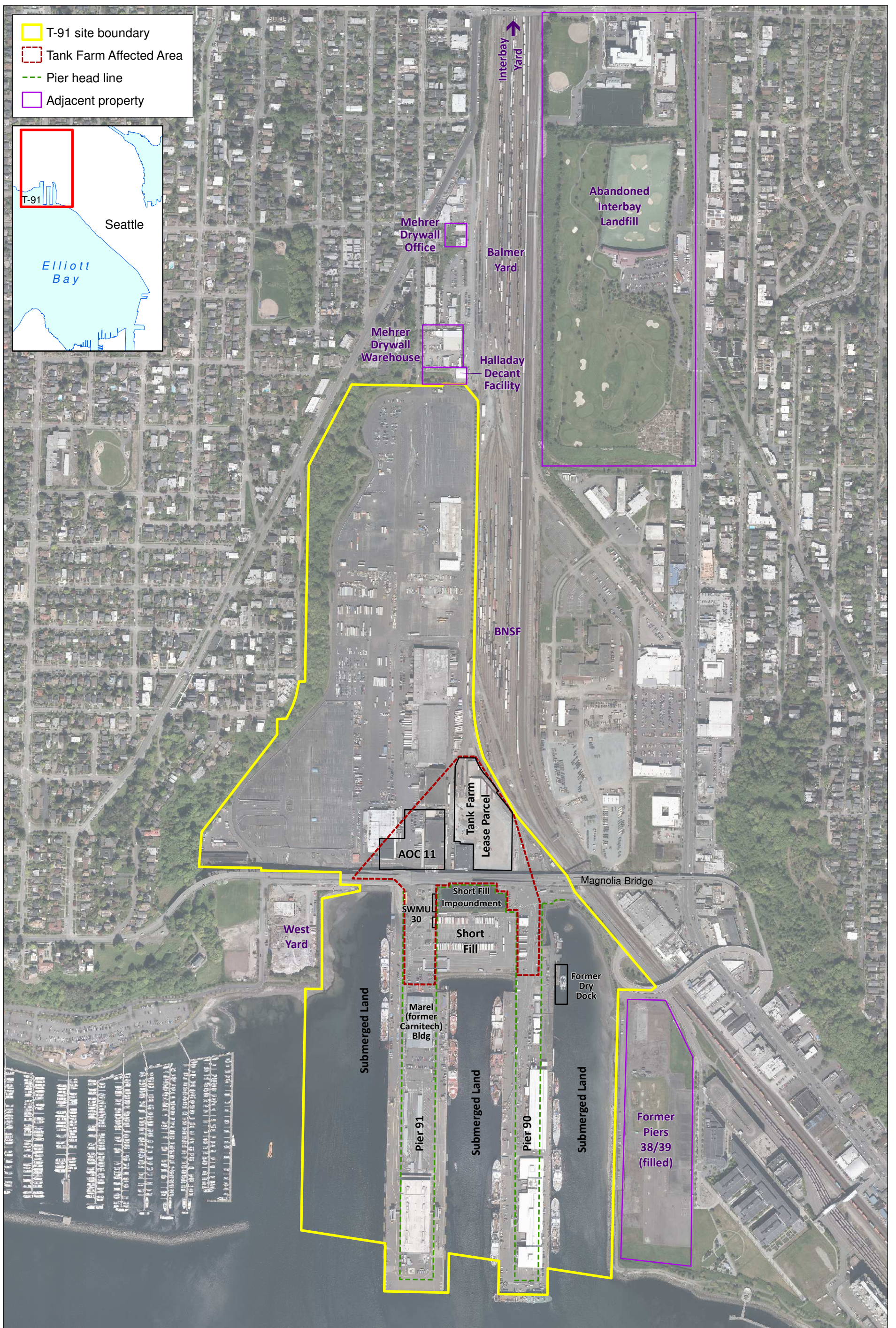
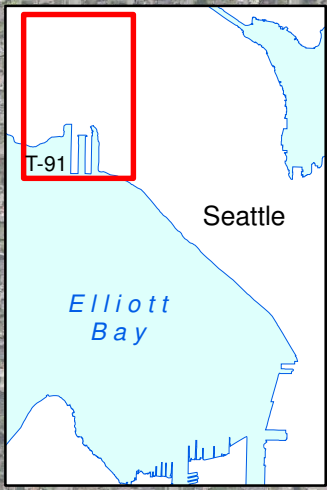
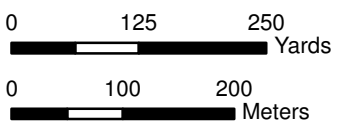


