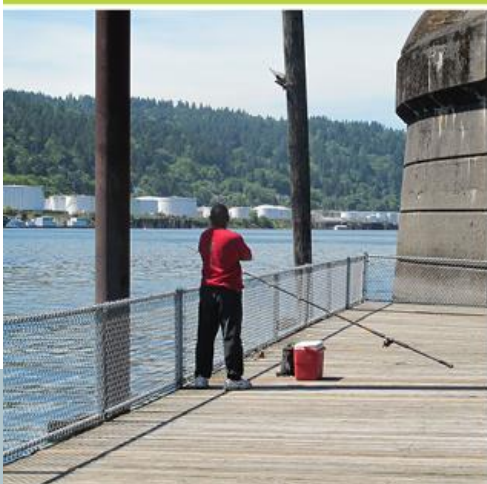




Portland Harbor League of Women Voters February 22, 2019

Cindy Ryals
Jessica Terlikowski



Our Time Together

- Introductions
- YOUR thoughts on the Portland Harbor Superfund
- Superfund basics
- Why is Portland Harbor a Superfund Site (A history lesson!)
- Health risks
- City of Portland's role
- City of Portland's Community Involvement Program

City of Portland's Environmental Services

- Contribute to the preservation and restoration of Portland's watersheds and rivers
- Manage gray and green infrastructure
 - 2 wastewater treatment plants
 - 2,000 green streets
 - 2,500 miles of pipe
 - 3 Big Pipes
 - 2,400 acres of wetlands
 - 50,000 storm drains
 - And much more!
- Lead City's Portland Harbor program



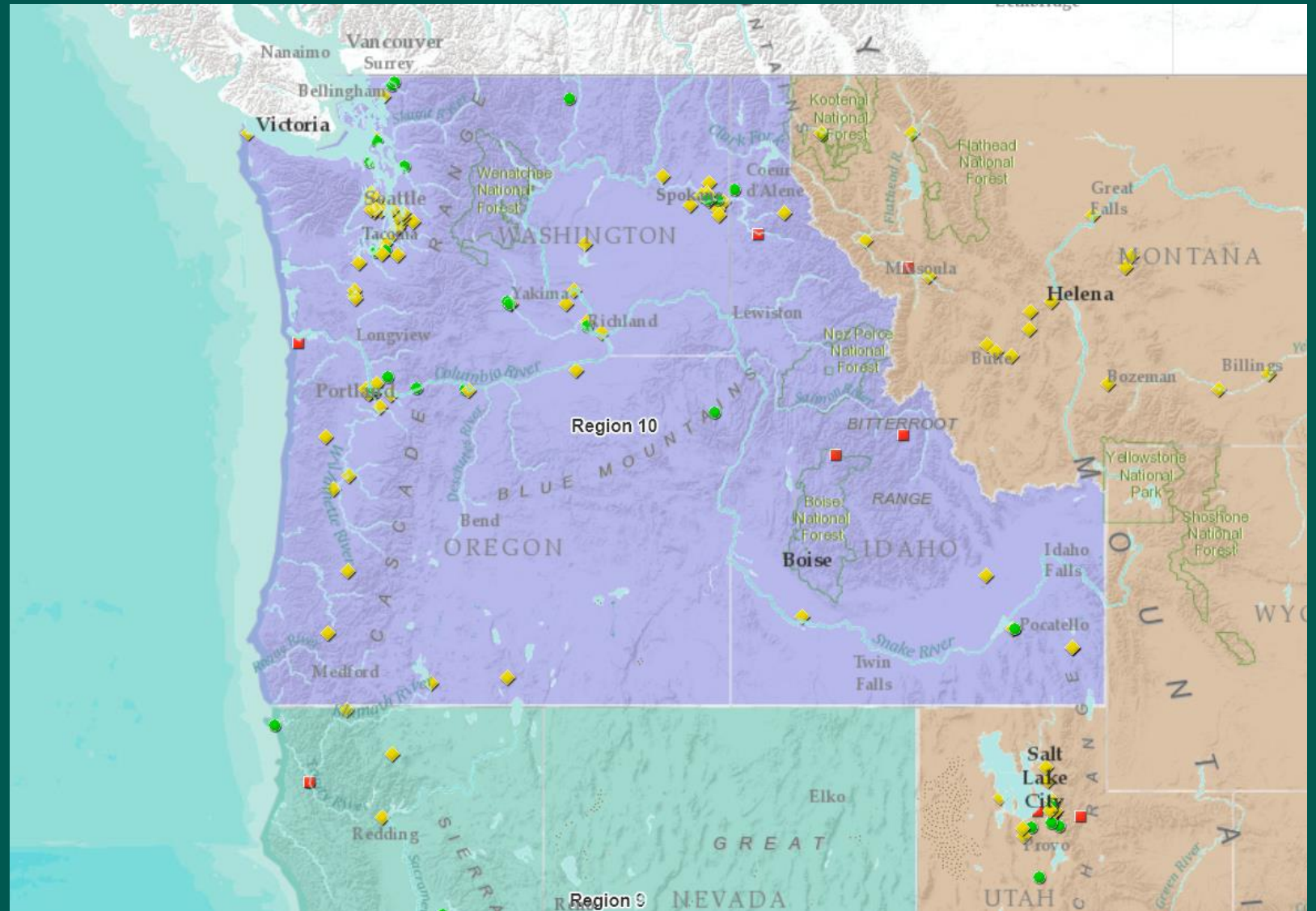
Tell us...

- The first thing that comes to mind when you hear the word “Superfund”.
- What you have heard about the Portland Harbor Superfund Site.



