DEQ Portland Harbor Upland Source Control Status and Summary Report

Portland Harbor Citizen Advisory Group

June 11, 2014

Presented by:

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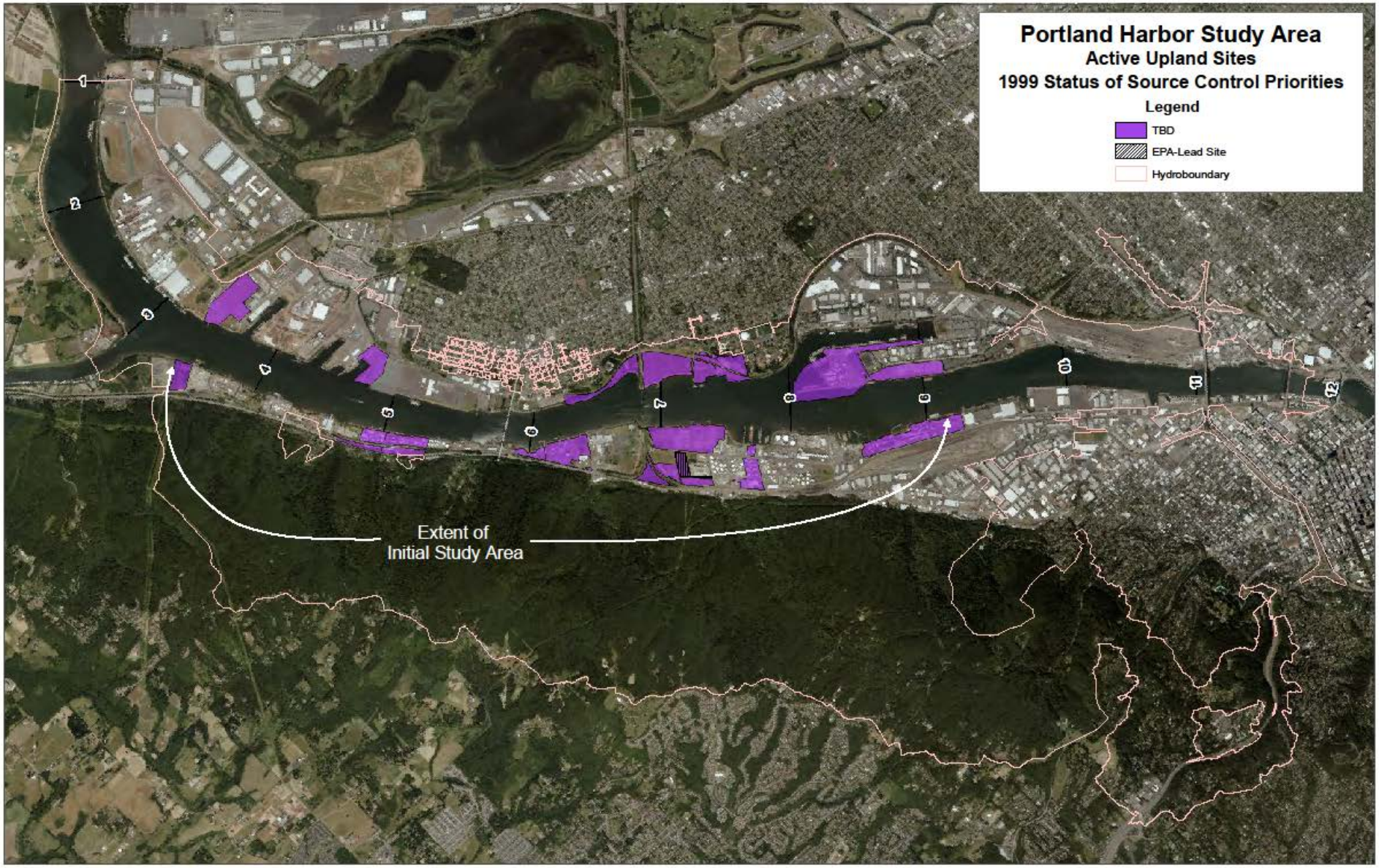
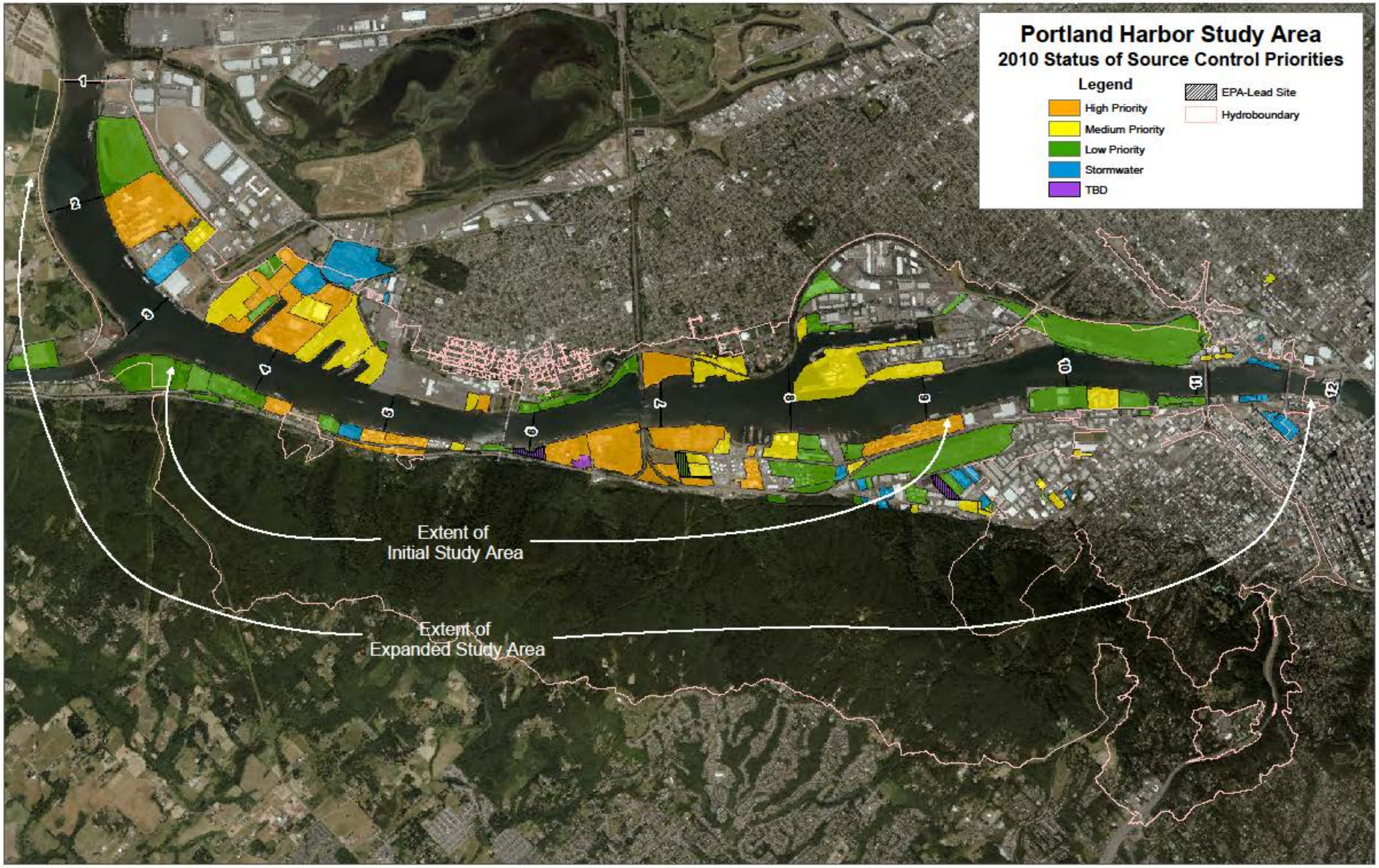
Presentation Outline