- T-91 site boundary
- Tank Farm Affected Area
- Pier head line
- Adjacent property



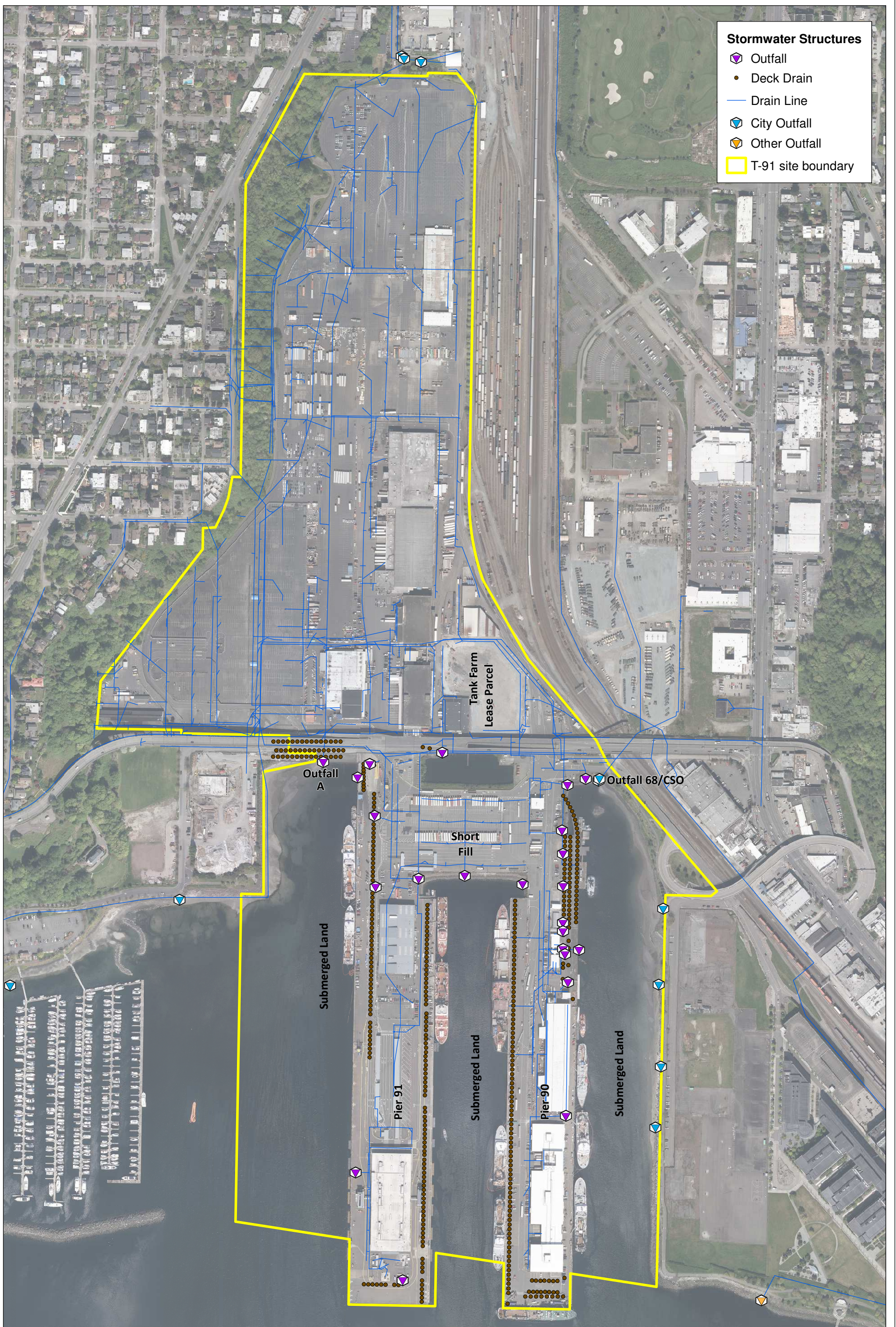
Aerial photo credit: Port of Seattle 2016, photo date unknown