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Superfund Basics

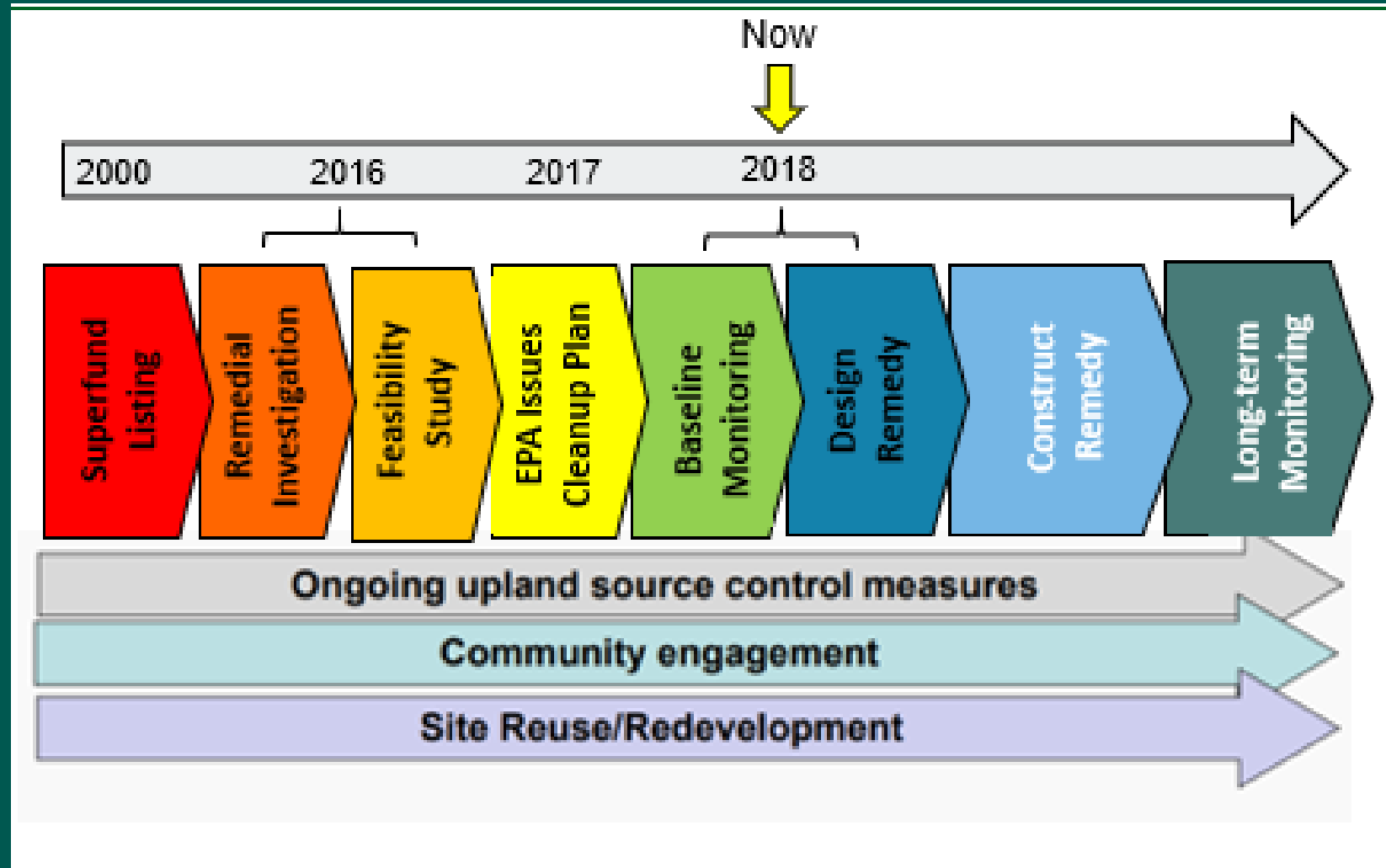


What is Superfund?

- Common name for the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980
- Love Canal Disaster was genesis of Superfund
- Purpose is to identify and clean up sites with toxic contamination
- Typically, businesses or other parties who caused the contamination are responsible for cleaning it up



Superfund: General Cleanup Process



Addressing the Contamination

- EPA oversees in-water cleanup
- DEQ oversees upland cleanup to make sure those chemicals don't recontaminate the river
- Example: Arkema site



Contractors at the Arkema cleanup site dig an underground wall meant to prevent contaminated groundwater from leaking into the Willamette River. Department of Environmental Quality

Cleanup Methods

Dredging



Capping



Treatment



Why Is Portland Harbor A Superfund Site? (And: A History Lesson!)

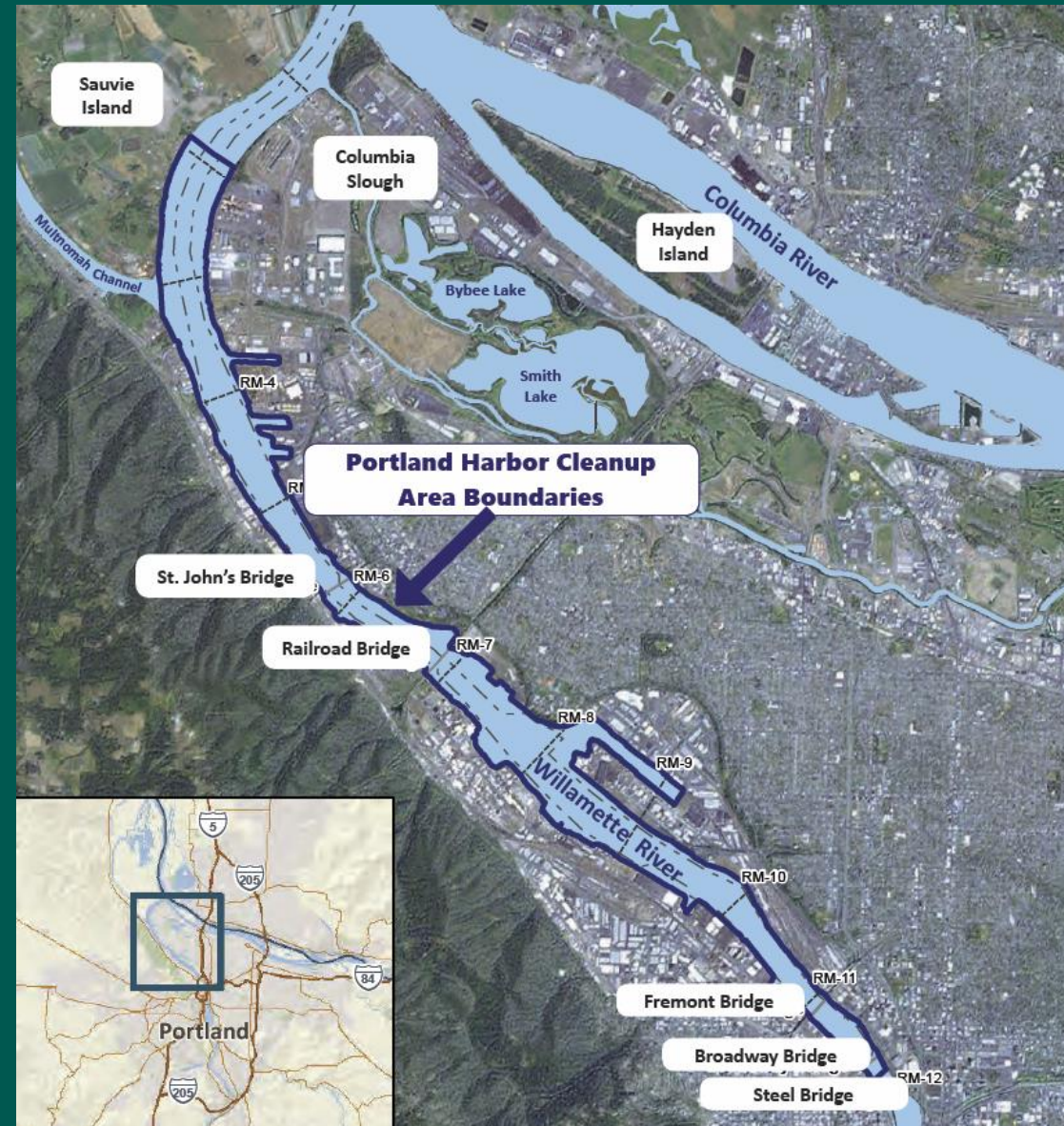


Figure from: <https://semspub.gov>

Why is Portland Harbor a Superfund Site?