- Brief history of DEQ's Source Control work
  - What is upland source control?
    - Residual soil/bank pathway
    - Groundwater pathway
    - Stormwater/direct discharge pathway
  - City of Portland Outfalls Project – Linda Scheffler
- DEQ's Source Control Summary Report highlights
  - Recontamination focus
  - Georegions
- Next Steps and Outreach

Upland Source Control 1999



Upland Source Control 2010



What is Upland Source Control?

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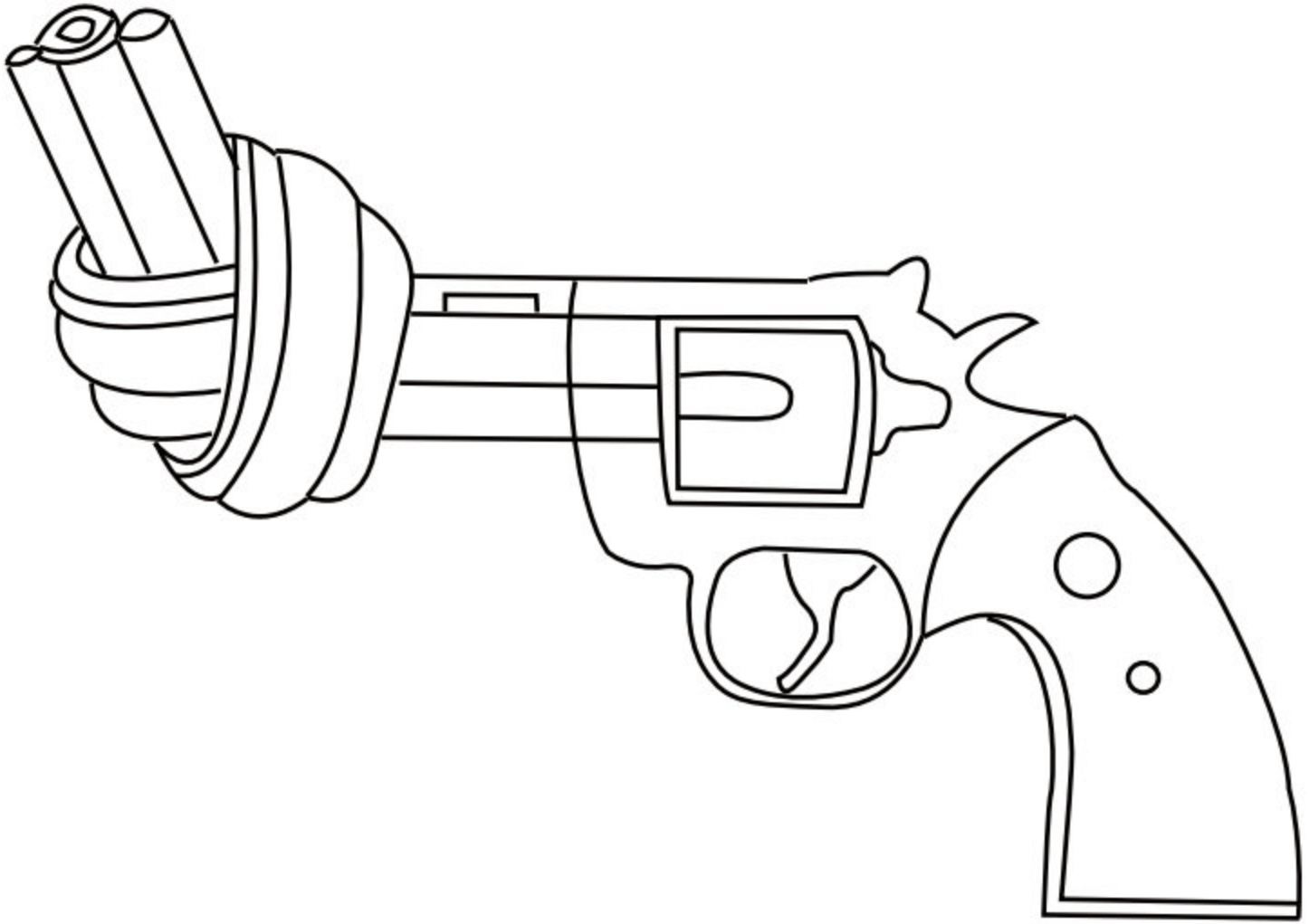


