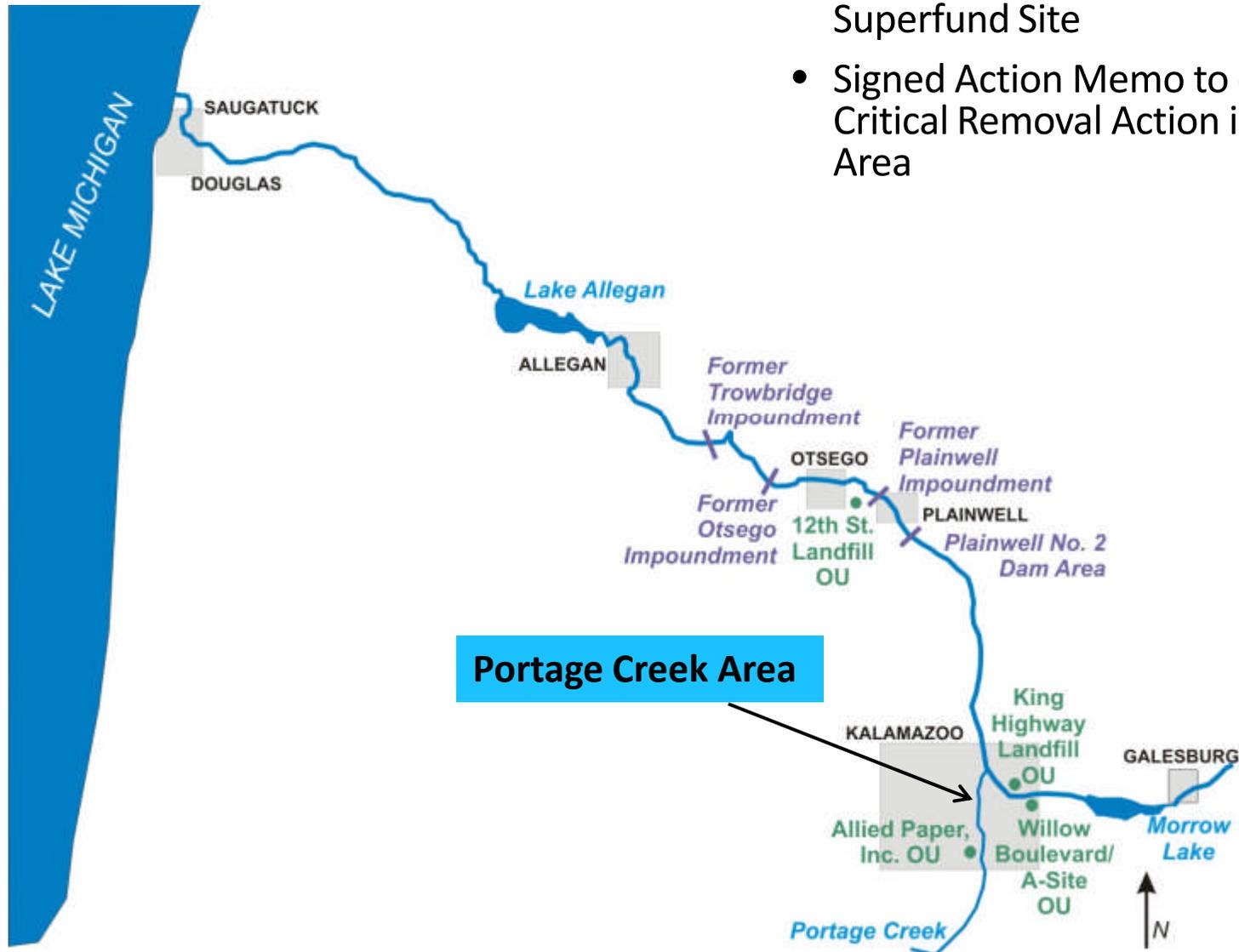


Portage Creek Area Removal Action

Public Meeting
December 15, 2011

Overview

- Portage Creek Area is part of the Allied Paper, Inc./Portage Creek/ Kalamazoo River Superfund Site
- Signed Action Memo to complete a Time-Critical Removal Action in the Portage Creek Area



