



Downtown Portland Willamette River Sediment Evaluation

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Project information posted at:

www.deq.state.or.us/lq/cu/nwr/willametteriver.htm



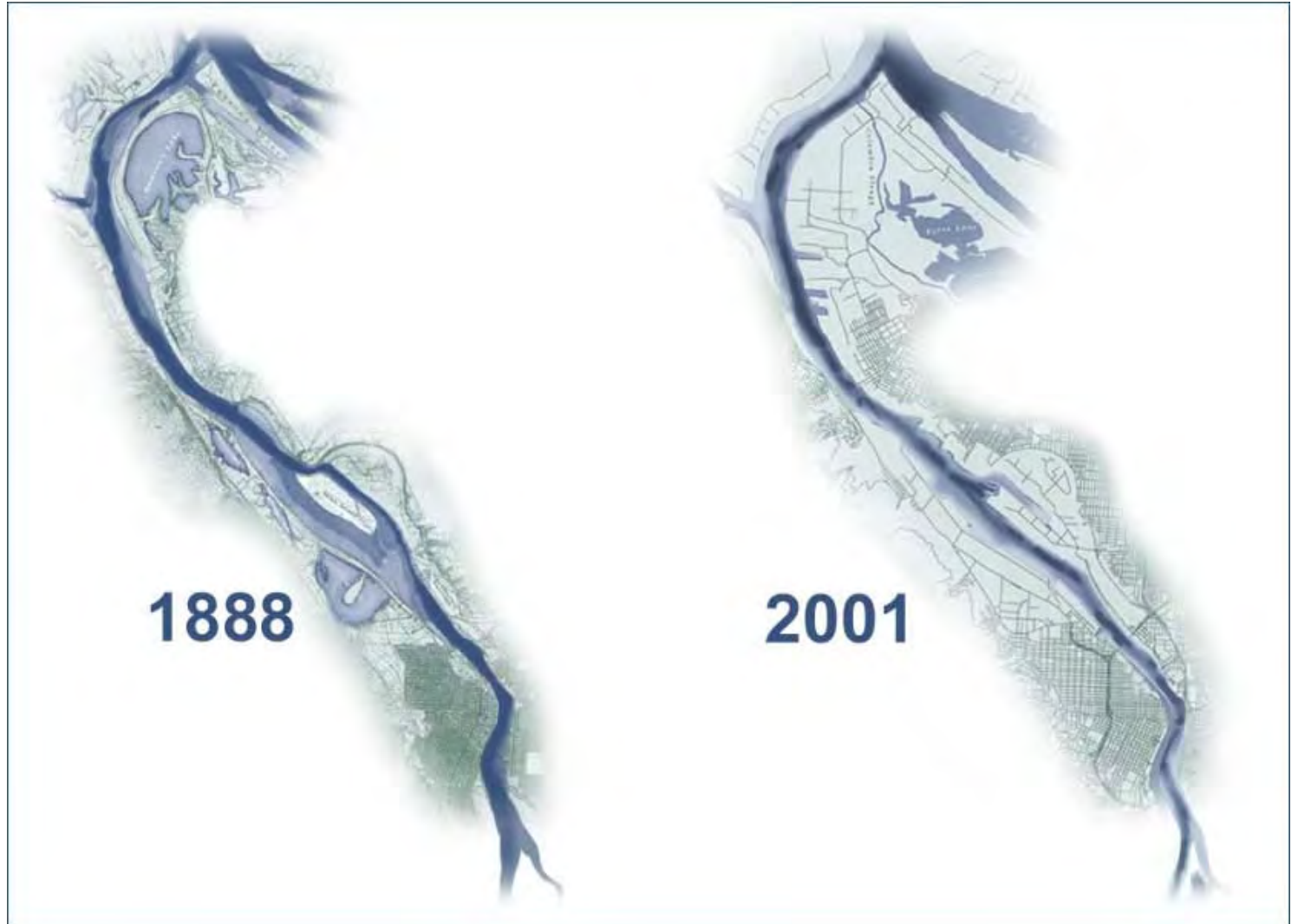
- 6:00** Introductions, review of meeting goals
- 6:05** Background and Goals of Investigation
- 6:20** Methods and Field notes from the Sampling
- 6:45** Data Summary, Evaluation/Focus Area Identification
- 7:15** Project updates – Zidell, City, Ross Island, NWN
- 7:30** Informal Exchange/Maps



Project Description and Rationale

- This downtown reach of the Willamette River is defined as the stretch between River Mile (RM) 12 and RM 16. This corresponds roughly to an area bounded by the Steel Bridge to the North, stretching south to the southern tip of Ross Island.
- The downtown stretch of the river has been used for and sculpted by commercial and transportation purposes for over 150 years.
- Before this study, limited information about toxics in sediment existed in this stretch of the river. Most data are confined to sites under active or past remediation, such as PGE Substation L, Zidell, and Ross Island, or have been provided by the Lower Willamette Group's (LWG) sampling efforts related to the Portland Harbor

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East Portland Waterfront, 1898



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Portland Waterfront, West Side, (1922). This photograph of Portland's west side waterfront was taken from on of the towers of the Hawthorne ridge in about 1922.