- Over 100 years of industrial use, including large WW2 war effort
- Typical practice was to discharge waste to the river so that it could be carried away by the water
- Instead, some of the waste sank to the bottom and contaminated the mud (sediment) at the bottom of the river



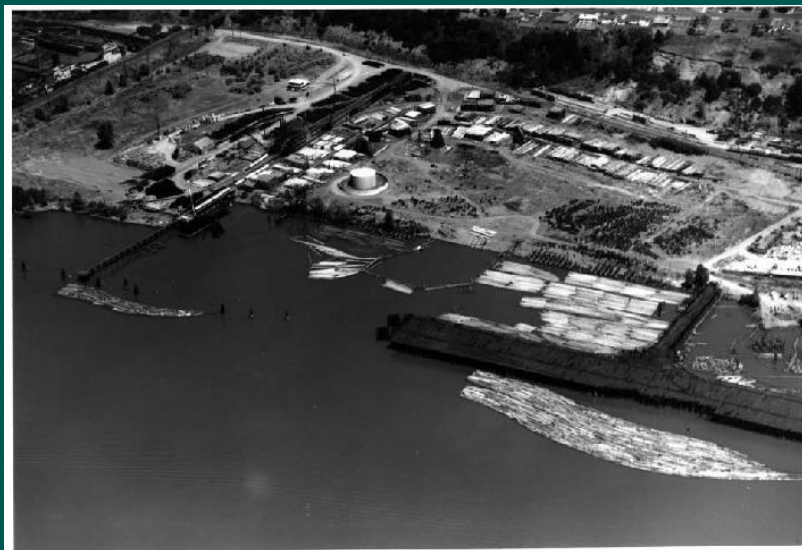
Industrial Activities in Portland Harbor: Plywood



Industrial Activities in Portland Harbor: Chemical Manufacturing



Industrial Activities in Portland Harbor: Petroleum Industries



Industrial Activities in Portland Harbor: Ship Repair



Industrial Activities in Portland Harbor: Ship Building & Dismantling



Chemicals found in the sediment

- Contaminants of greatest concern
 - **PCBs** = “polychlorinated biphenyls”. Formerly used widely in electrical equipment like capacitors and transformers.
 - **Dioxin/Furans** = Usually a byproduct of other processes. Produced during combustion (such as back-yard barbeques!)
 - **DDT** = Formerly used as a pesticide and for wide-spread insect control.
 - **PAHs** = “polyaromatic hydrocarbons”. Most commonly associated with petroleum products (e.g. diesel, gas, tar, coal).

Health Risks



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Human Health Risk

- Contamination primarily in riverbed sediment, which accumulates in fish over time
- Greatest health risk to people is eating resident fish
 - Small organisms in sediment take in contaminants
 - Fish eat these organisms
 - Contaminants build up in fish's fat
 - Bigger and older fish likely to be more contaminated

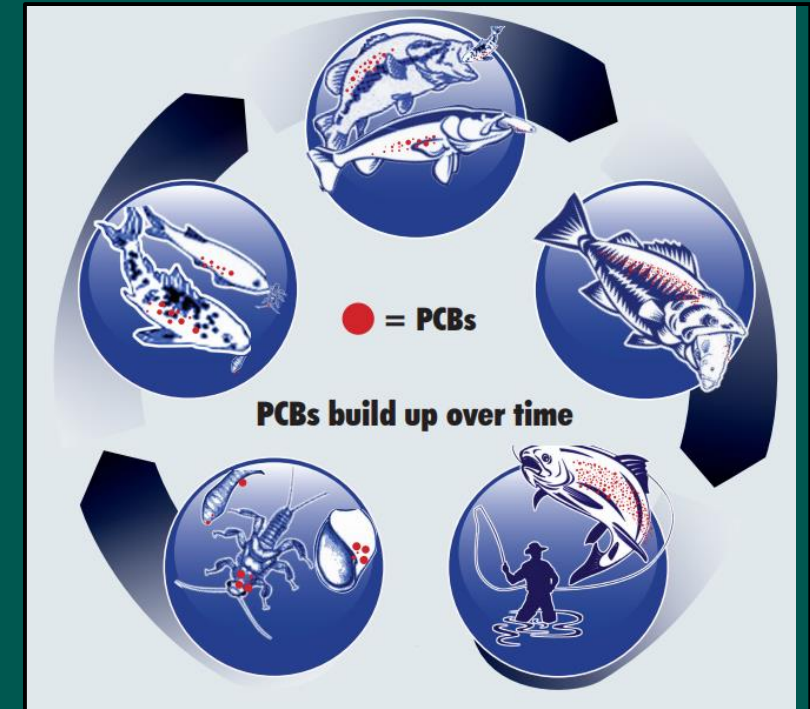


Image courtesy of Oregon Health Authority

Fish Advisory for Lower Willamette River

Recommended maximum meals*,
per month, for resident fish:

2



Black Crappie
(or 4 meals, if fillet only)

0



Carp

0



Brown Bullhead

0



Bass

Recommended maximum meals*, per month, for shellfish:

2



Crayfish

*Note: Harvesting freshwater clams
and mussels in the Willamette River
is ILLEGAL.*

7



Mussels

0



Clams

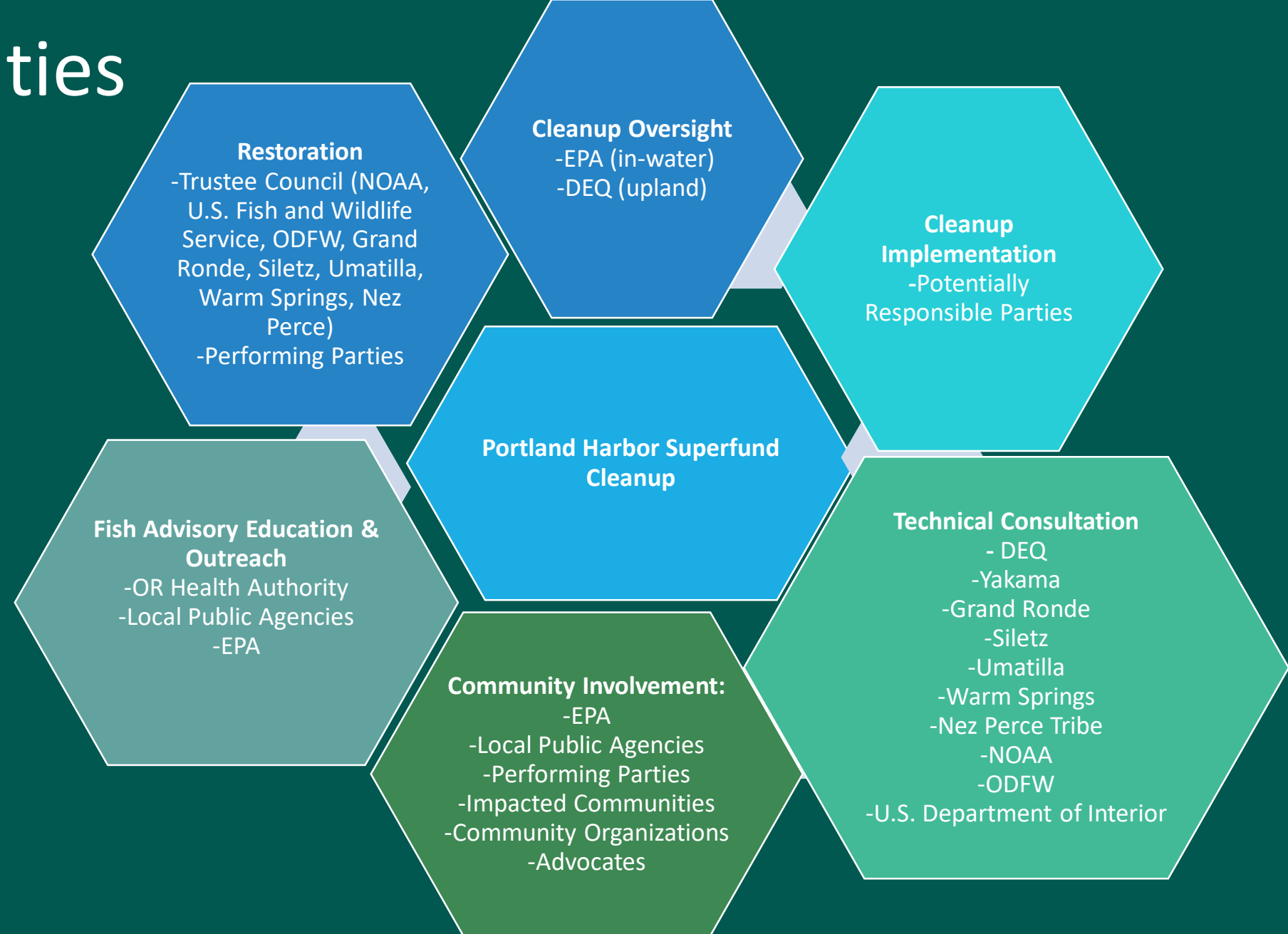
**All recommended meals will be 0 (zero) when Superfund clean-up activities (for example, dredging) begin and soils are disturbed.*