Portage Creek Investigation Results

- 1993-2000 Remedial Investigation/Feasibility Study (RI/FS)
 - Series of transects sampled
 - Highest PCB concentration 79 mg/kg
- 2008 Supplemental RI/FS
 - Target sediment probes and depositional features
 - Highest PCB concentration 300 mg/kg
- 2010 MDNRE sampling
 - Define hotspots
 - Highest creek sediment PCB concentration 590 mg/kg
 - Highest floodplain PCB concentration 72 mg/kg

Other Factors

- 2010 Millennium Holdings LLC Bankruptcy
- Georgia Pacific not involved with Portage Creek
- Other Potentially Responsible Parties notified, denied to do the work.
- Ultimately the Area 1 record of decision remedy would have required work in Portage Creek.

Portage Creek Excavation Areas Map

04/01/2011



Legend

- Major Roads
- Excavation Area Grid Boundary
- Portage Creek Boundary



Projection: UTM Zone 16N
Datum: NAD 83



Cleanup Standard/Goal

- Remove approximately 17,000 cubic yards
- In-stream Sediment Performance Standard of 10 mg/kg
- In-stream Sediment Performance Standard Goal of 1 mg/kg with six inch over-dredge
- Floodplain Soil Performance Standard of 10 mg/kg
- Floodplain Soil Performance Standard Goal of 5 mg/kg with six inch over-dredge
- Dredge depths range from 12 inches to approximately 56 inches in various Slope Areas

Sediment Removal Operations Overview

- Install coffer dams and creek bypass pumps
- Dewater area between coffer dams
- Excavate sediment/preliminary solidification/load & transfer sediment to John Street Staging Pad
- Final stabilization/solidification at John Street Staging Pad
- Load out for disposal (subtitle D, or TSCA landfill)
- Verification sampling/re-excavate and resample as needed
- Post removal survey (Structural feature, Topographic/bathymetric)