Source Control Priorities

High Priority – move directly to source control measures

- High concentrations in associated sediment
- Many contaminants elevated
- High toxicity of elevated contaminants
- Large area of impact and/or multiple pathways

Medium Priority – complete source control evaluation & do source control measures, if warranted

Low Priority – complete source control evaluation, but source control measures not likely

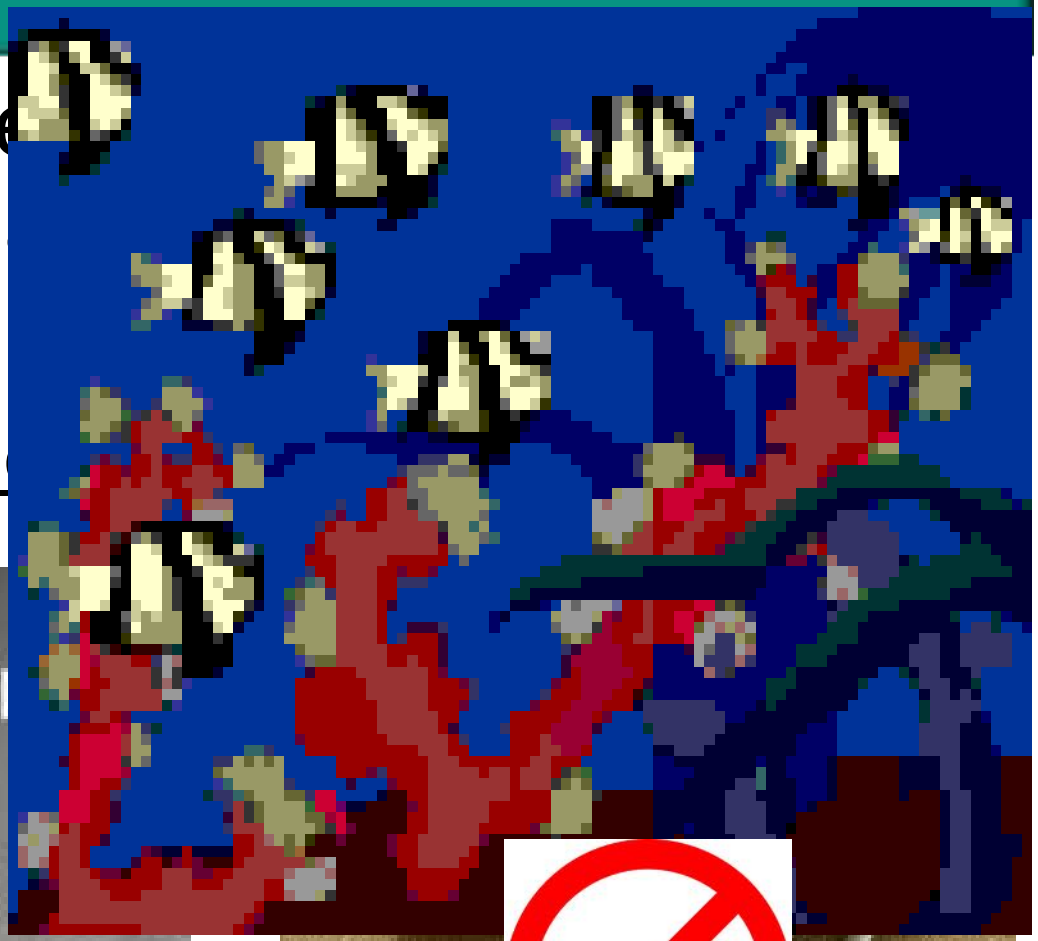
JSCS Objectives of Upland Source Control

- Prevent sediment recontamination from uncontrolled upland sources

- Control upland sources posing unacceptable risk to in-water receptors

To ensure that the river, and particularly river sediment, will not be recontaminated following implementation of the in-water sediment action remedies.

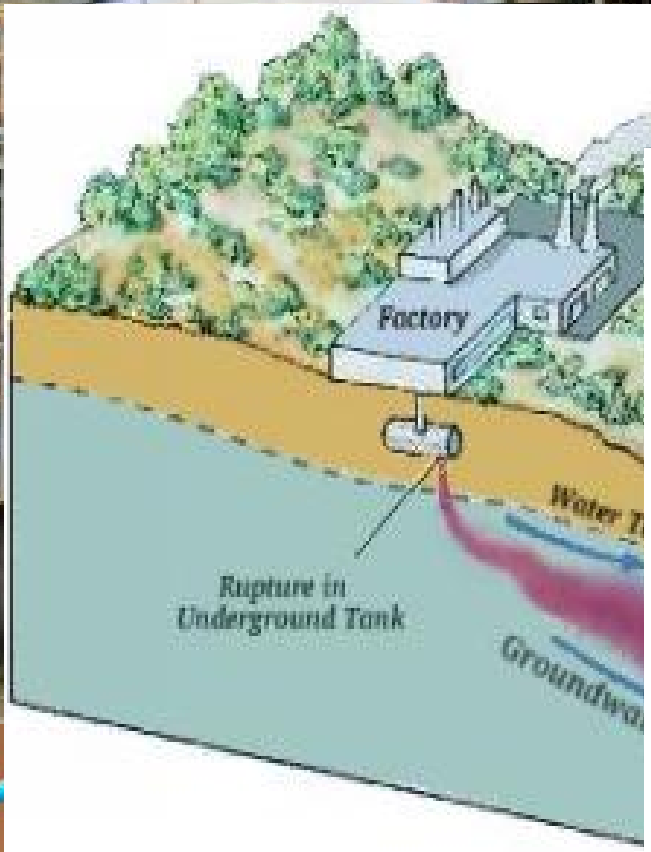
What is Upland Source Control?