Fish Advisory Outreach and Education

- Funded by the City, State, and Port of Portland, Multnomah County is leading
 - Identification and engagement of communities fishing in lower Willamette
 - Collaboration with communities to develop culturally specific messaging and engagement strategies
 - Educating Portlanders on OHA's fish advisory
- Multnomah County fish advisory outreach and education program coordinator
 - Beth Appert, beth.appert@multco.us



Involved Entities



City of Portland's Role

Pre-ROD Efforts

- **Source Control.** The City has been doing source control work since around the time the Site was listed in the Superfund Program, in 2000. This included identifying sources of contaminants to the river and working with DEQ and individual property owners to control those sources.
- **LWG.** The City was a member of the Lower Willamette Group, the name of the group of parties that performed the Remedial Investigation and Feasibility Study for the in-water cleanup. The group no longer exists because that work is completed.
- **Community.** The City engaged community groups in developing our comments on EPA's Proposed Plan (EPA's draft cleanup plan).

Policy



- BES team represents the City on Portland Harbor
- City's unique role:
 - Steward of river and community
 - Regulator and planner
 - Potentially Responsible Party
- Program is a priority to both Commissioner Fish, who oversees the Bureau leading the work, and the Mayor's office
- Policy work involves building partnerships and providing leadership in moving the cleanup forward

Technical

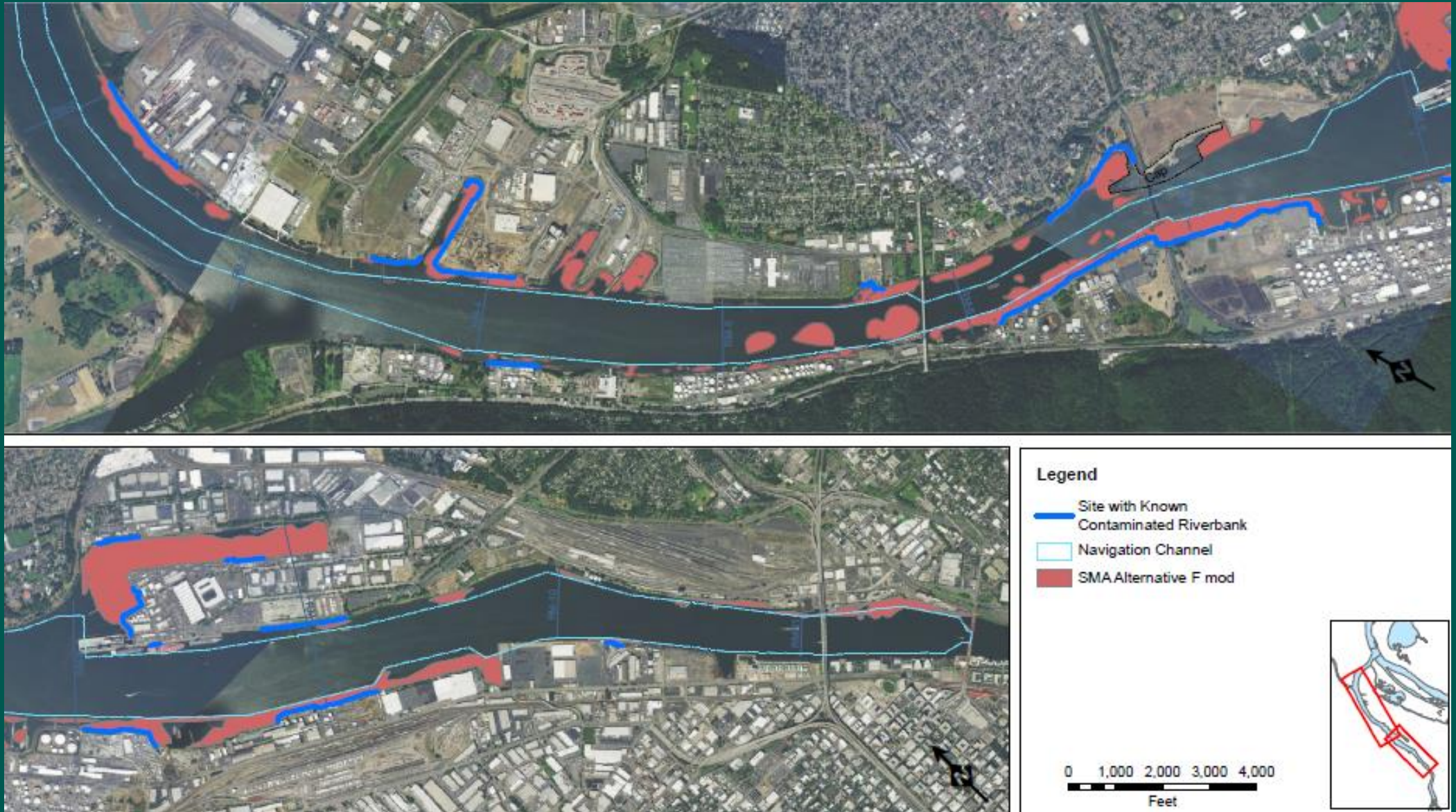


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In-Water Work: What's Happening Now