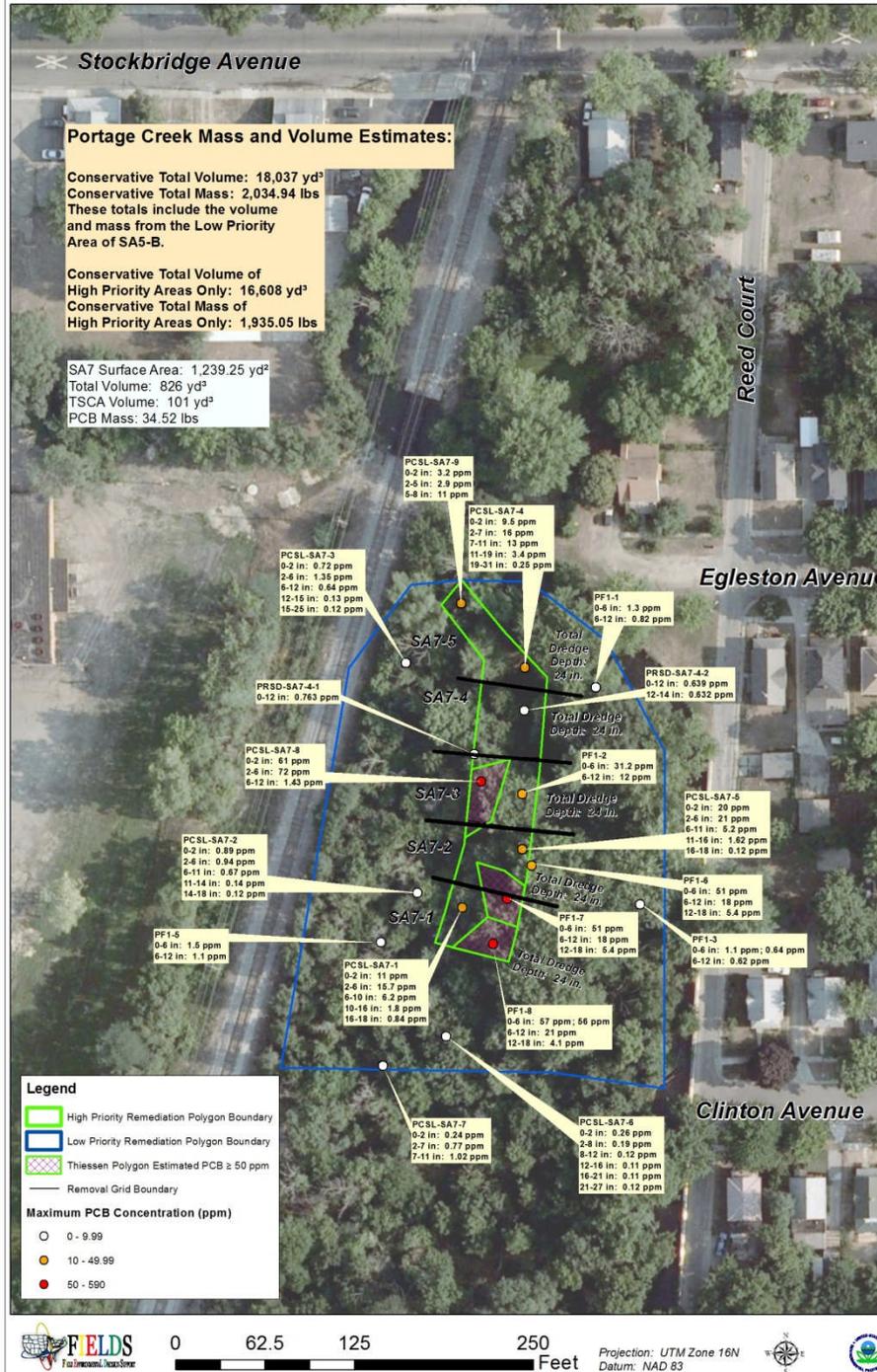
Restoration Overview

- Backfill stream channel stabilize toe of bank
- Cofferdam removal
- Removal area restoration planting
- Infrastructure restoration activities (fence replacement, asphalt repairs, etc.)
- Remove sediment erosion controls after re-vegetation
- Post condition documentation

