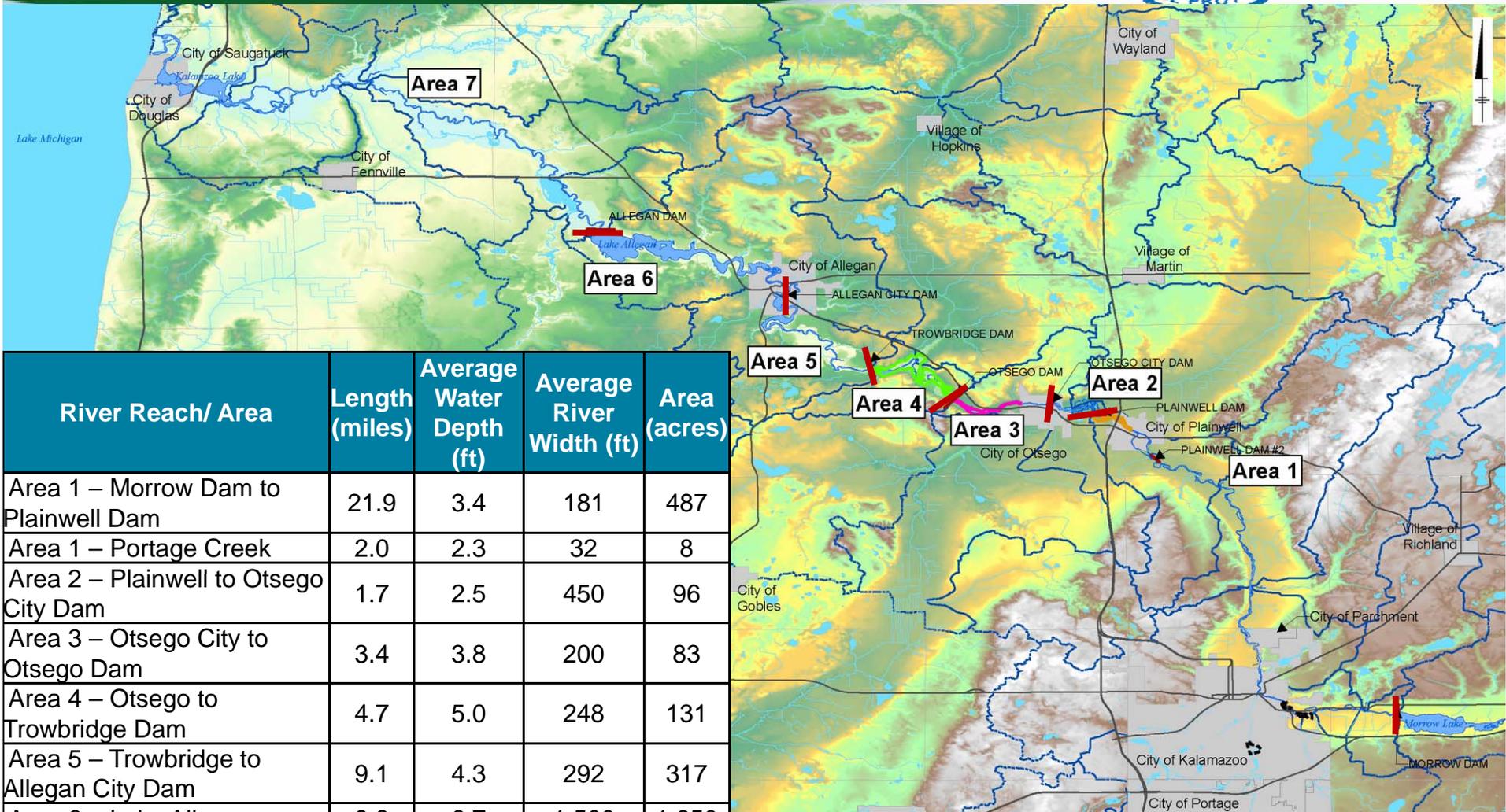




# Allied Paper, Inc./Portage Creek/ Kalamazoo River Superfund Site

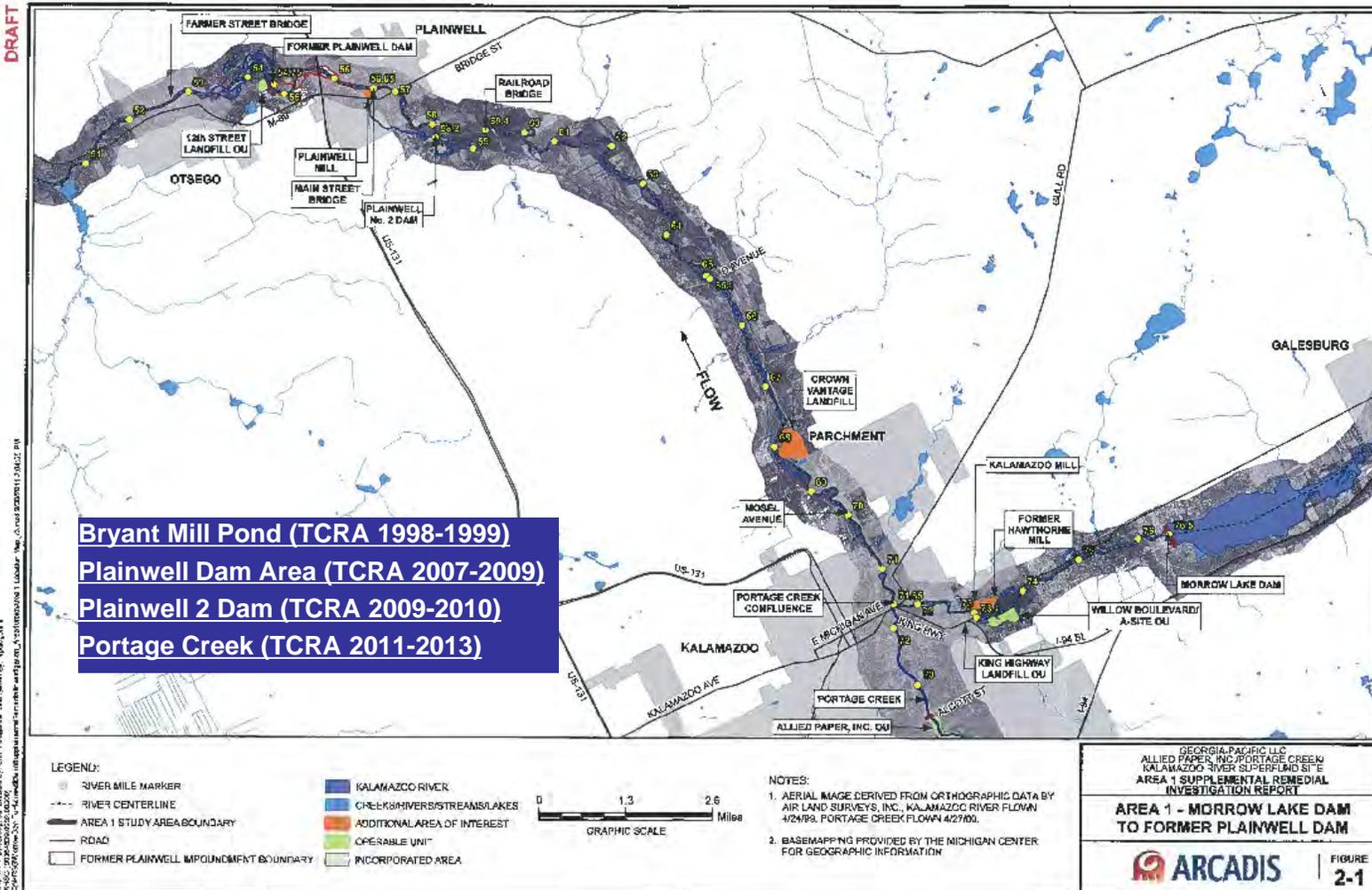
Kalamazoo River Update  
December 4, 2013

# The Seven Areas of Operable Unit 5 (The Kalamazoo River and Portage Creek)



River Reach/ Area	Length (miles)	Average Water Depth (ft)	Average River Width (ft)	Area (acres)
Area 1 – Morrow Dam to Plainwell Dam	21.9	3.4	181	487
Area 1 – Portage Creek	2.0	2.3	32	8
Area 2 – Plainwell to Otsego City Dam	1.7	2.5	450	96
Area 3 – Otsego City to Otsego Dam	3.4	3.8	200	83
Area 4 – Otsego to Trowbridge Dam	4.7	5.0	248	131
Area 5 – Trowbridge to Allegan City Dam	9.1	4.3	292	317
Area 6 – Lake Allegan	9.8	6.7	1,500	1,650
Area 7 – Allegan Dam to Lake Michigan	26	5.5	212	670