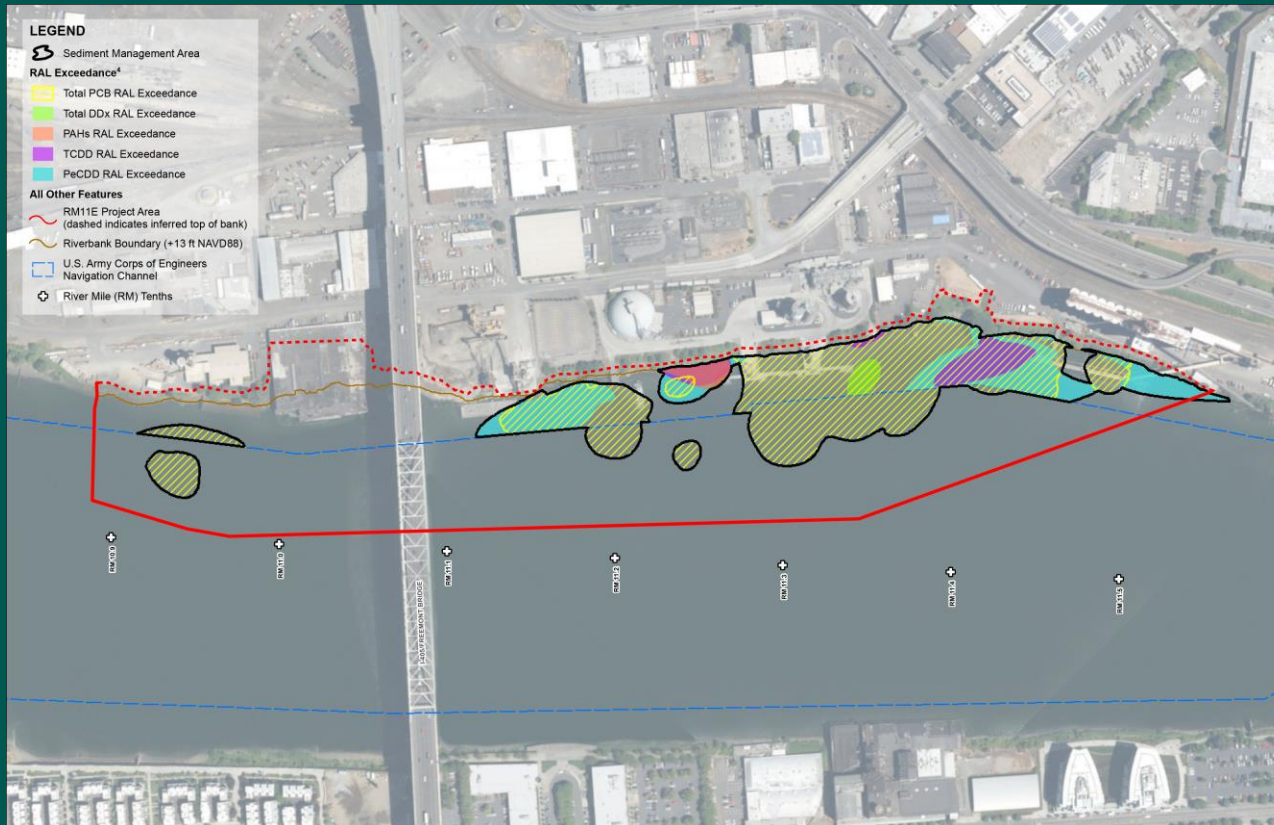
Current In-water work:

Refinement and Baseline Sampling

(performed by “pre-RD group”, not the City)

- **Bathymetric Survey** (elevation map of the bottom of the river)
- **Surface Sediment** – over 650 new samples
- **Subsurface sediment** – down to 15 feet below surface
- **Fish Tissue** – smallmouth bass
- **Surface Water** – multiple seasons
- **Pore Water** – multiple seasons
- **Fish acoustic tracking study** – ~1 year study
- **Sediment traps** – captures sediment in the water column to help understand what is moving downstream