Lincoln Steam Plant





Investigation Details

- Collected “grab” samples of river sediments at 81 locations.
- Collected “core” samples of river sediments at 36 locations, up to 15 feet deep.
- Analyzed samples for full list of toxics, including metals, PCBs, organics, pesticides and herbicides. A limited number of samples were tested for dioxins.
- Surveyed samples for sediment dwelling (benthic) critters.

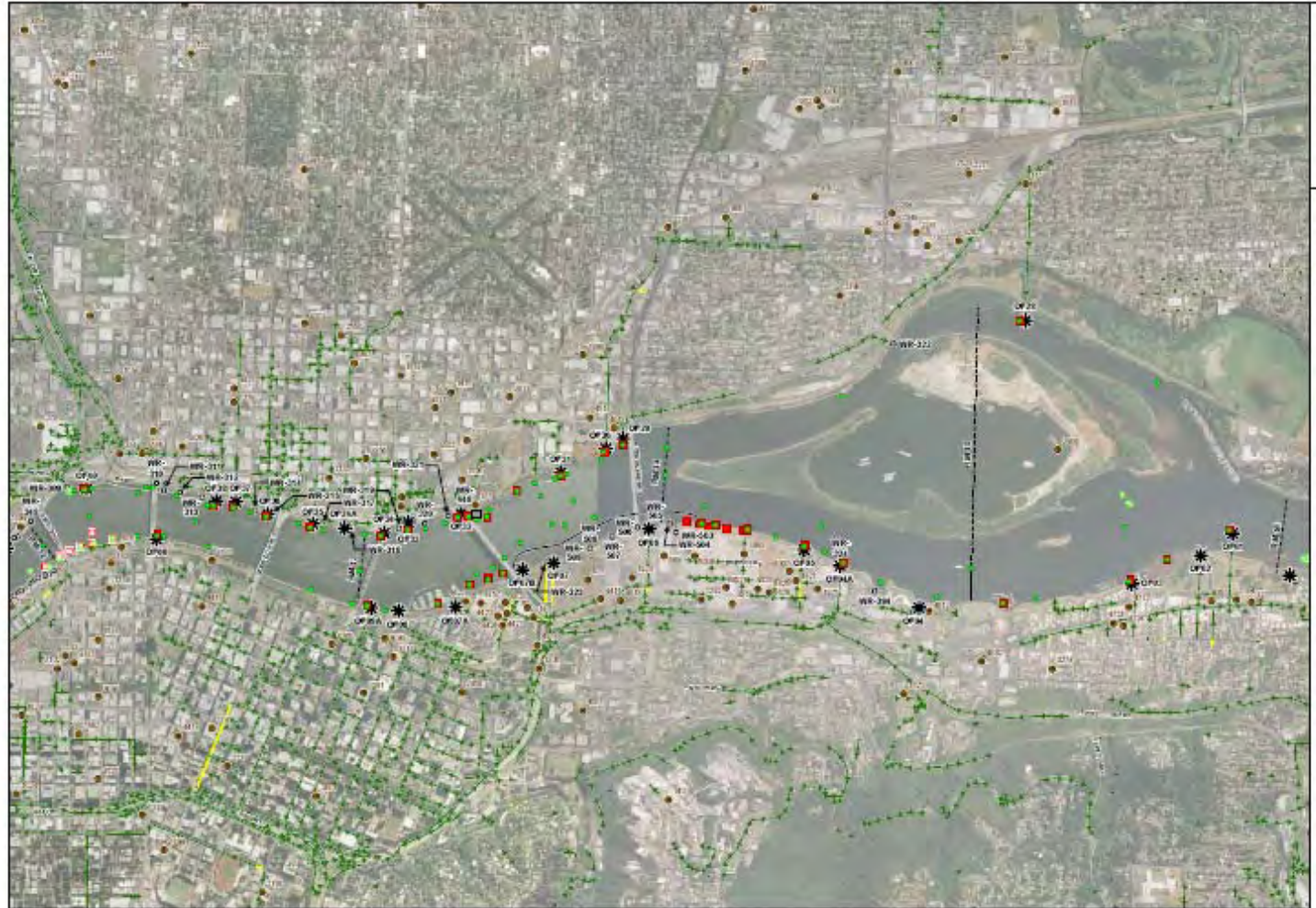


Investigation Details, continued

Sampling locations and analytical parameters for the sampling were selected in order to meet the following objectives:

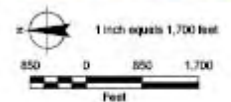
- Outfalls - assess the potential impact to river sediments from stormwater originated from a variety of land uses and from basins containing DEQ-listed (ECSI) sites.
- Riverfront Industries - assess the potential impact to river sediments from past and current riverfront industries.
- Ambient Stations - assess ambient levels of hazardous substances within the Downtown Reach.