Map 1. T-91 site and vicinity

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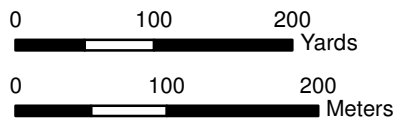




**Stormwater Structures**

- ◆ Outfall
- Deck Drain
- Drain Line
- ◆ City Outfall
- ◆ Other Outfall
- T-91 site boundary

Aerial photo credit: Port of Seattle 2016, photo date unknown



Map 2. Existing T-91 outfalls and deck drains

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Approximate PNO subsurface pipeline release area  
 T-91 site boundary

1990  
 1996

1999

1991

Submerged Land

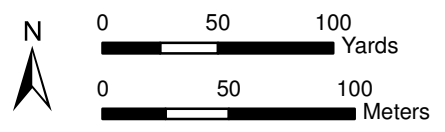
Pier 91

Submerged Land

Pier 90

Submerged Land

Aerial photo credit: Port of Seattle 2016, photo date unknown

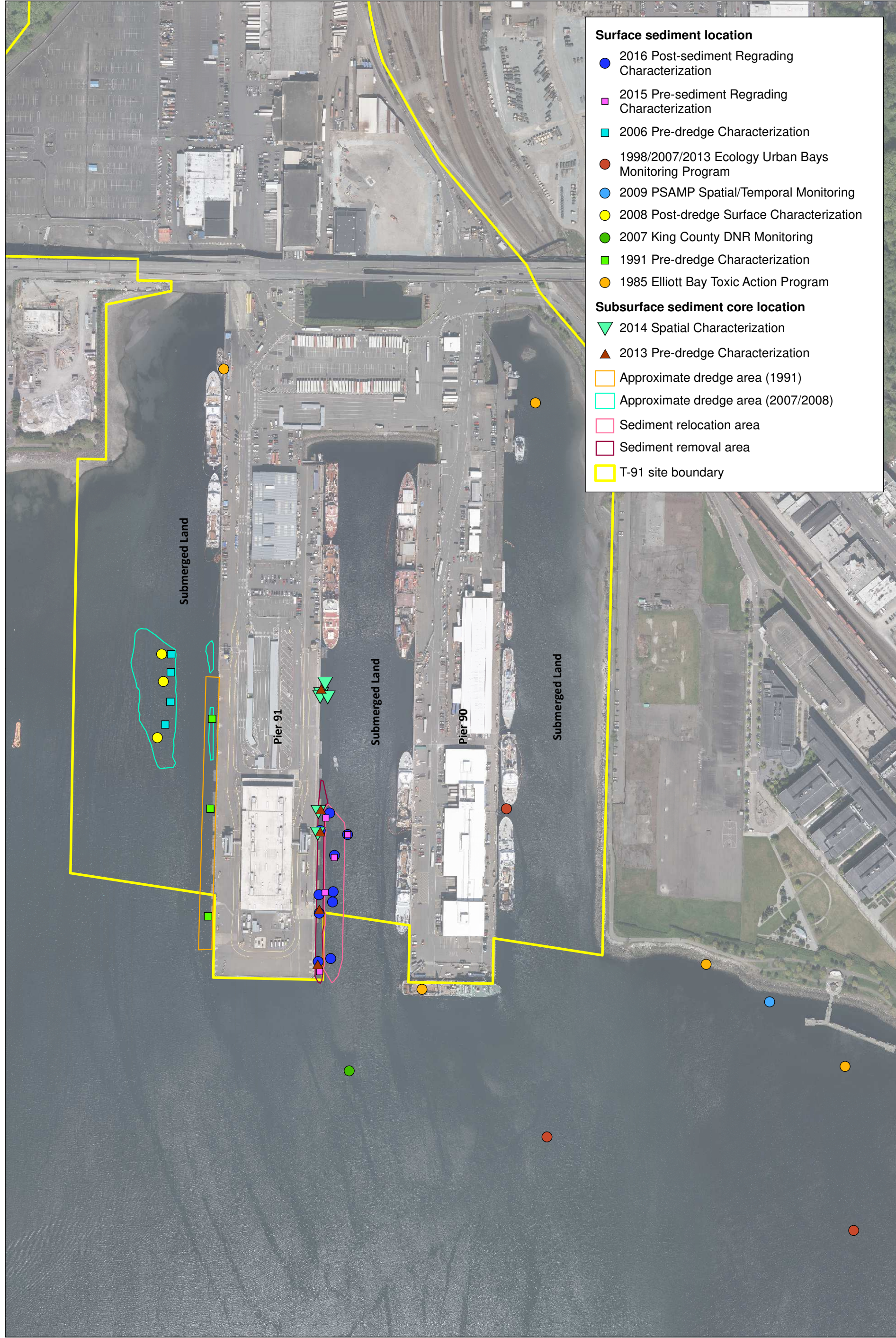


**Map 3. Past subsurface pipeline releases on Piers 90 and 91**

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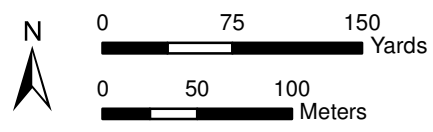