In-Water Work: River Mile 11 East

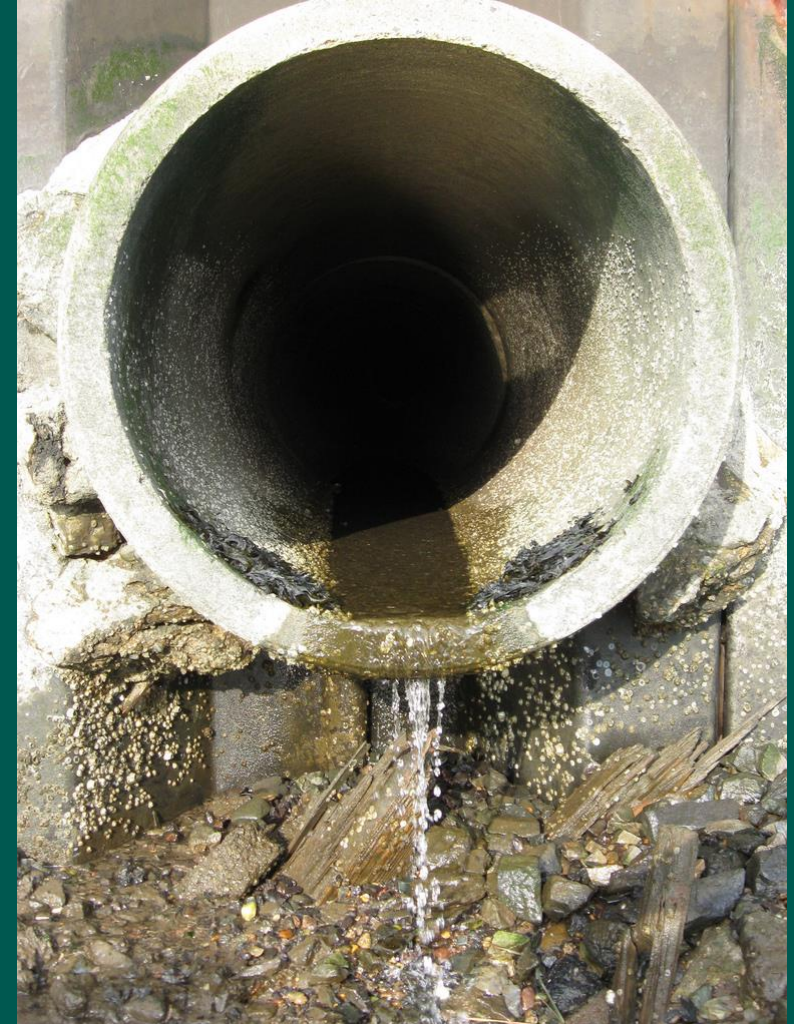


Implementation Challenges

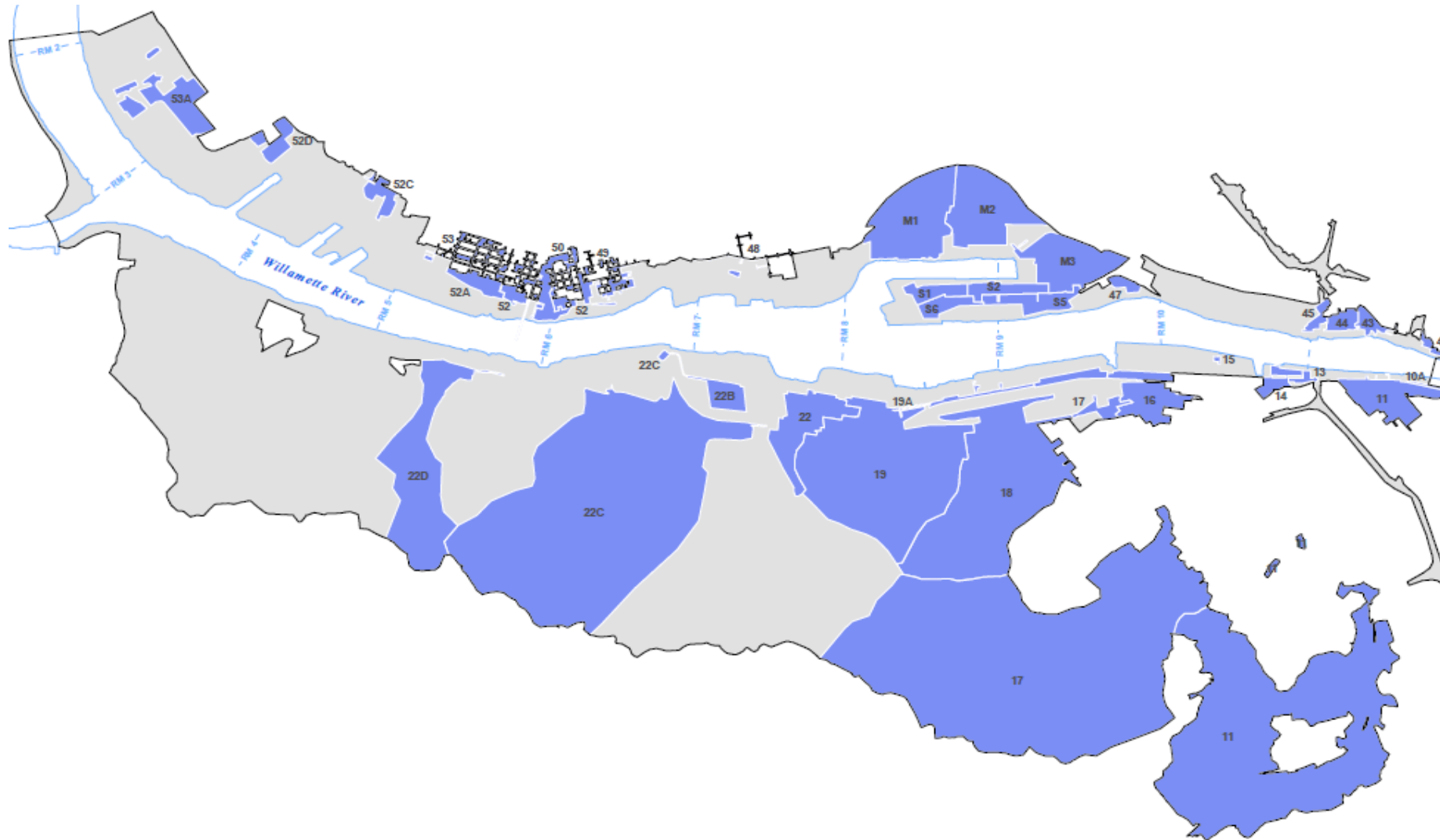


Source Control (DEQ is lead Agency)

- Identify and control sources to City conveyance systems to prevent recontamination:
 - Protection of the public conveyance system is a shared responsibility
 - Control contaminants at the source
 - DEQ/City partnership critical to address overall stormwater issues
 - DEQ/City regulatory programs to be evaluated and improved, as needed



Portland Harbor Superfund

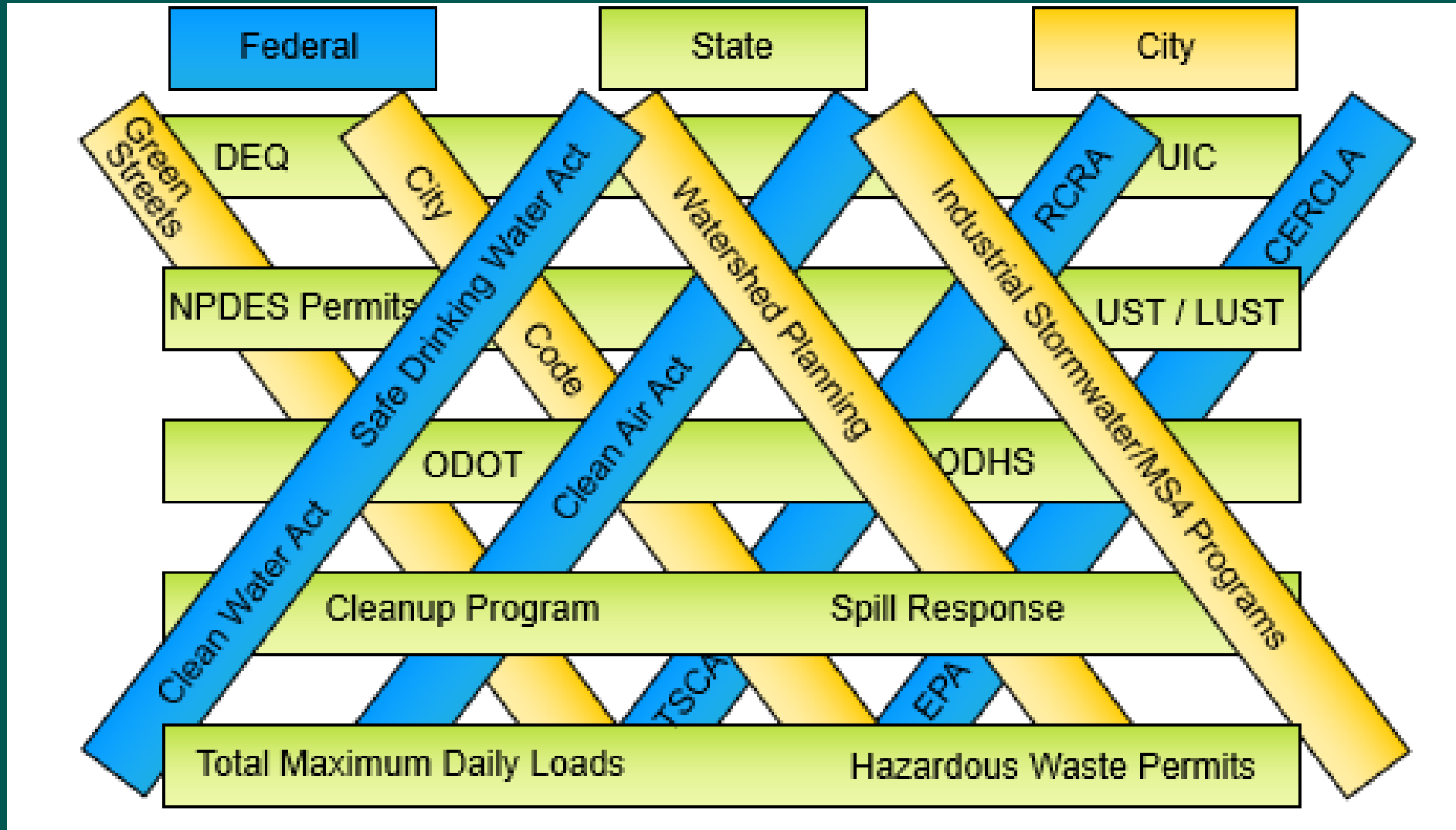


Source Control Conclusions

While low levels of contaminants may persist in stormwater, the City's current and previous work related to source control indicates that stormwater discharging from City outfalls will not contribute to recontamination of the Portland Harbor in-water sediment remedy after remaining site-specific SCMs are fully implemented.