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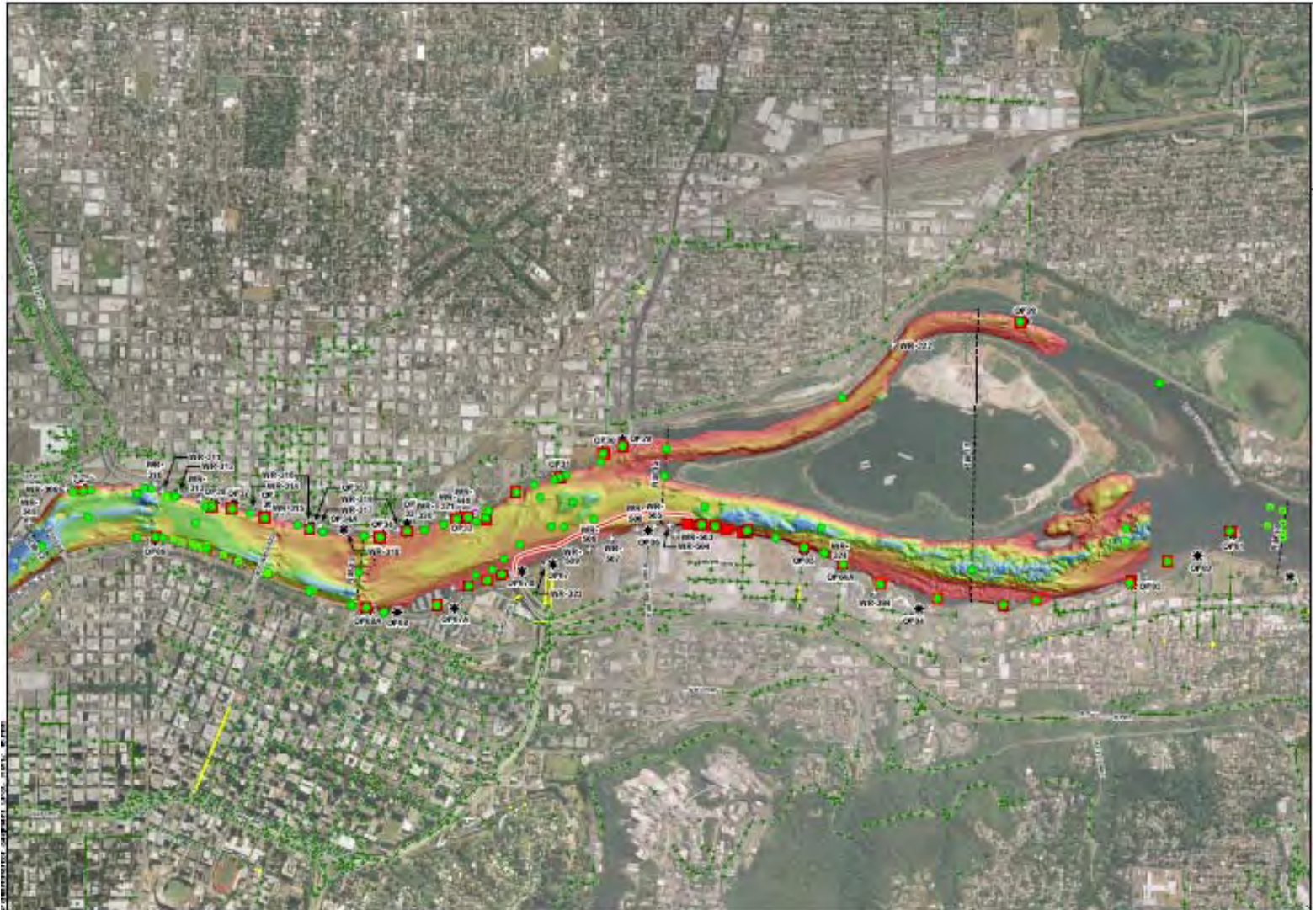


MAP NOTES:
Projection: Oregon State Plane North
Datum: North American Datum of 1983
Date: October 8, 2006
1. The locations of all features shown are approximate.
2. Outfall data obtained from the Lower Willamette Outfall's (LWO) GIS shapefile entitled "Outfalls_Aug06_Inv187". Original source of information provided by the City of Portland in June of 2005.
3. LWO core and grab locations obtained from LWO SCRA Combo database dated July 2, 2006.