Prepared by craigh. 1/30/2017. W:\Projects\Port of Seattle - T91 Sediment Investigation\GIS\Maps and Analyses\Historical Data Review\Map 3 6562 T-91 Past Pipeline Releases.mxd





- Surface sediment location**
- 2016 Post-sediment Regrading Characterization
  - 2015 Pre-sediment Regrading Characterization
  - 2006 Pre-dredge Characterization
  - 1998/2007/2013 Ecology Urban Bays Monitoring Program
  - 2009 PSAMP Spatial/Temporal Monitoring
  - 2008 Post-dredge Surface Characterization
  - 2007 King County DNR Monitoring
  - 1991 Pre-dredge Characterization
  - 1985 Elliott Bay Toxic Action Program
- Subsurface sediment core location**
- ▼ 2014 Spatial Characterization
  - ▲ 2013 Pre-dredge Characterization
  - Approximate dredge area (1991)
  - Approximate dredge area (2007/2008)
  - Sediment relocation area
  - Sediment removal area
  - T-91 site boundary

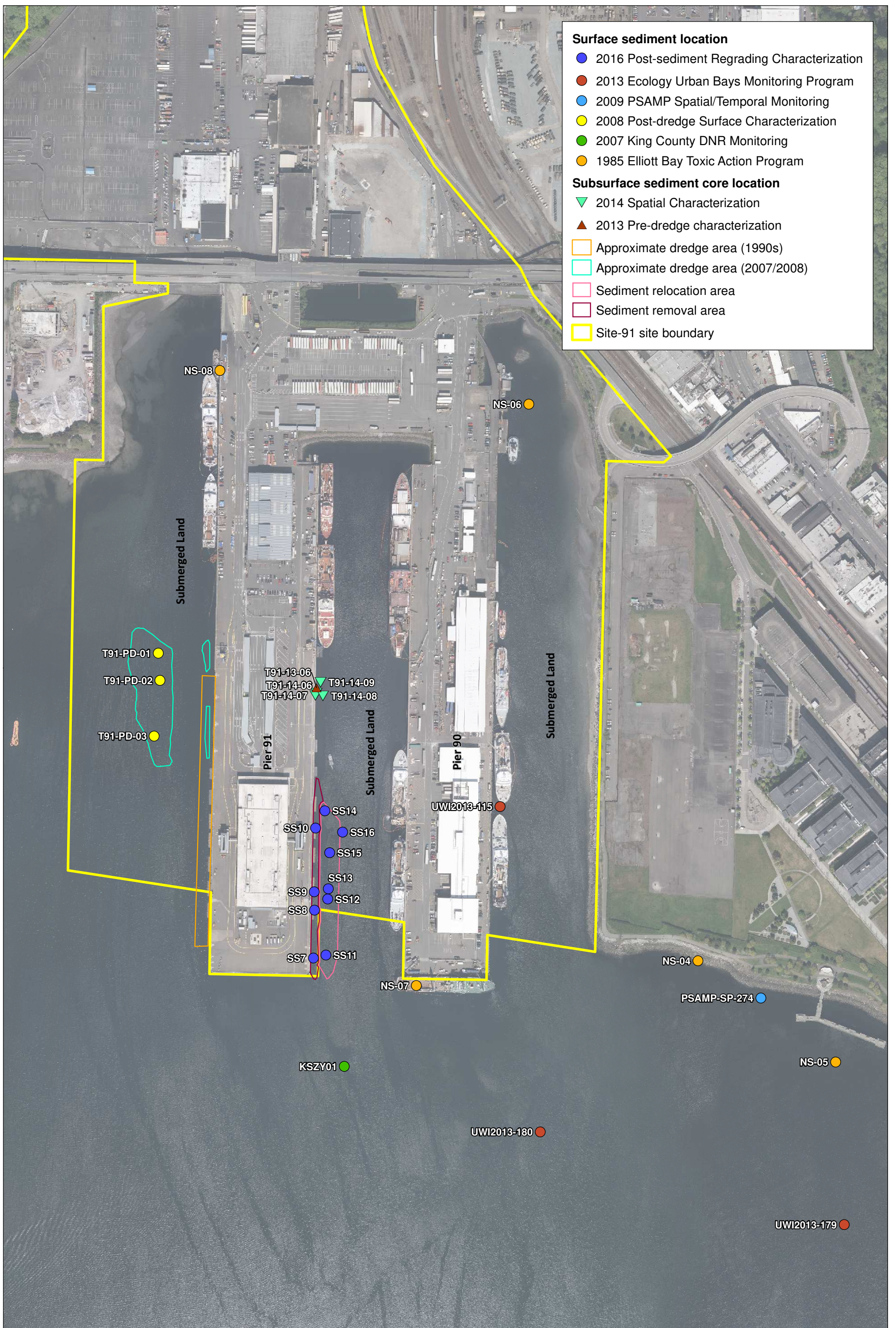
Aerial photo credit: Port of Seattle 2016, photo date unknown