Long-Term Stormwater Controls



Community Involvement



Why is it important that the City have a public involvement program when this is an EPA-led project?

- Portland Harbor is one of the largest and most complex sediment cleanup sites in the Nation.
- There are multiple jurisdictions involved and multiple communication needs.
- Communities have long requested greater public engagement for this project.
- No one agency can do this alone.

Foundation for Program Development

Relationship Building

- Community groups
- Environmental groups
- Tribal members
- Culturally specific groups

Community Grants

- Portland Harbor Community Coalition
- Portland Harbor Community Advisory Group
- Audubon Society

City-led Input Collection

- Facilitated dialogues
- 1:1 conversations
- Tabling, events & workshops

Outcomes

- 550+ Portlanders provided input
- 45 organizations engaged
- Rich input from environmental justice communities
- New/stronger community relationships



Photo credit: Donovan Smith,
Portland Harbor Community Coalition

We heard from

- Audubon Society of Portland
- Bonneville Environmental Foundation
- Columbia River Inter-Tribal Fish Commission
- Communities of Color Collaborative
- East European Coalition
- Get Hooked
- Human Access Project
- Iraqi Society of Oregon
- JOIN
- NAACP
- Neighborhood associations
- Northwest Council Water Protectors
- OPAL
- Oregon Tradeswomen
- Portland African American Leadership Forum
- Portland Harbor Community Advisory Group
- Portland Harbor Community Coalition
- Right 2 Survive
- Self Enhancement Inc.
- Sierra Club
- Street Roots
- Village Coalition
- Willamette Riverkeeper
- Willamette River Advocacy Group
- Wisdom of the Elders

And more!

WHAT WE HEARD

Increase public voice and participation in the Superfund process, particularly among impacted communities.

Portlanders' Priorities:

- Recognize community expertise and its value.
- Involve Portland Harbor-impacted communities in meaningful way.
- Provide resources to support full participation in the Superfund process and opportunities to inform decisions.
- Engage impacted communities early and often.

WHAT WE HEARD

Distribute
Superfund-
related benefits
and burdens
equitably.

Portlanders' Priorities:

- Acknowledge City's role in facilitating past and present social inequities.
- Consider potential benefits and impacts of Superfund decisions on EJ communities.
- Prioritize benefits for impacted communities in the form of:
 - ✓ Workforce development and living wage jobs
 - ✓ River access for cultural practices, spiritual connections, fishing, and recreation

WHAT WE HEARD

Provide
accessible
information on
health and
safety risks.

Portlanders' Priorities:

- Provide information on:
 - ✓ What the contaminants are
 - ✓ What the impacts are on human health and safety, particularly for vulnerable populations
 - ✓ Which river activities are safe
 - ✓ How one can reduce one's risk
- Target outreach and education.

WHAT WE HEARD

Build greater public awareness and understanding of Superfund.

Portlanders' Priorities:

- Consistent communication about Superfund.
- Provide information on past, present, and future of Superfund—including cultural and community histories of peoples with past and present river connections.
- Provide updates on cleanup progress and outcomes.

WHAT WE HEARD

Be accessible
and
transparent.

Portlanders' Priorities:

- Provide information on:
 - ✓ City's role in the cleanup
 - ✓ City's plan to fund the cleanup
 - ✓ Timeline/Progress
- Open access to data
- More opportunities to engage with the City, public agencies, and Potential Responsible Parties (PRPs).

WHAT WE HEARD

Protect against
future
contamination.

Portlanders' Priorities:

- Build an understanding of relevant policies and regulations.
- Provide information on how the City prevents river pollution.
- Provide opportunities to guard against environmental policy/regulatory rollbacks.
- Support enforcement of existing policies.