DRAFT



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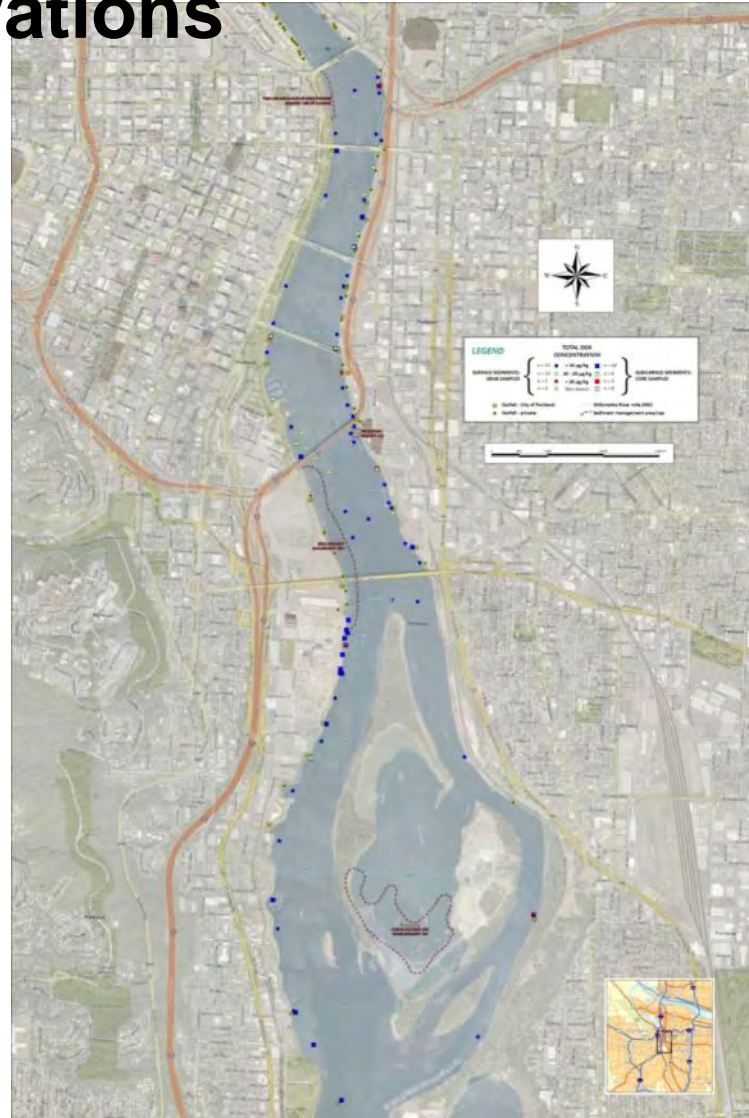


Investigation Goals

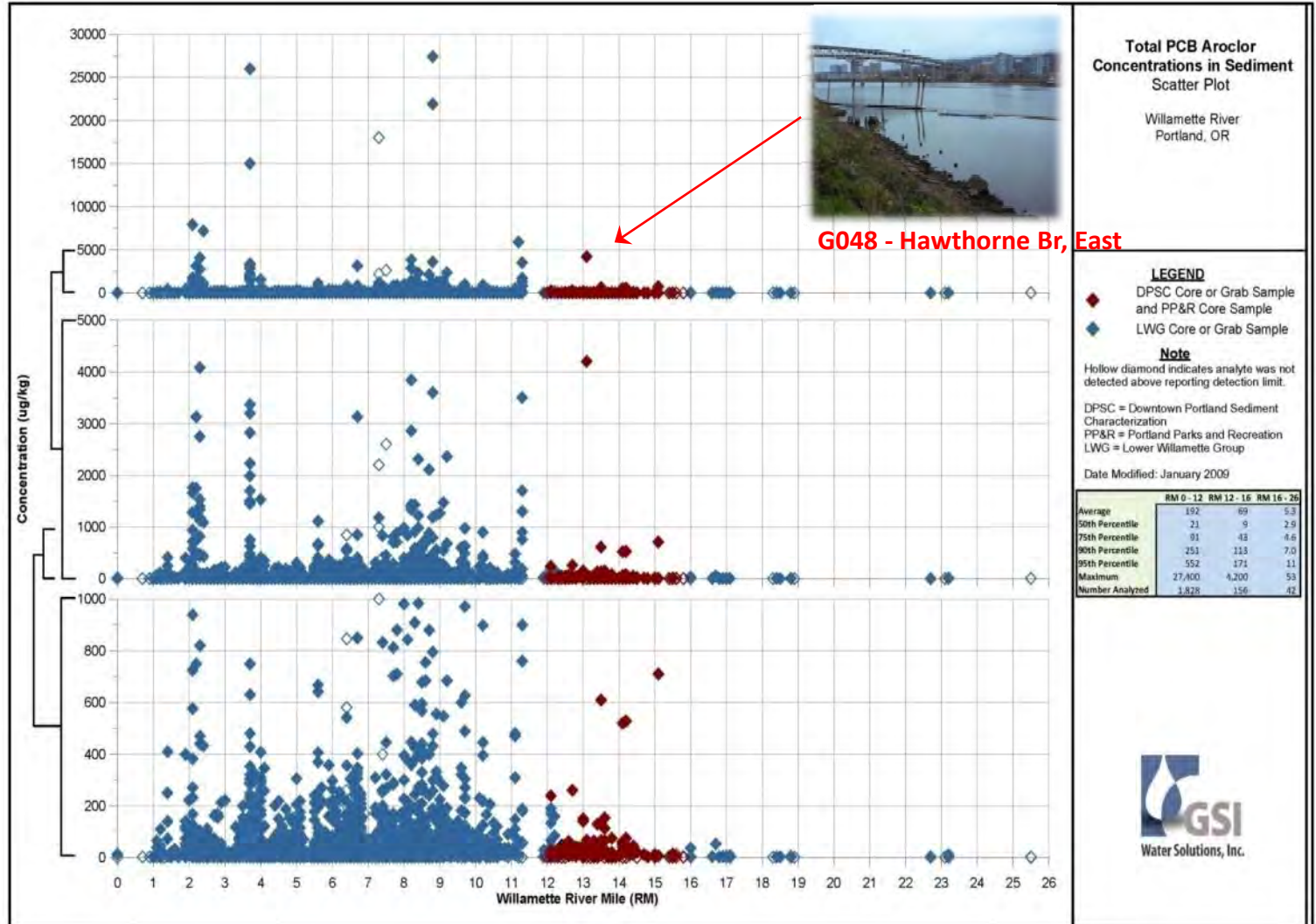
- Determine an ambient concentration of contaminants in sediment.
- In consideration of ambient concentrations, identify areas of sediment deposition in excess of acceptable screening levels, and related hotspot concentrations. Evaluate whether sediment in the reach poses a recontamination threat to the PH Study Area (consistent with our role in the MOU as lead agency for SC).
- Develop a state-led strategy to treat or remove hot spots, and control remaining sources to levels protective of HH and the environment.
- Facilitate finalization of Portland Harbor RI/FS, and implementation of Cleanup actions.