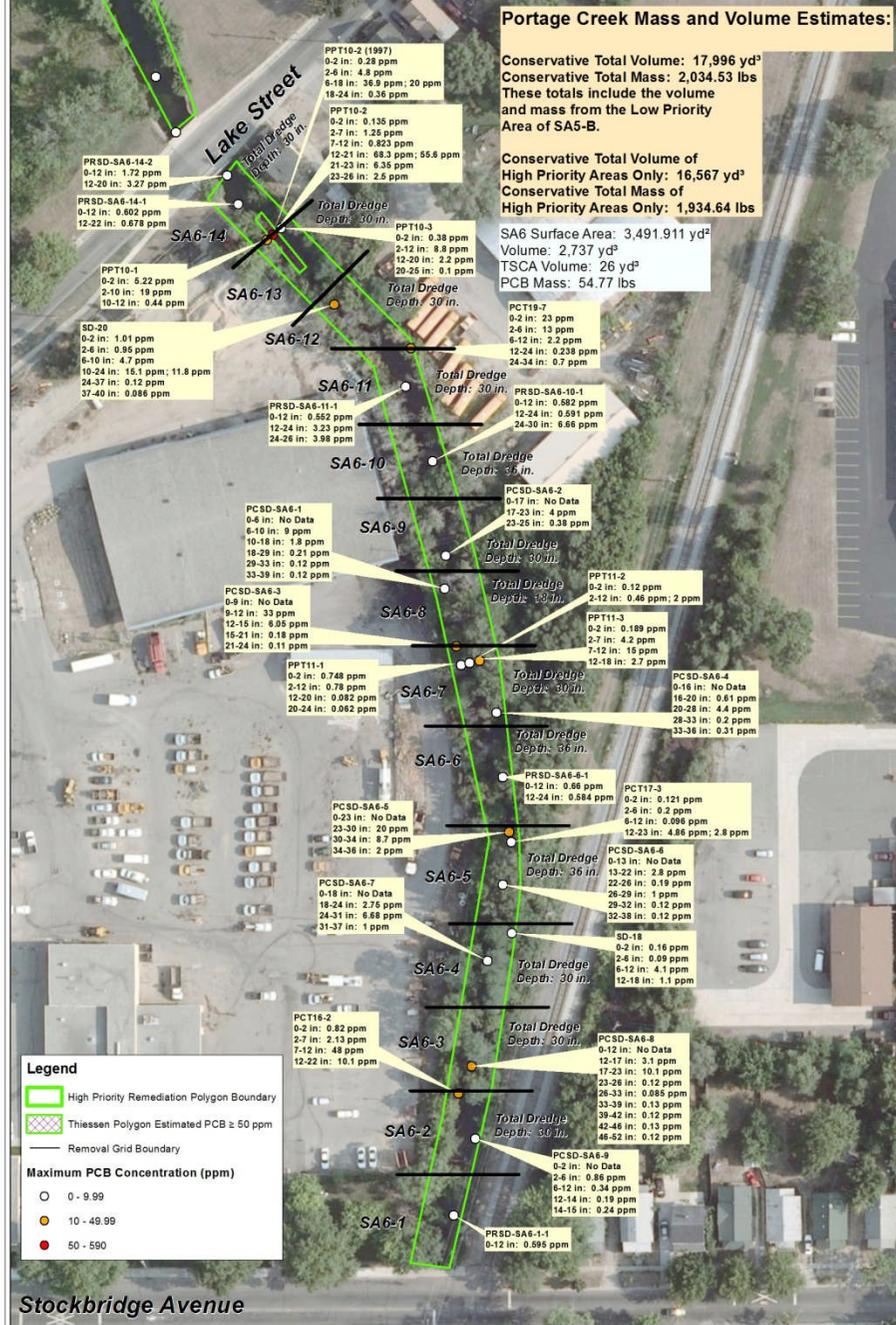
Current Site Documents

- Health and Safety Plan
- Quality Assurance Project Plan (QAPP) – under review
- Field Sampling Plan
- Soil Erosion and Sedimentation Control Plan
- Traffic Control Plan
- Debris Management Plan