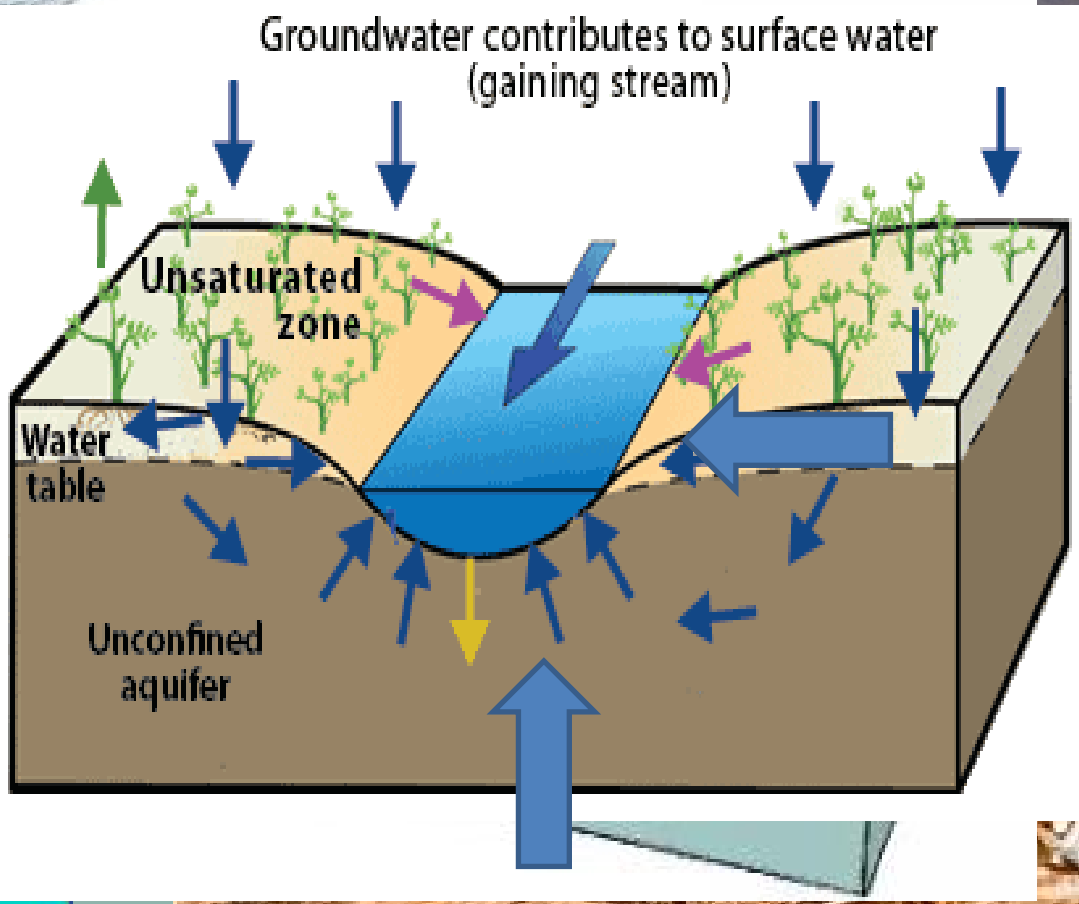


What is Upland Source Control?