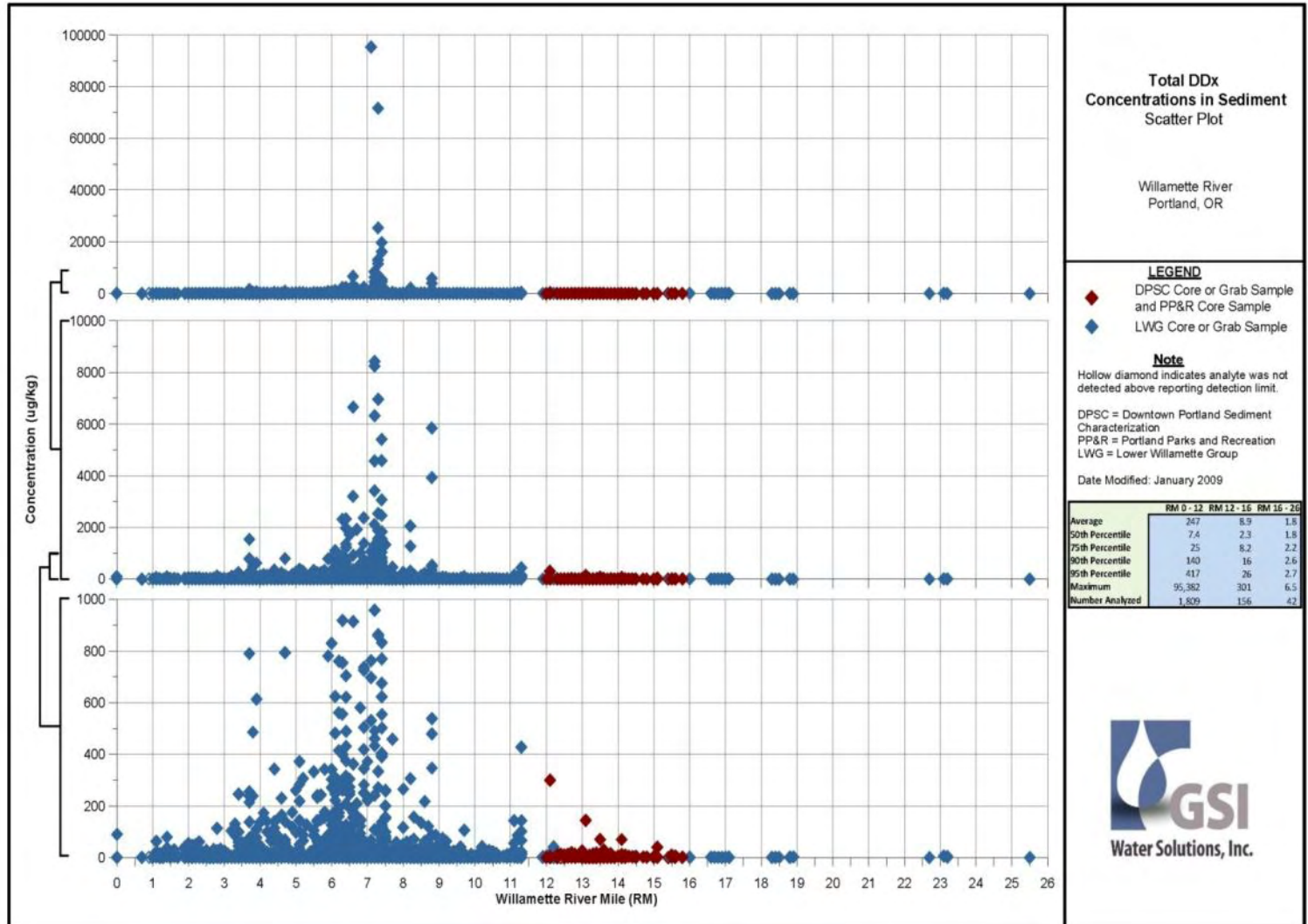
DDx concentrations



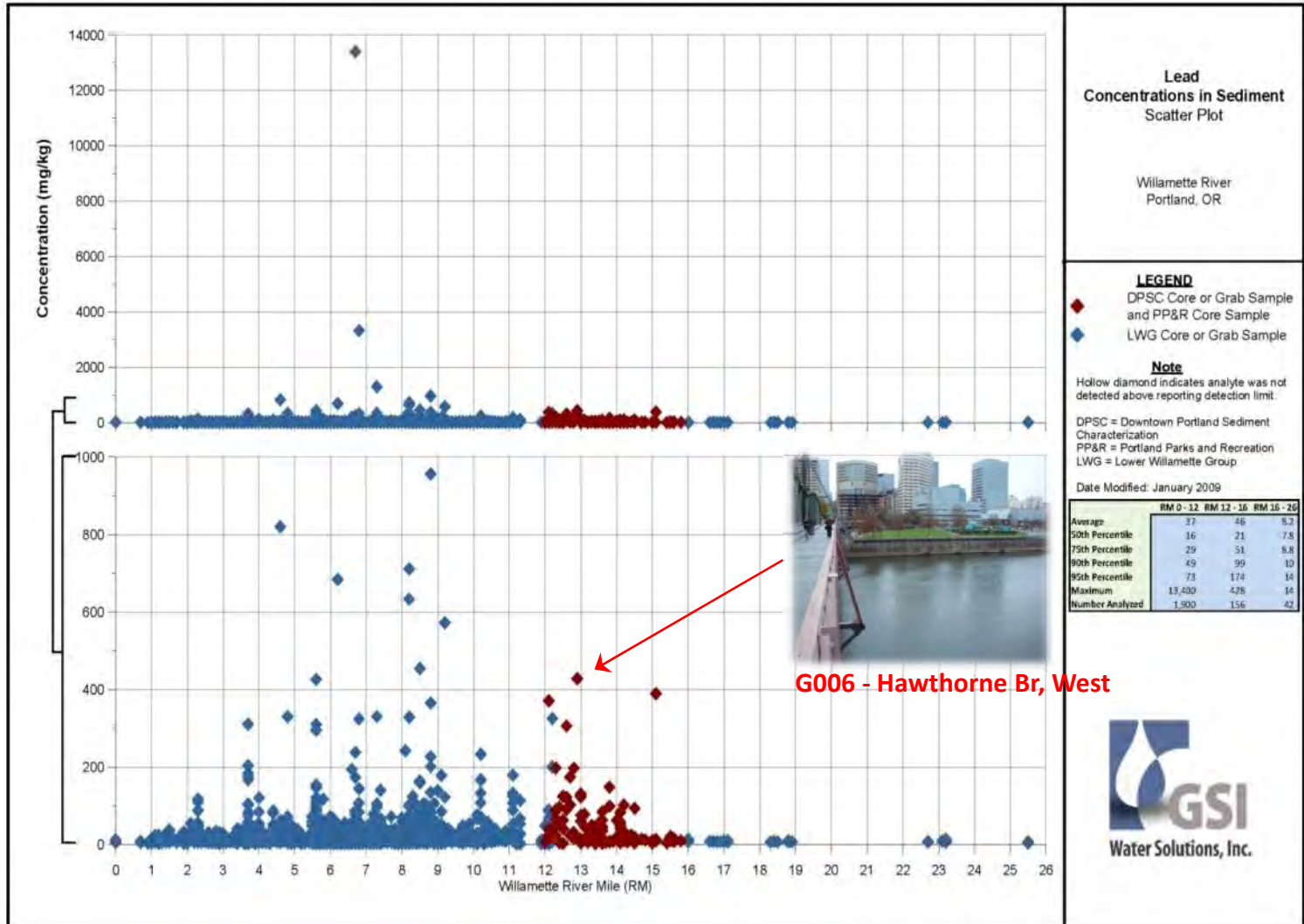
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