**Map 4. Past T-91 sediment sample locations**

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**Surface sediment location**

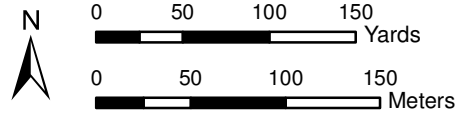
- 2016 Post-sediment Regrading Characterization
- 2013 Ecology Urban Bays Monitoring Program
- 2009 PSAMP Spatial/Temporal Monitoring
- 2008 Post-dredge Surface Characterization
- 2007 King County DNR Monitoring
- 1985 Elliott Bay Toxic Action Program

**Subsurface sediment core location**

- ▼ 2014 Spatial Characterization
- ▲ 2013 Pre-dredge characterization

- Approximate dredge area (1990s)
- Approximate dredge area (2007/2008)
- Sediment relocation area
- Sediment removal area
- Site-91 site boundary

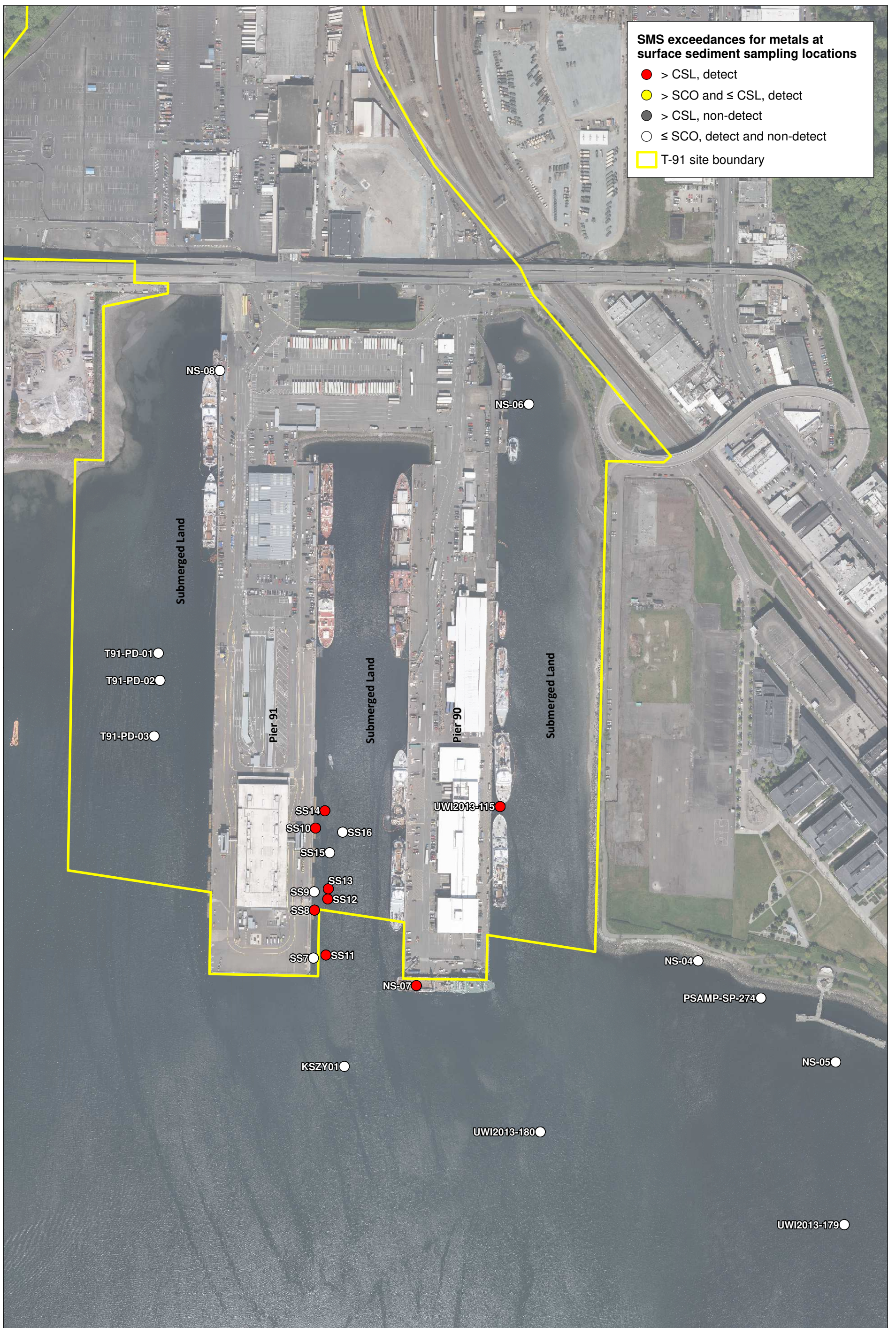
Aerial photo credit: Port of Seattle 2016, photo date unknown