- Restoration Plan
- SA5 Technical Memo - under development
- SA6 Technical Memo
- SA7 Technical Memo
- Portage Creek Area Vegetation Summary

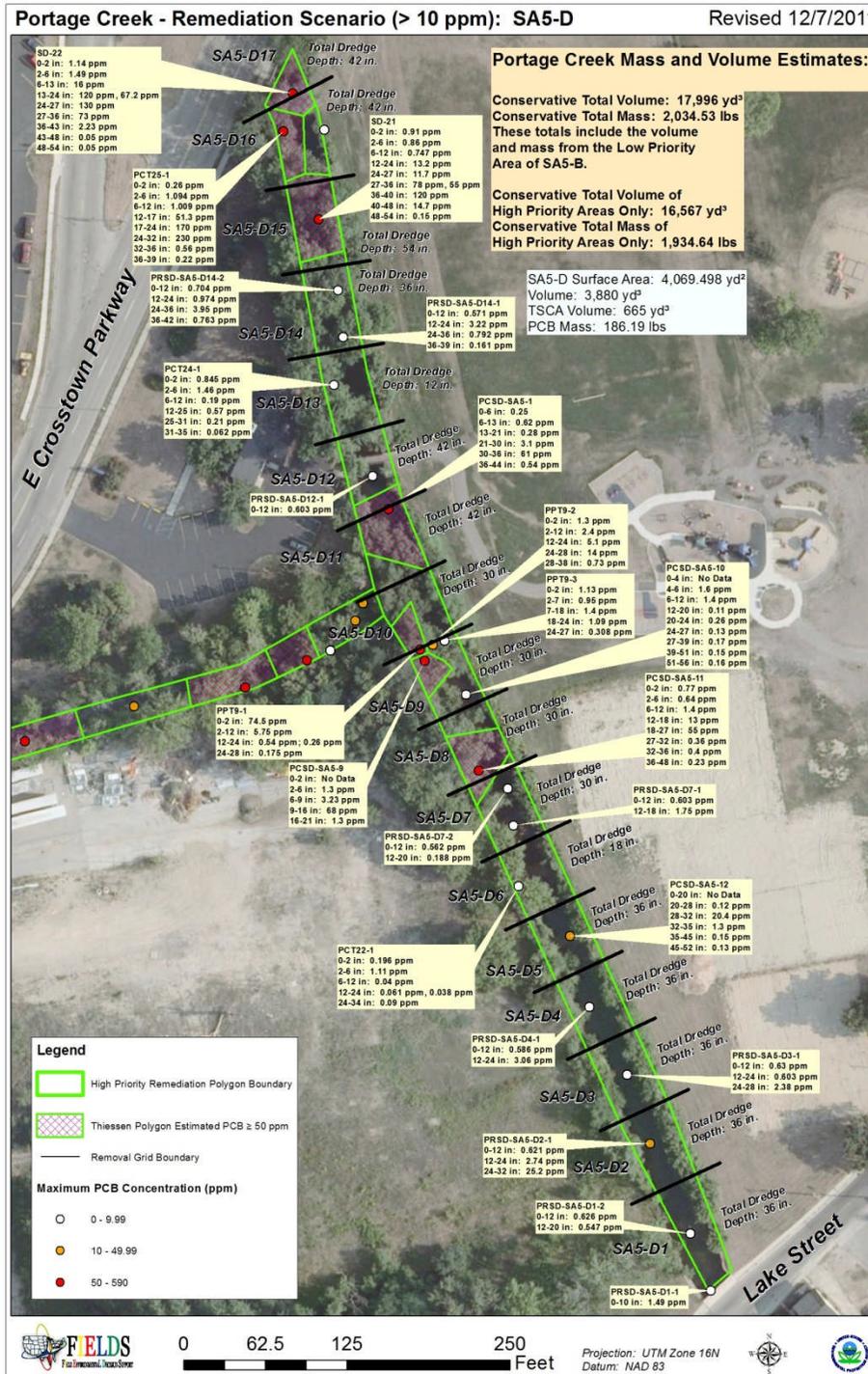
SA7 Excavation Area between Reed Street and Stockbridge Avenue