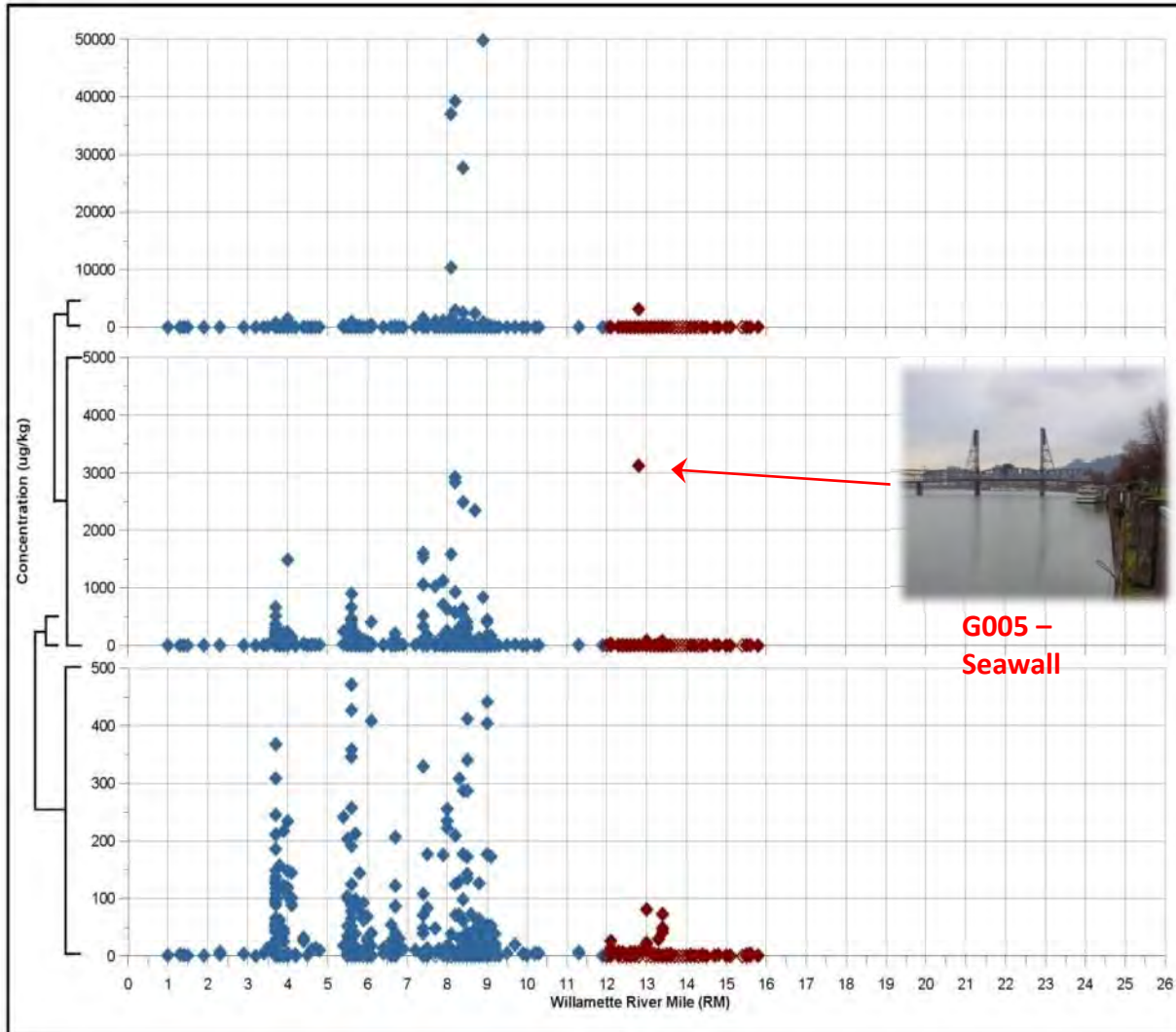
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Total Butyltin Concentrations in Sediment Scatter Plot