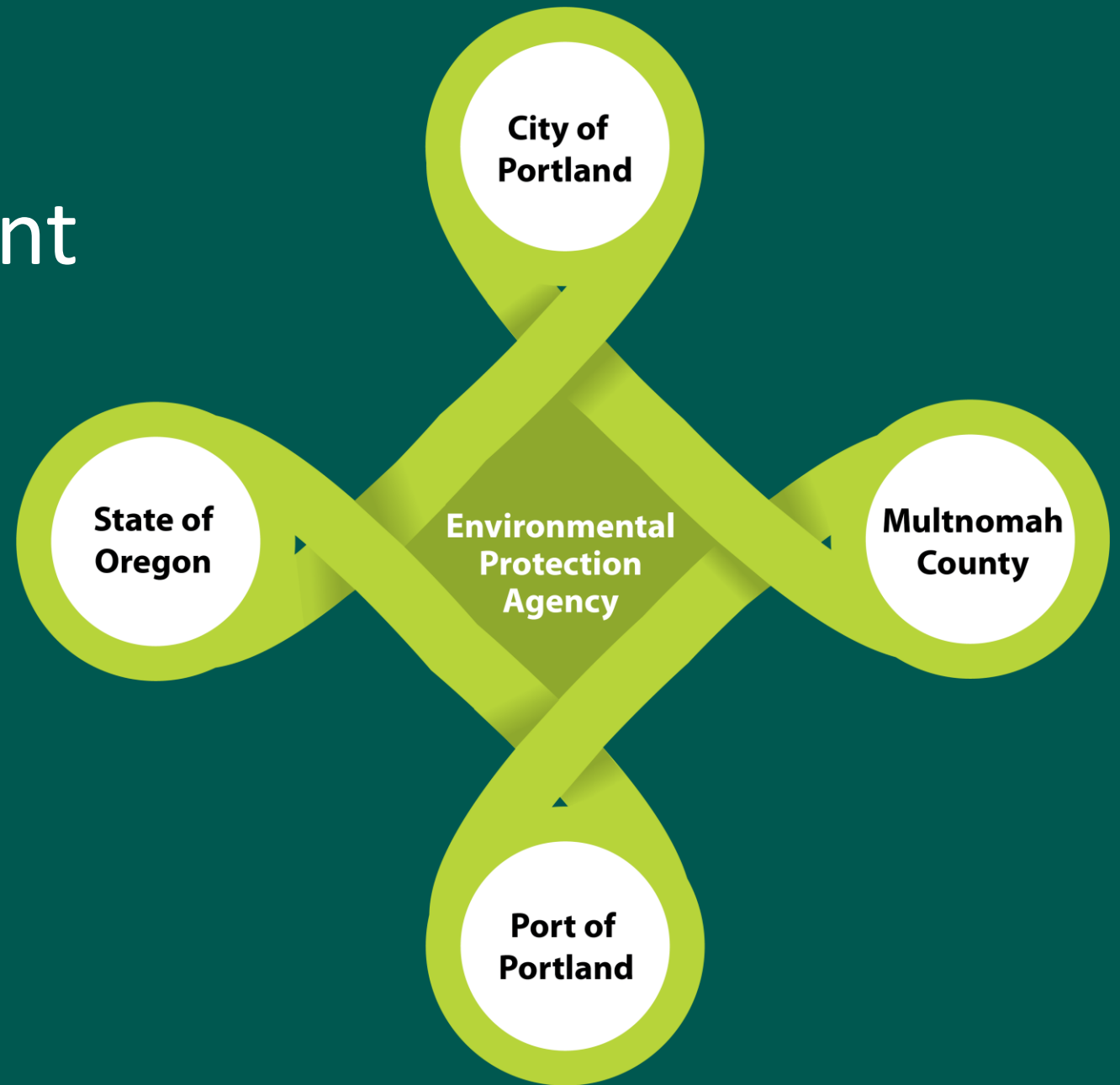
WHAT WE HEARD

The Superfund
is more than
just the
cleanup.

Portlanders' Priorities:

- Take a broad view to cleanup-related planning that considers:
 - ✓ Past harms and displacement of marginalized communities.
 - ✓ Potential benefits and burdens of decisions.
 - ✓ Opportunities to:
 - ✓ Evaluate policy for the Harbor's future
 - ✓ Improve other aspects of river health that support fish and wildlife habitat
 - ✓ Apply traditional ecological knowledge

Public Agencies' Community Involvement Relationships



Responding to Portlanders' Priorities: Proposed Community Involvement Program Areas

FOR EXAMPLE—

Community Benefits:

- Funding to support public participation
- Capacity building for effective engagement
- Enabling economic opportunities
 - Workforce development
 - Equitable contracting
- River access



City of Portland

Community Involvement Program Goals

1

Support meaningful involvement of Superfund-impacted communities that results in greater public participation in the cleanup process and community informed decision-making.

2

Increase Portlanders' understanding of the Superfund cleanup process.

3

Support transparency, ongoing communication, and collaboration among public entities and Superfund-affected communities.

4

Increase the public's access to Portland Harbor Superfund-related information.



INITIATIVE 1

Community Grantmaking

Dedicate funds to support community engagement in Portland Harbor.

AGENCY PARTNERS: City of Portland



INITIATIVE 2

Willamette Cove Remedial Design Roundtable Pilot

Partner with public agencies to convene community for roundtable

AGENCY PARTNERS: City of Portland, State of Oregon, and Port of Portland

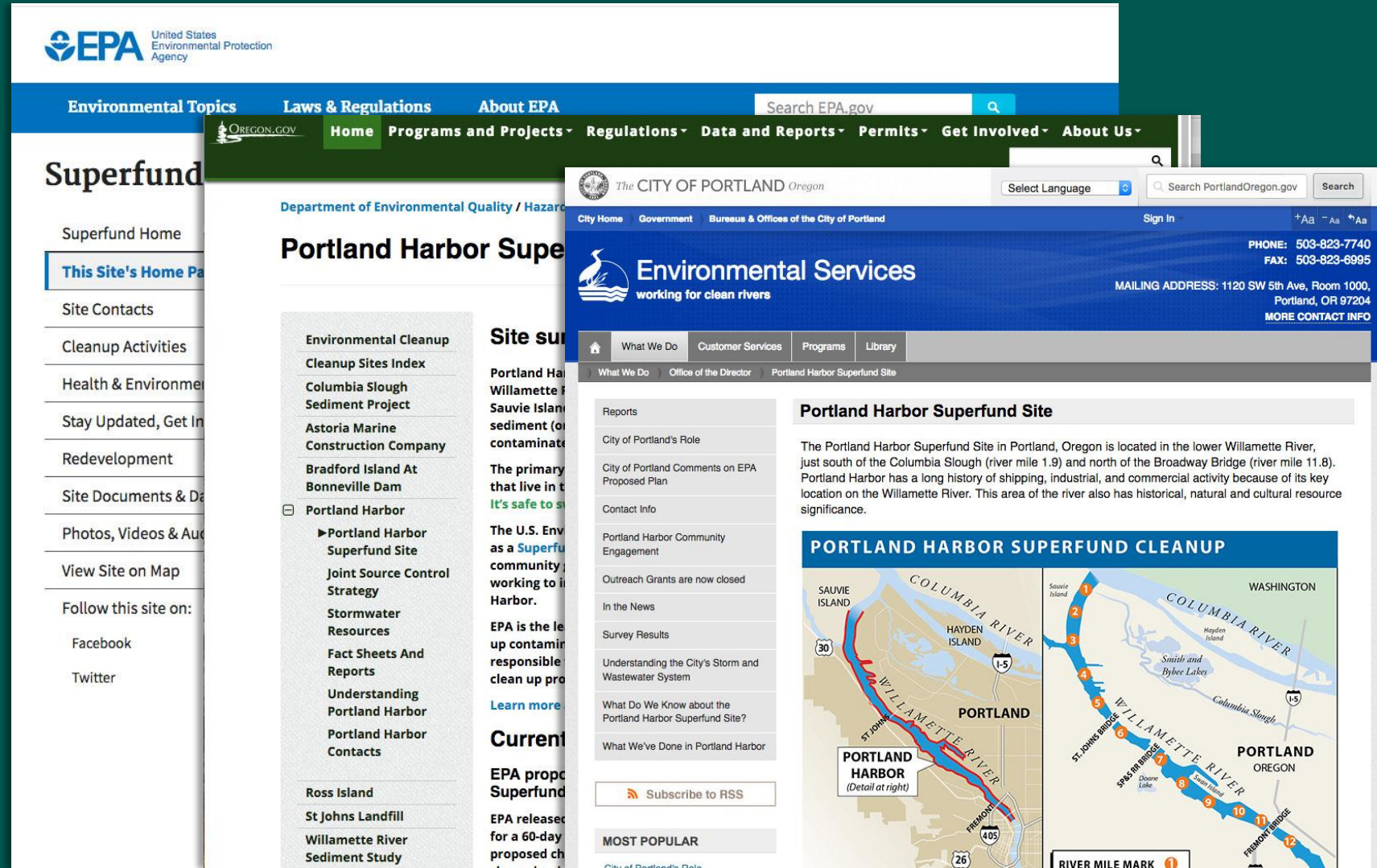
INITIATIVE 3

Information Management Plan

Centralize sitewide information, making it more accessible, transparent, and timely.

AGENCY PARTNERS:

- City of Portland, EPA, and State of Oregon



INITIATIVE 4 Public Education

Create communications to build public's Superfund awareness.

Target youth education with BES programs.

Continued support for fish advisory education program.

AGENCY PARTNERS: City of Portland, State of Oregon, Port of Portland, and Multnomah County





INITIATIVE 5

Community Benefits

Work with community to develop plan that maximizes community benefits and local economic opportunities.

AGENCY PARTNERS: City of Portland, State of Oregon, and Port of Portland

Questions?



**Thank You
Cindy Ryals
Jessica Terlikowski**