Soil and Bank Erosion

Groundwater



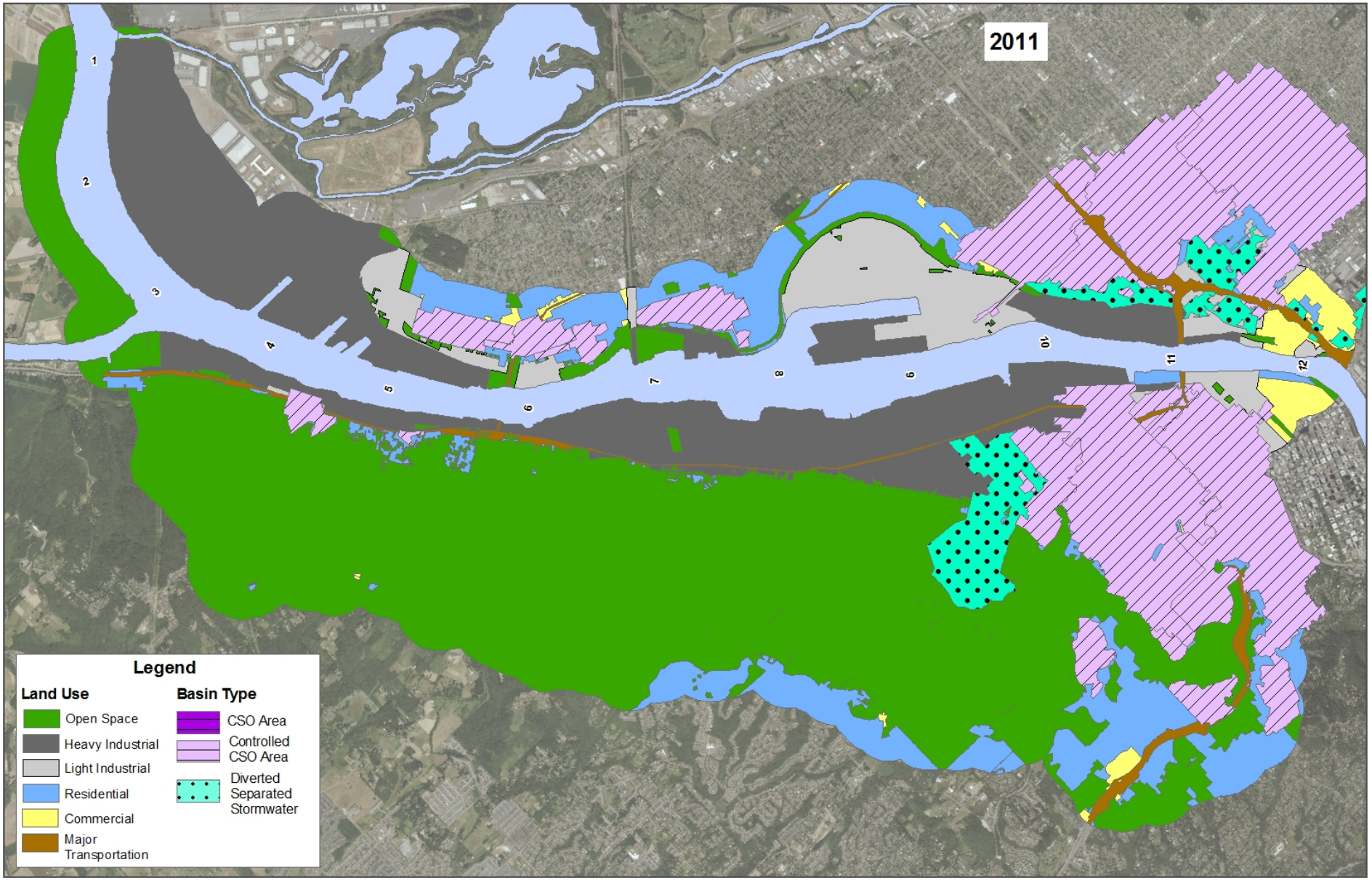


INFILTRATION

DEQ
State of Oregon
Department of
Environmental

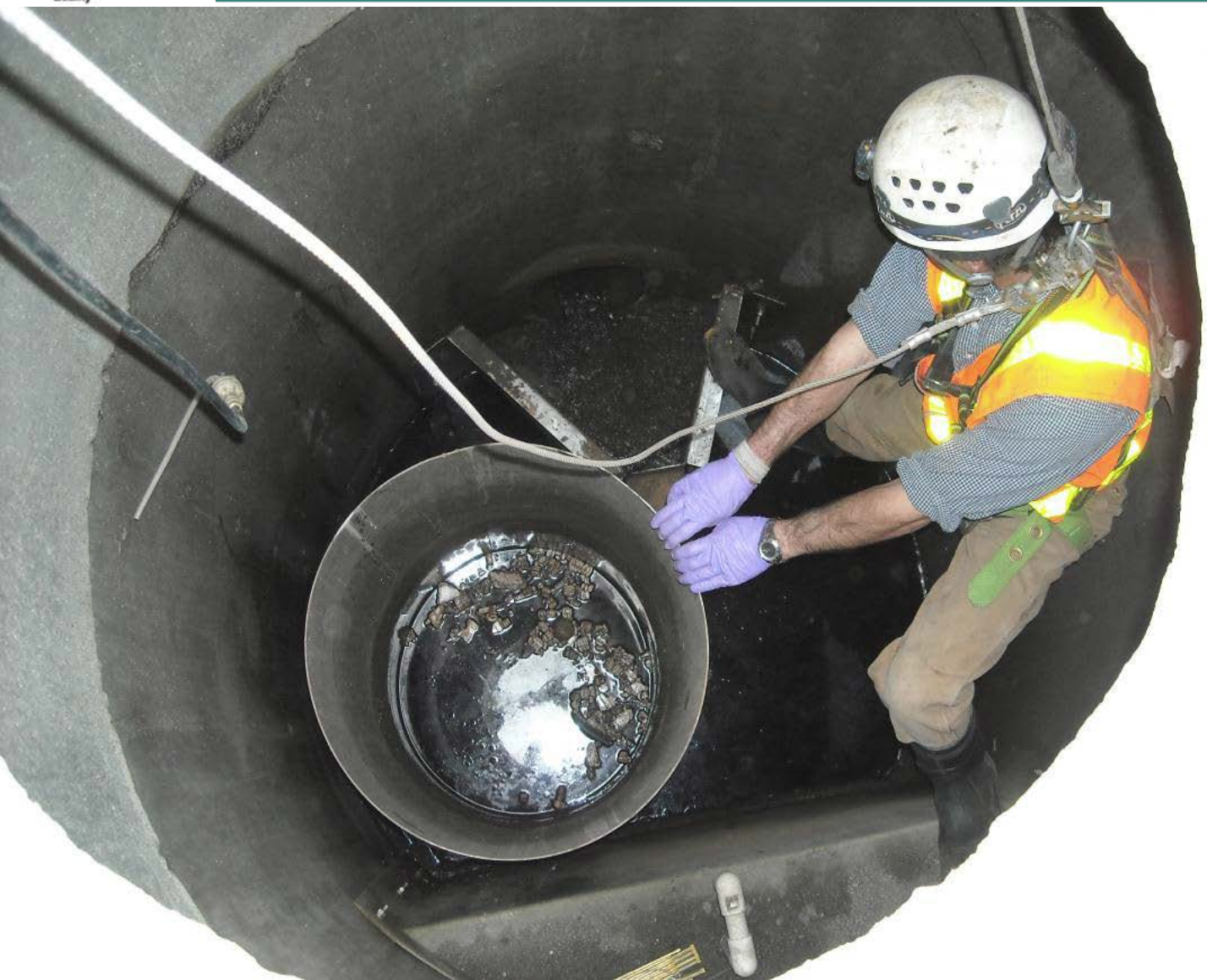
Stormwater & Direct Discharge

CSO Controls in Portland Harbor: 1991-2011



DEQ
State of Oregon Department of Environmental Quality

City of Portland Stormwater Outfalls Investigation



Basin 44 manhole

Recontamination Theme in DEQ's Upland Source Control Summary Report

Guidance

- 2005 EPA & DEQ *JSCS*
- 2005 EPA *Contaminated Sediment Remediation Guidance for Hazardous Waste Sites*
- 2002 EPA *OSWER Directive 9285.6-08 Principles for Managing Contaminated Sediment Risks at Hazardous Waste Sites (specifically w/PCBs)*