Willamette River
Portland, OR

LEGEND

- ◆ DPSC Core or Grab Sample and PP&R Core Sample
- ◆ LWG Core or Grab Sample

Note

Hollow diamond indicates analyte was not detected above reporting detection limit.

DPSC = Downtown Portland Sediment Characterization
PP&R = Portland Parks and Recreation
LWG = Lower Willamette Group

Date Modified: January 2009

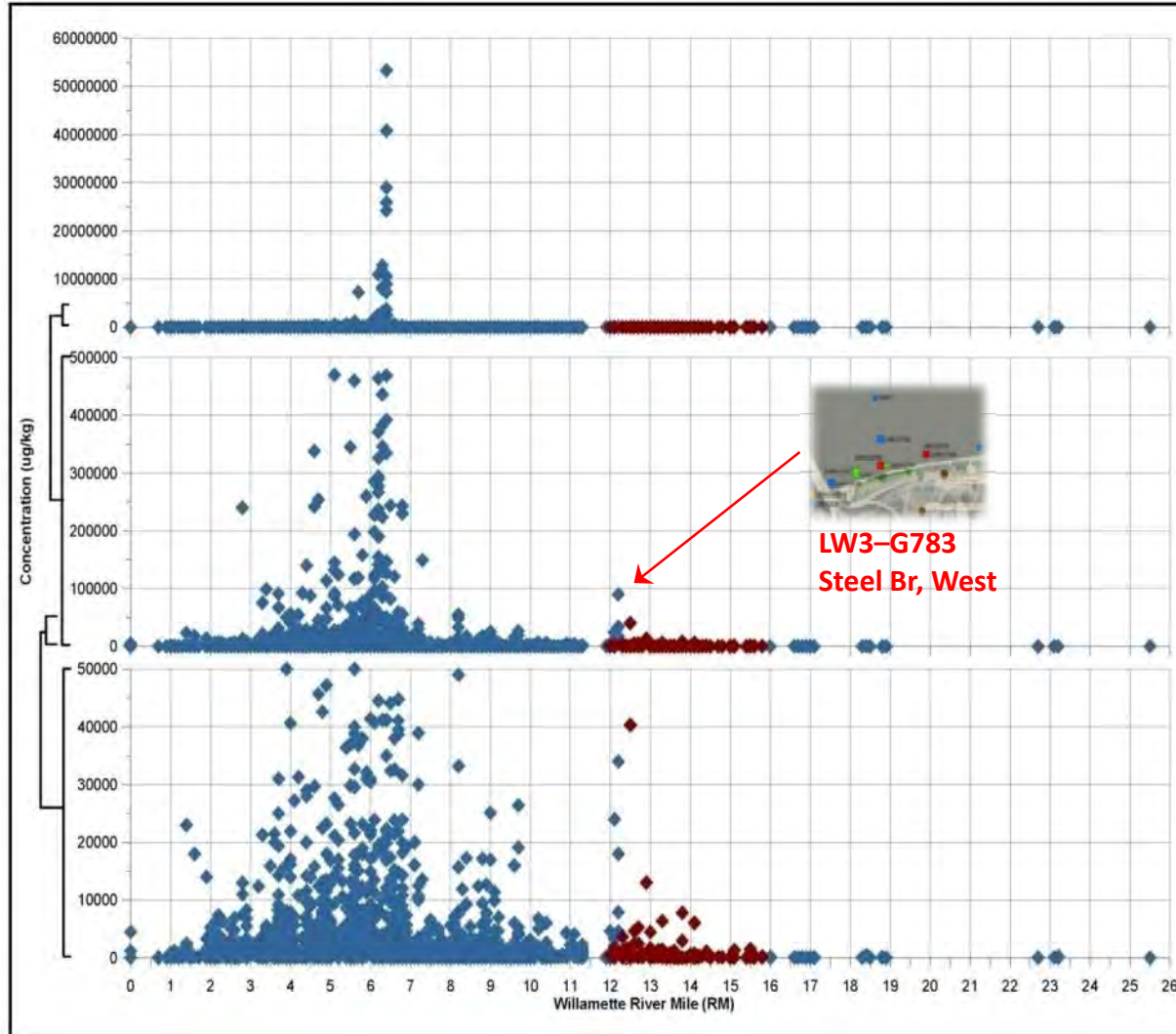
	RM 0 - 12	RM 12 - 16	RM 16 - 26
Average	488	30	-
50th Percentile	8.6	0.3	-
75th Percentile	65	2.5	-
90th Percentile	245	11	-
95th Percentile	636	26	-
Maximum	49,810.0	3,121	-
Number Analyzed	451	123	-