# Operable Unit 5: Area 1

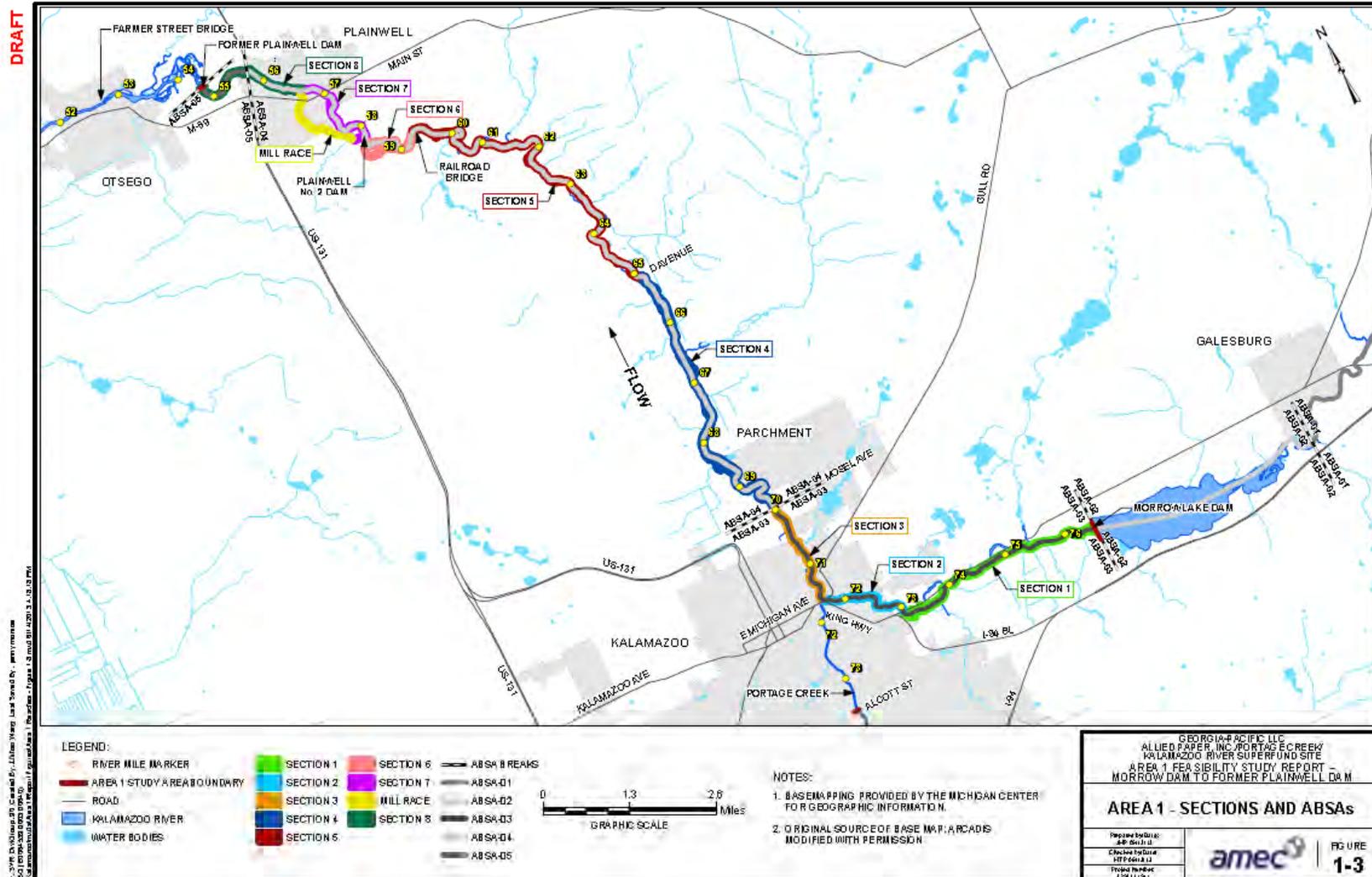




# Area 1 River Investigation Progress

- Supplemental Remedial Investigation (SRI)
  - Report Approved June 2012
- Feasibility Study of potential remedial alternatives
  - Report submitted October 30, 2012
  - EPA disapproved Report February 5, 2013
  - Report (AMEC) resubmitted July 29, 2013
- Proposed remedy decision for Area 1
  - Spring/Summer 2014