**Map 5. T-91 sediment sample locations that represent existing conditions**

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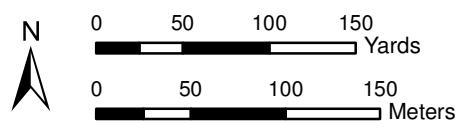


**SMS exceedances for metals at surface sediment sampling locations**

- > CSL, detect
- > SCO and ≤ CSL, detect
- > CSL, non-detect
- ≤ SCO, detect and non-detect
- T-91 site boundary

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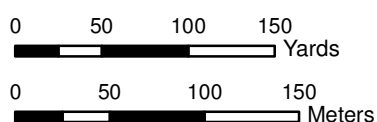
**Map 6. Exceedances of SMS standards for metals in surface sediment samples**

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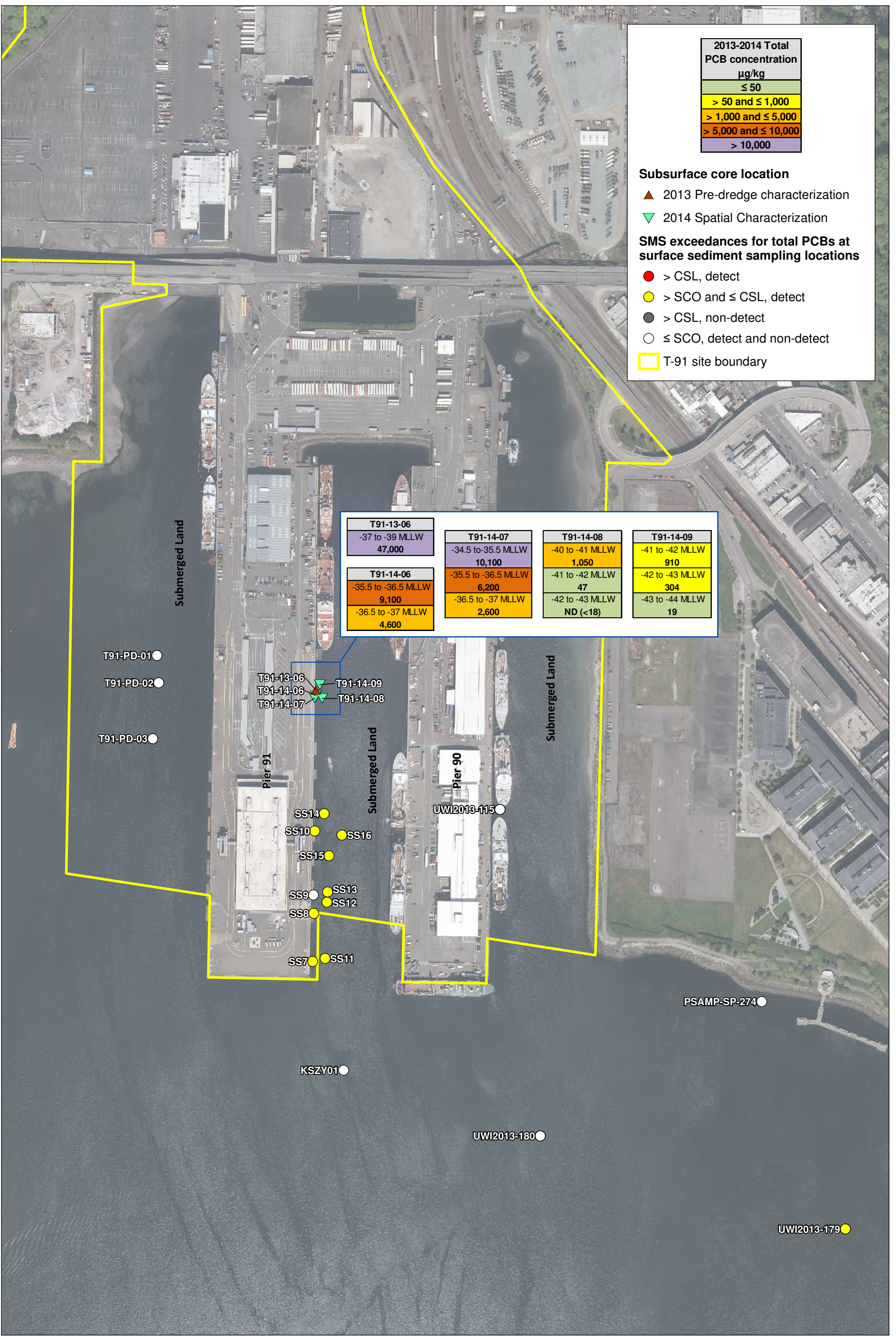
Aerial photo credit: Port of Seattle 2016, photo date unknown



Map 7. Exceedances of SMS standards for PAHs in surface sediment samples

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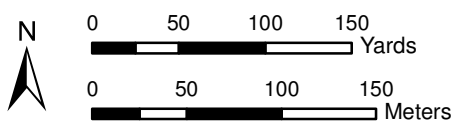
2013-2014 Total PCB concentration $\mu\text{g}/\text{kg}$
$\leq 50$
$> 50$ and $\leq 1,000$
$> 1,000$ and $\leq 5,000$