EPA Direction

- EPA/DEQ Joint Recontamination Framework
- Each site/pathway as Excluded; Removed & when; Controlled, how & when or Uncontrolled w/plan & schedule

Examples

- Lower Duwamish Waterway, WA
- Gowanus Canal, NY

Source Control Summary Report Contents

1.0 Introduction
- 1.1 Background & Purpose
- 1.2 JSCS & Guidance Overview
- 1.3 Report Organization & Scope

2.0 Site Description & Upland Land Use

3.0 Potential Upland Source Contaminant Transport Pathways
- 3.1 Soil/Bank Erosion
- 3.2 Groundwater
- 3.3 Stormwater
- 3.4 Air Deposition
- 3.5 Overwater Activities
- 3.6 Upstream Sediment Impacted by Upland Activities

4.0 Potential for In-Stream Sediment Recontamination and In-Stream Risk
- 4.1 Direct Discharges
  - 4.1.1 NPDES General & Individual Wastewater & Stormwater permits inventory
  - 4.1.2 City Stormwater Outfalls (39 MS4 & CSO Abatement details)
  - 4.1.3 ODOT Stormwater Outfalls (3 MS4 w/contribution to 29 others)
  - 4.1.4 Private Outfalls – unpermitted
- 4.2 Linear Transportation Features
  - 4.2.1 ODOT Highways
  - 4.2.2 PBOT Roadways
  - 4.2.3 Railroads
- 4.3 Groundwater Plumes
- 4.4 Erodible Bank Areas

Recontamination expectations per guidance

Big picture overview of recontamination pathways general

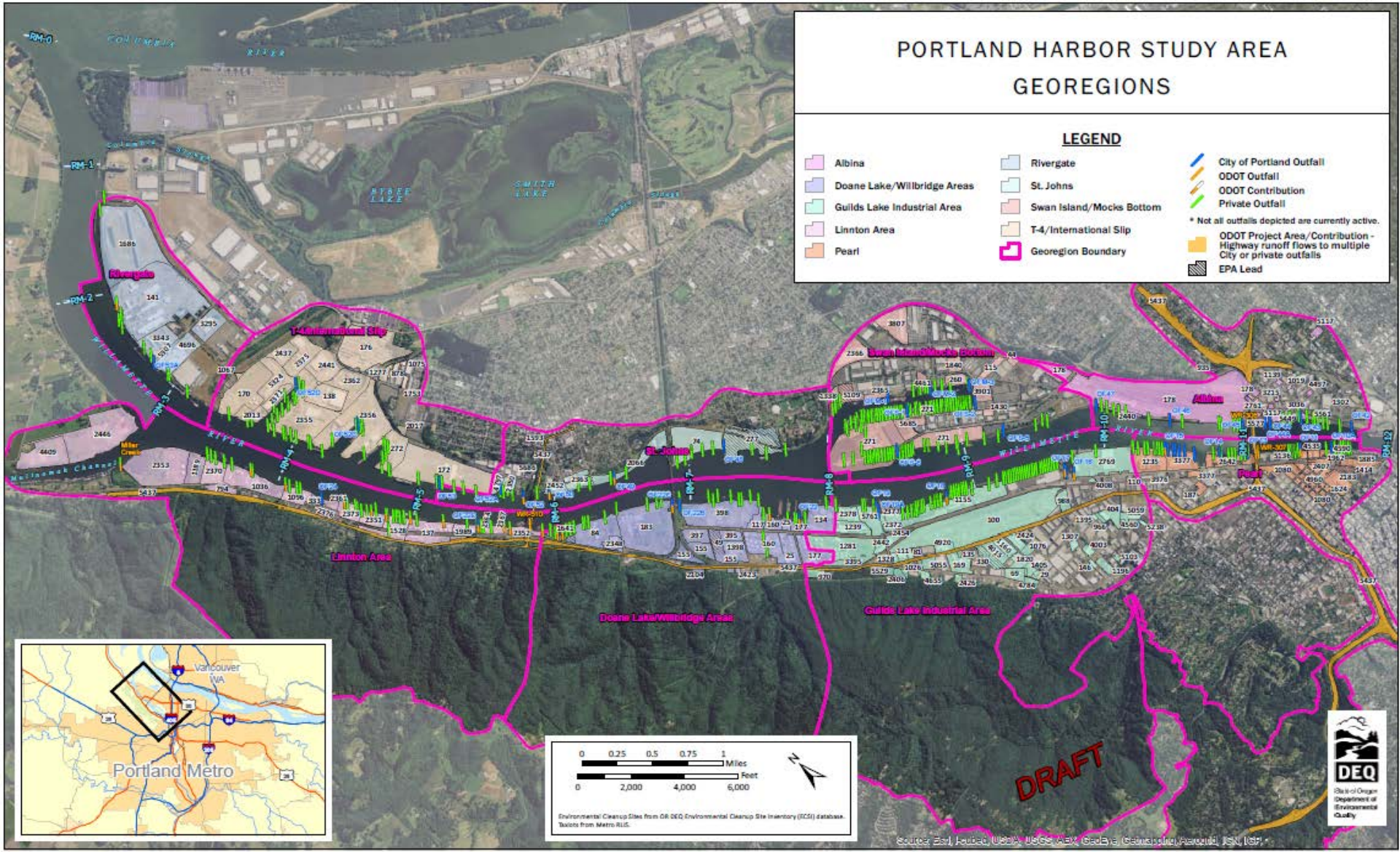
Source Control Summary Report Contents

4.5 Geographic Regions

- 4.5.1 Albina – RM 9.9 – 11.8 E
- 4.5.2 Pearl District – RM 10.3 – 11.8 W
- 4.5.3 Swan Island/Mocks Bottom – RM 8.1 – 9.9 E
- 4.5.4 Guilds Lake – RM 8.0 – 10.3 W
- 4.5.5 St Johns – RM 5.1 – 8.1 E
- 4.5.6 Doane Lake/Willbridge – RM 6.0 – 8.0 W
- 4.5.7 T-4/International Slip – RM 3.4 – 5.1 E
- 4.5.8 Linnton – RM 3.0 – 6.0 W
- 4.5.9 Rivergate – RM 1.9 – 3.4 E