G005 -
Seawall



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Total PAH Concentrations in Sediment Scatter Plot

Willamette River
Portland, OR

LEGEND

- ◆ DPSC Core or Grab Sample and PP&R Core Sample
- ◆ LWG Core or Grab Sample

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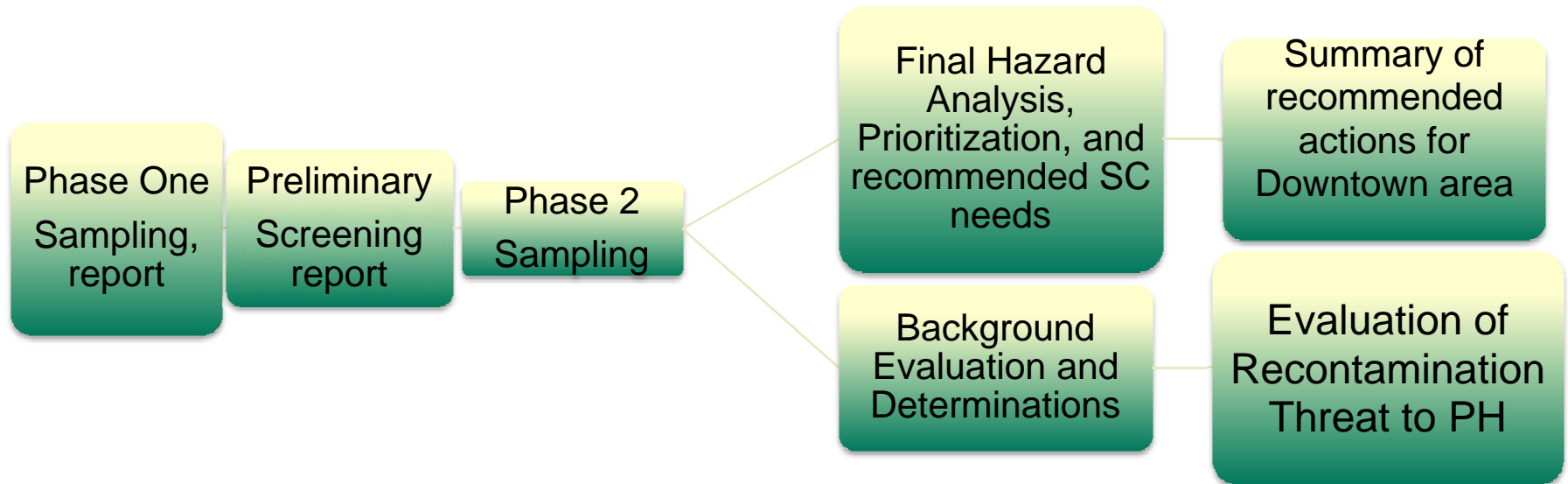
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	RM 0 - 12	RM 12 - 16	RM 16 - 26
Average	168,817	2146	94
50th Percentile	960	276	72
75th Percentile	4,480	752	160
90th Percentile	11,840	3400	120
95th Percentile	124,000	6402	179
Maximum	53,300,000	90000	460
Number Analyzed	1,927	156	42





Downtown Portland Sediment Investigation - Where we are in the process



January 09
conjunction with previous reports

Summer 09

Fall/Winter 09

Spring 2010

TBD, in



Next Steps

- Confirm initial data and complete preliminary characterization of Priority Locations. Complete review of entire dataset, background and final report (Spring '10)
- Initiate additional investigation, source control and sediment cleanup actions as warranted, coordinate with other current efforts in geographic area (ongoing)
- Evaluate ambient concentrations
- Discuss implications with other DEQ programs
- Discuss findings with EPA and other stakeholders



Issues

- Relationship to Portland Harbor cleanup
- Ambient and Hot Spot concentrations determination, relationship to Portland Harbor assessments
- Areawide source control for stormwater-relationship to MS4 permits, Portland Harbor and TMDLs
- Resources to follow up