Second Supplemental Sediment Sampling Program

Preliminary Overview of Results

Lower Passaic River Study Area
17-mile Remedial Investigation/Feasibility Study

January 8, 2015
The Lower Passaic River Study Area (LPRSA)
## LPRSA Sediment Sampling Events

<table>
<thead>
<tr>
<th>Dates</th>
<th>Program</th>
<th>Number Locations/Type of Samples</th>
<th>Extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>July to December 2008</td>
<td>Low Resolution Coring (LRC)</td>
<td>106 surface locations</td>
<td>Full LPRSA Depth to refusal</td>
</tr>
<tr>
<td>Oct/Nov 2009 August 2010</td>
<td>Benthic Sediment Sampling</td>
<td>131 surface locations</td>
<td>Full LPRSA Surface only</td>
</tr>
<tr>
<td>January to February 2012</td>
<td>First Supplemental Sampling Program (SSP1)</td>
<td>85 surface locations</td>
<td>Full LPRSA 2.5’ deep cores</td>
</tr>
<tr>
<td>September to October 2013</td>
<td>SSP2</td>
<td>76 surface locations</td>
<td>Above RM 7.2 LRCs to refusal</td>
</tr>
</tbody>
</table>

Note: Surface here refers to the top 0 to 6 inches of sediment. Low Resolution Cores (LRCs) are generally analyzed every 6 to 12 inches to a specified depth.
Why SSP2?

- Prior to SSP2, there were approximately 200 surface sediment samples below RM 8 and 130 above RM 8
  - More information was needed to understand the river above RM 8
- Now there are about 200 surface sediment sample locations both above and below RM 8
  - Good coverage of the entire LPRSA
Data Quality Objectives of SSP2

- Provide additional characterization of the nature and extent of sediment chemistry and fill data needs above RM 8, as identified by USEPA
- Provide data to support system understanding, sediment surface concentration mapping, and sediment transport and contaminant fate and transport model parameterization

Source: September 2013 QAPP for SSP2
All sediment sample locations above RM 8

- Each location may have samples collected at multiple depths

- Samples located on both sides of the river and in the channel
All sediment sample locations above RM 8 (continued)
SSP2 2,3,7,8-TCDD Surface Sediment Concentrations – Linear Scale
SSP2 2,3,7,8-TCDD Surface Sediment Concentrations – Log Scale
LRC, Benthic, SSP1 and SSP2 Programs
2,3,7,8-TCDD Surface Sediment Concentrations
Above RM 8 – Linear Scale
LRC, Benthic, SSP1 and SSP2 Programs
2,3,7,8-TCDD Surface Sediment Concentrations
Above RM 8 – Log Scale
Figure 3-4.a Profiles of LRC SSP2 Core Data By River Mile and Depth: 2,3,7,8-TCDD

If ND, the numerical value associated with the DL was reported. Concentration presented on a dry weight basis. Locations 549, 559, 576 not sampled.
Total PCBs = The sum of PCB congener detects. If all ND, reported as the highest individual analyte DL. (see Table 3-1) Concentration presented on a dry weight basis. Locations 545, 569, 576 not sampled.
Figure 3-4.i Profiles of LRC SSP2 Core Data By River Mile and Depth: Mercury

Tributaries shaded pink and labeled

11.3 (90%)
4.55 (75%)
1.82 (50%)
0.343 (25%)
0.00174 (min)

If ND, the numerical value associated with the DL was reported.
Concentration presented on a dry weight basis.
Locations 545, 569, 576 not sampled.

October 2014
Thank You!

- Any questions?