Site-by-site + Georegion evaluations of potential for recontamination

Geographic Regions

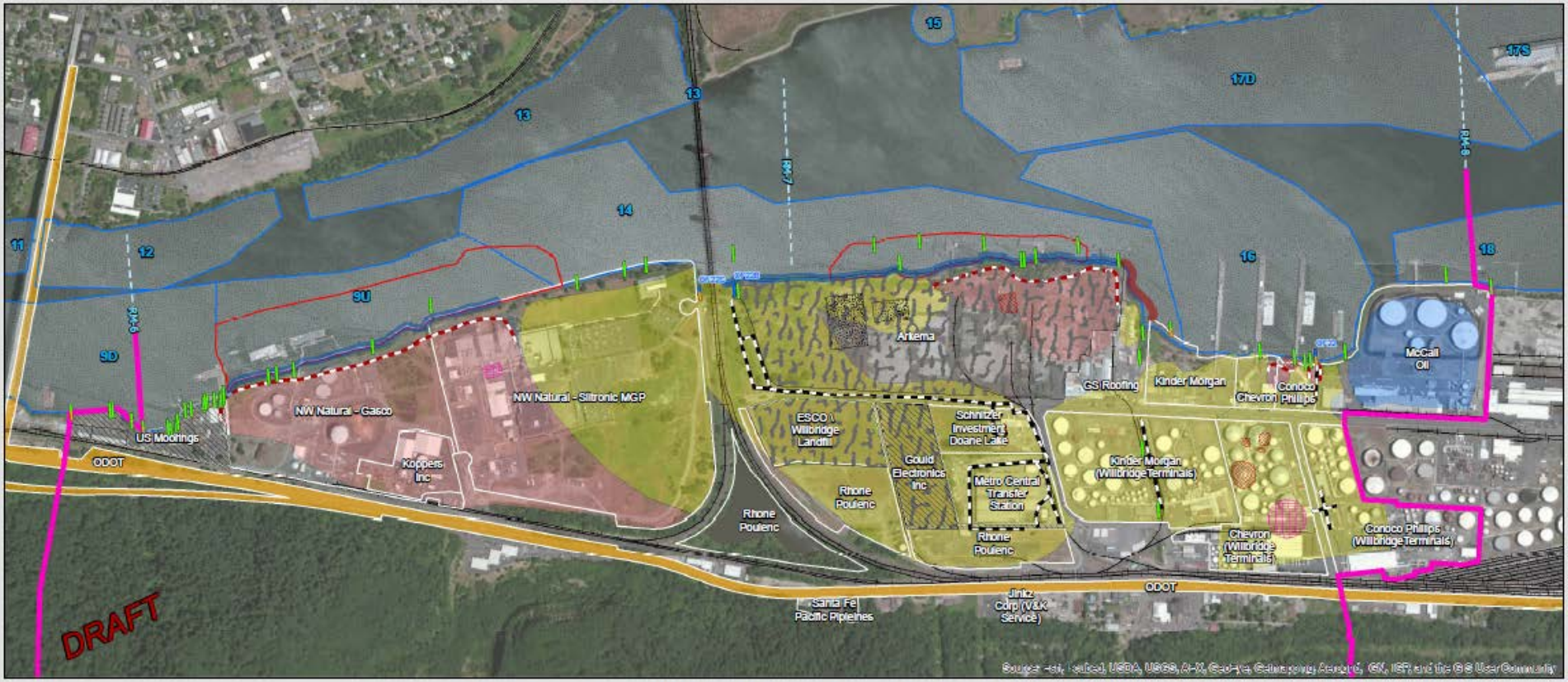


St. Johns Georegion Table

Table 4.5.5-2 - St. Johns Geographic Region Sites

SITE	ECSI#	PATHWAY(S)	PRIORITY	SOURCE CONTROL MEASURES STATUS/DATES	DECISION DOCUMENT	RECONTAMINATION POTENTIAL
MarCom North	4797	Overland flow Bank erosion Groundwater Stormwater	Low Low Low Low	Soil and sandblast grit removal 2007 Excluded Excluded Excluded	SCD 2008	Low
MarCom South	2350	Overland flow Bank erosion Groundwater Stormwater	Low Low Low Low	Soil removal 2008 Excluded 2011 Excluded 2011 Excluded 2011	SCD 2008	Low
City of Portland BES Lab	2452	Overland flow Bank erosion Groundwater Stormwater	Low Low Low Low	Excluded Excluded Excluded Excluded	SCD 2010	Low
Crawford St Corp	2363	Overland flow Bank erosion Groundwater Stormwater	Low Low Low Low	Characterization ongoing - 2014 Soil removal 2001/In-water remedy integration	SCD anticipated 2015	Low
McCormick & Baxter	74	Overland flow Bank erosion Groundwater Stormwater	High High High High	Groundwater containment remedy constructed 2003 Upland soil removal and soil/bank cap constructed 2005	ROD 1996 CCR* 2005	Low
Willamette Cove	2066	Overland flow Bank erosion	Low Med	Soil removal 1999, 2004 &2008 Sand removal 2006/in-water remedy	SCD anticipated	Medium until in-water remedy

Doane Lake/Willbridge Georegion



DOANE LAKE/WILLBRIDGE GEOGRAPHIC REGION

LEGEND

- Georegion Boundary
- Site Boundary
- EPA Lead
- Early Action Areas
- Willamette River Mile
- Railroads
- Sediment Management Units/ Areas of Potentail Concern

Groundwater Plume Priority Status
- High
- Medium
- Insignificant

Erodible Bank Status
- DEQ Potential/Interim DEQ Bank Actions
- Expected EPA Riverbank Actions
- To Be Determined

Groundwater Source Control Measures
- Containment
- Stormwater Pipe Re-Lined
- In-situ Treatment

Stormwater Source Control Measures
- Cap
- Soil Removal
- Treatment Component

- City of Portland Outfall
- ODOT Outfall
- ODOT Contribution
- Private Outfall

* Not all outfalls depicted are currently active.