SA6 Excavation Area between Stockbridge Avenue and Lake Street



SA5D Excavation Area between Lake Street and East Crosstown Parkway



Axtell Creek Excavation Area between John Street and confluence with Portage Creek

Portage Creek - Remediation Scenario (> 10 ppm): Axtell Creek

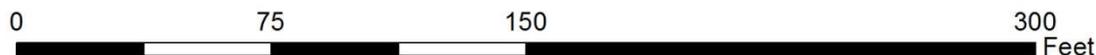
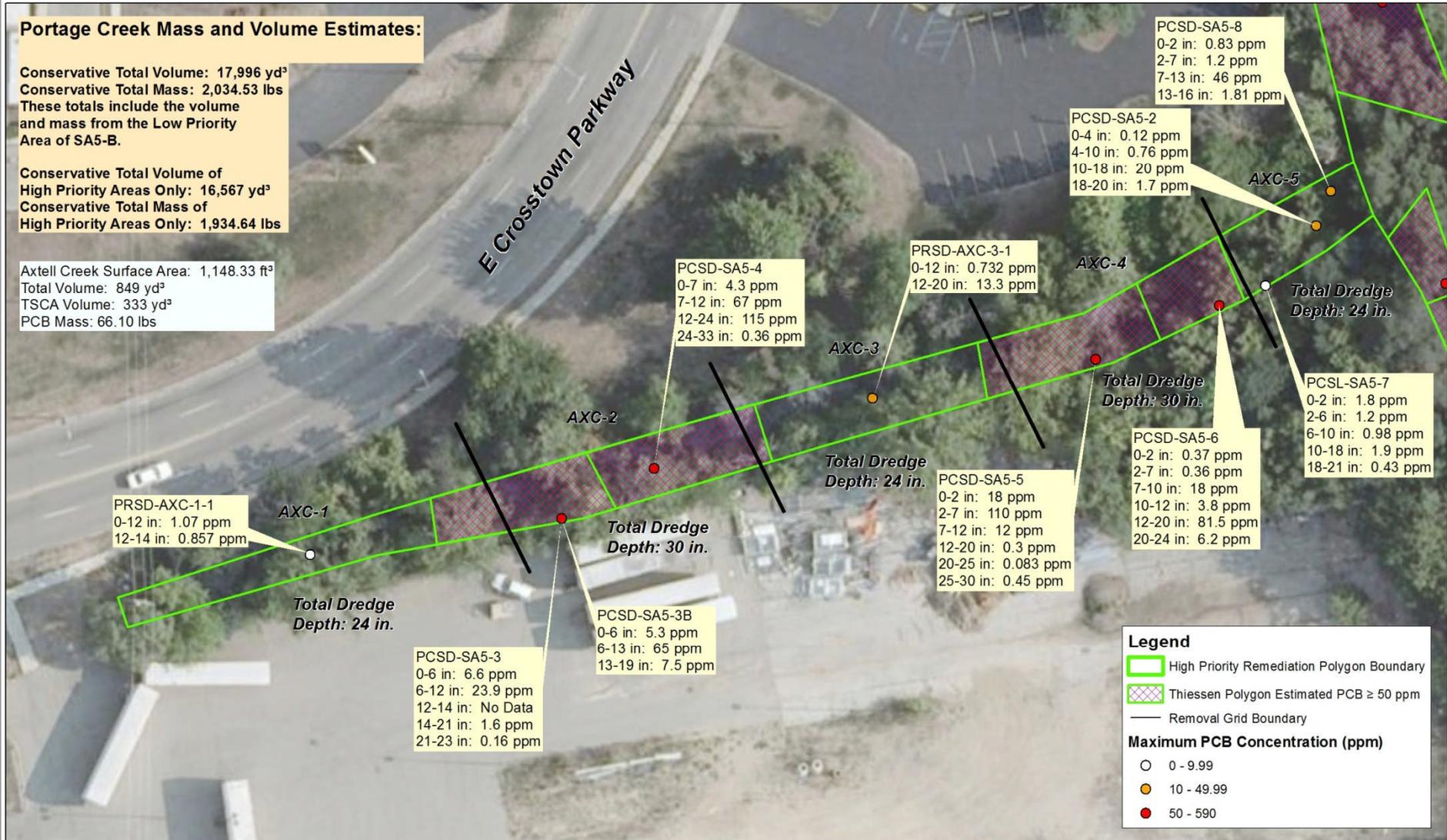
Revised 12/7/2011

Portage Creek Mass and Volume Estimates:

Conservative Total Volume: 17,996 yd³
 Conservative Total Mass: 2,034.53 lbs
 These totals include the volume and mass from the Low Priority Area of SA5-B.

Conservative Total Volume of High Priority Areas Only: 16,567 yd³
 Conservative Total Mass of High Priority Areas Only: 1,934.64 lbs

Axtell Creek Surface Area: 1,148.33 ft²
 Total Volume: 849 yd³
 TSCA Volume: 333 yd³
 PCB Mass: 66.10 lbs



Projection: UTM Zone 16N
 Datum: NAD 83



Schedule & Cost

- Continue development of planning documents
- Mobilized September 26, 2011
- Continue data gap/assessment sampling
- Complete access arrangements for 2012 construction activities
- Excavate SA7 wetland in January 2012
- Mobilize in April/May 2012 for summer construction season
- Project to be completed in phases over a 2 – 4 year period
- Estimated cost of \$15.8 million



**John Street Support Area:
Intersection of East Crosstown Parkway and John Street**

John Street Staging Pad Construction

10/11/2011 11:13



John Street Staging Pad Construction



10/07/2011 10:21

John Street Staging Pad Liner Installation



11/01/2011 08:31

John Street Staging Pad Liner Installation





Liner Seam Sealer

11/01/2011 09:57

John Street Support Area Site Control Installation



11/03/2011 14:37

Axtell Creek Fence Removal

11/04/2011 12:55



Axtell Creek Vegetation Clearing

11/08/2011 09:26





Reed Street Access to SA7

10/25/2011 09:02



10/25/2011 16:00

Reed Street Access to SA7



10/13/2011 09:30

Access Road Construction to SA7

SA7 Access Road





SA7 Access Road

SA7 Excavation Area



10/27/2011 11:03



SA7 Flooding

Questions?

www.epaossc.org/portagecreekarea

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