$> 5,000$ and $\leq 10,000$
$> 10,000$

- Subsurface core location**
- ▲ 2013 Pre-dredge characterization
  - ▼ 2014 Spatial Characterization
- SMS exceedances for total PCBs at surface sediment sampling locations**
- $> \text{CSL}$ , detect
  - $> \text{SCO}$  and  $\leq \text{CSL}$ , detect
  - $> \text{CSL}$ , non-detect
  - $\leq \text{SCO}$ , detect and non-detect
  - T-91 site boundary

<b>T91-13-06</b> -37 to -39 MLLW <b>47,000</b>	<b>T91-14-07</b> -34.5 to -35.5 MLLW <b>10,100</b>	<b>T91-14-08</b> -40 to -41 MLLW <b>1,050</b>	<b>T91-14-09</b> -41 to -42 MLLW <b>910</b>
<b>T91-14-06</b> -35.5 to -36.5 MLLW <b>9,100</b>	<b>T91-14-07</b> -35.5 to -36.5 MLLW <b>6,200</b>	<b>T91-14-08</b> -41 to -42 MLLW <b>47</b>	<b>T91-14-09</b> -42 to -43 MLLW <b>304</b>
<b>T91-14-06</b> -36.5 to -37 MLLW <b>4,600</b>	<b>T91-14-07</b> -36.5 to -37 MLLW <b>2,600</b>	<b>T91-14-08</b> -42 to -43 MLLW <b>ND (&lt;18)</b>	<b>T91-14-09</b> -43 to -44 MLLW <b>19</b>