- ODOT Project Area/Contribution - Highway runoff flows to multiple City or private outfalls

0 0.1 0.2 0.3 0.4 Miles

Environmental Cleanup Sites from OR DEQ Environmental Cleanup Site Inventory (ECSI) database. Taxlots from Metro RLIS.

DEQ State of Oregon Department of Environmental Quality

Source Control Summary Report Contents

4.6 DEQ WQ & Pollution Prevention Programs

4.7 Upstream Information

4.8 Data Gaps & Plans for Filling Them

- 4.8.1 Schedule for completion of SCMs at sites with yet uncontrolled sources
- 4.8.2 Bank areas needing evaluation/remedy
- 4.8.3 Groundwater
- 4.8.4 Railroads
- 4.8.5 Stormwater
- 4.8.6 LA/RE needed

4.9 Effectiveness Measures & Schedules

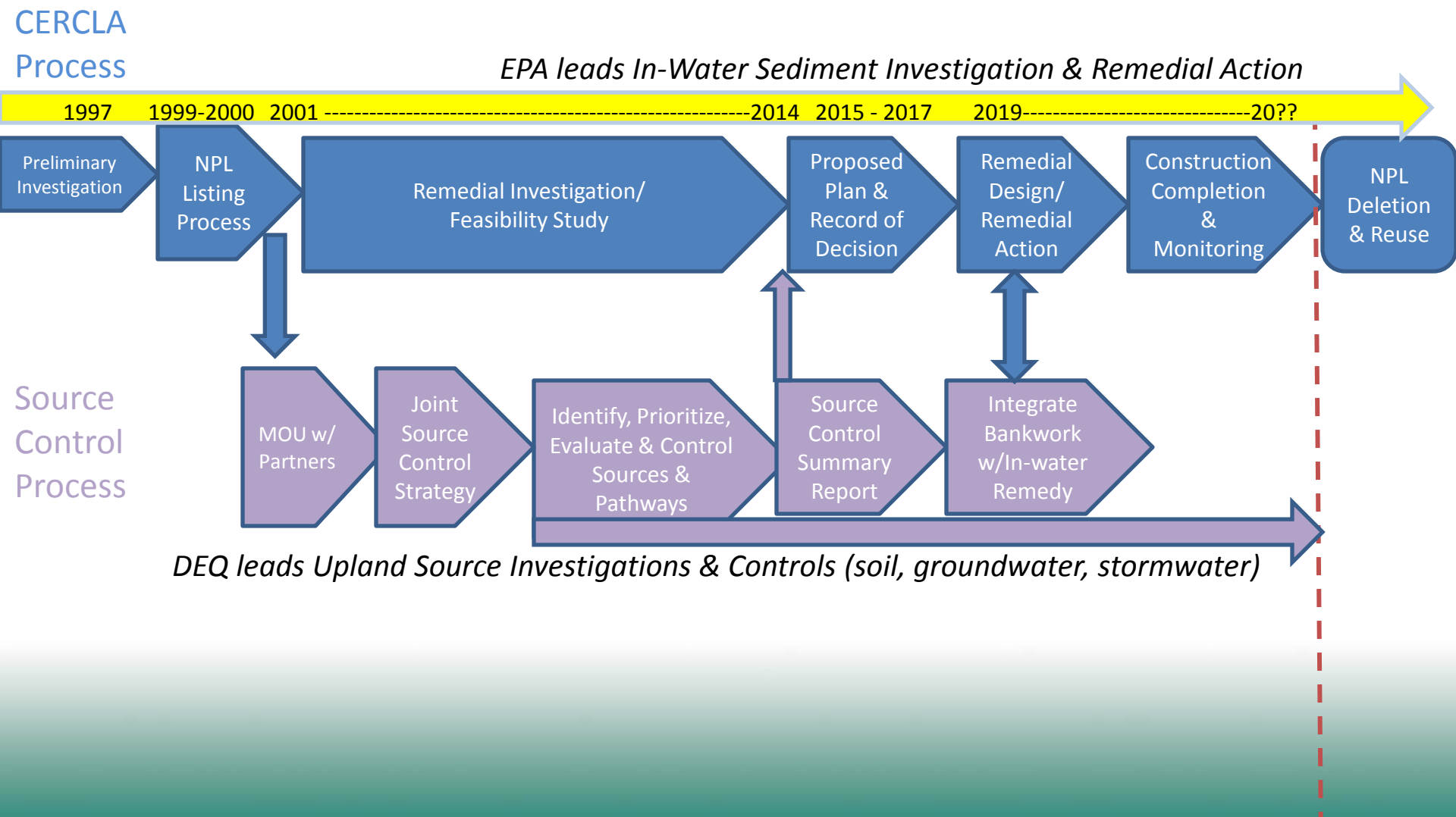
5.0 Recontamination Potential Conclusions

- 5.1 Lines & Weight of Evidence

6.0 References

Harbor-wide evaluation of potential for sediment recontamination, risk to aquatic receptors & plan for data gaps filling & adaptive management

In-Water and Upland Source Control Schedules



Questions?