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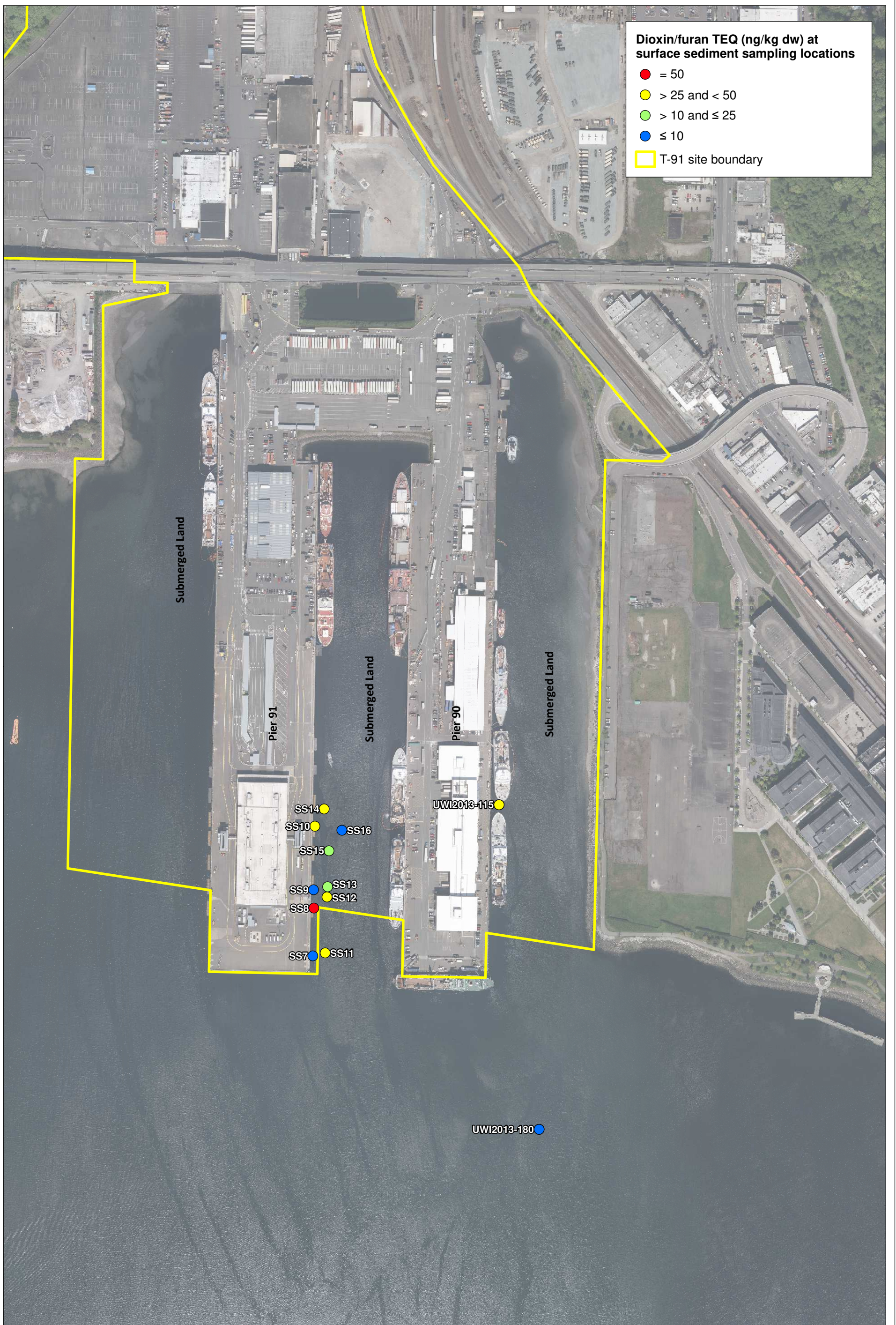
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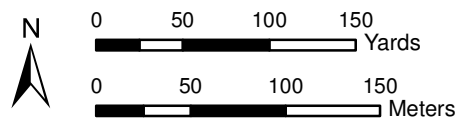
**Map 8. Exceedances of SMS standards for PCBs in surface sediment and subsurface PCB concentrations**

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**Map 9. Dioxin/furan TEQs in surface sediment samples**

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