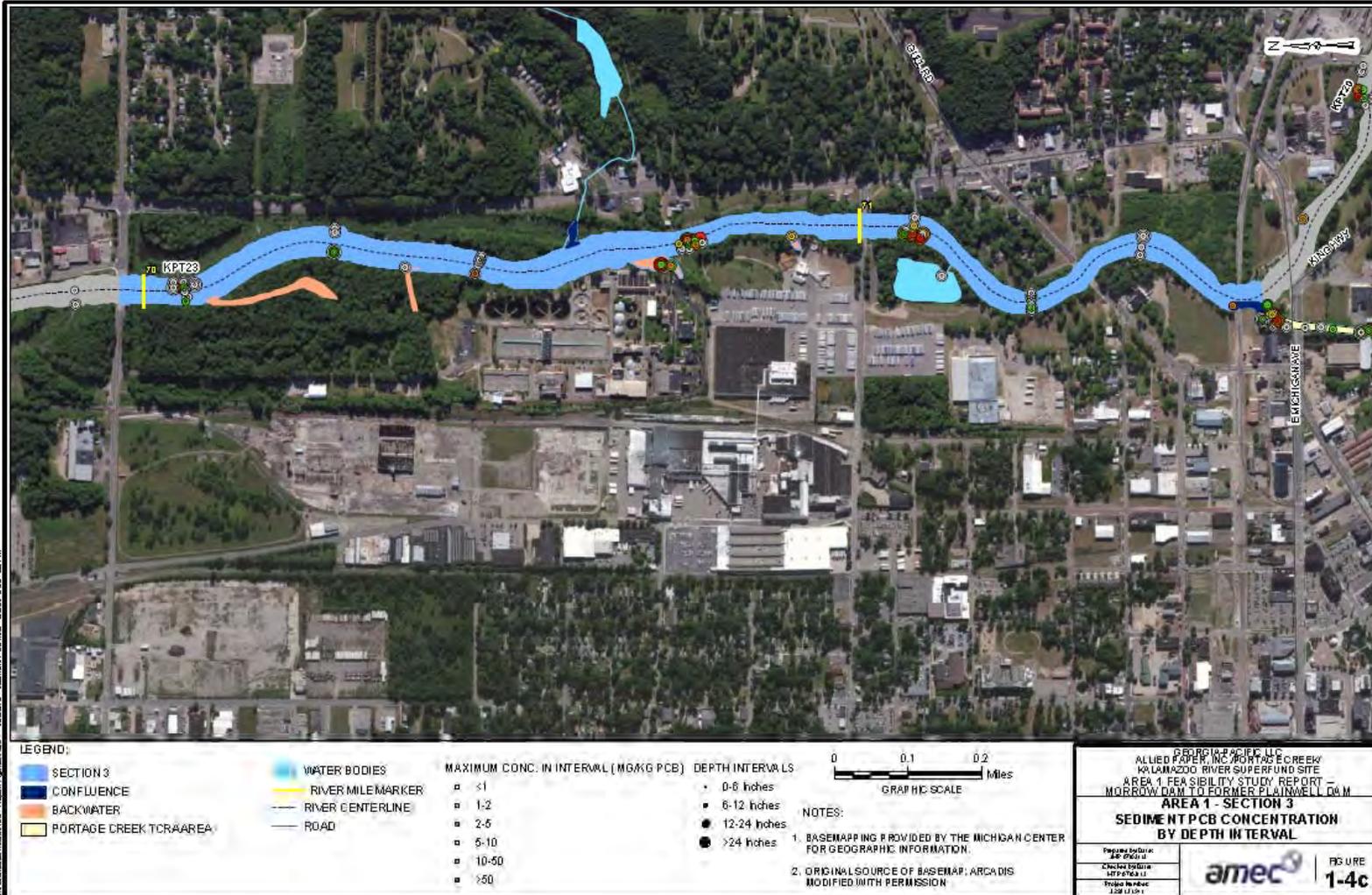
# Operable Unit 5: Area 1



# Operable Unit 5: Area 1



DRAFT

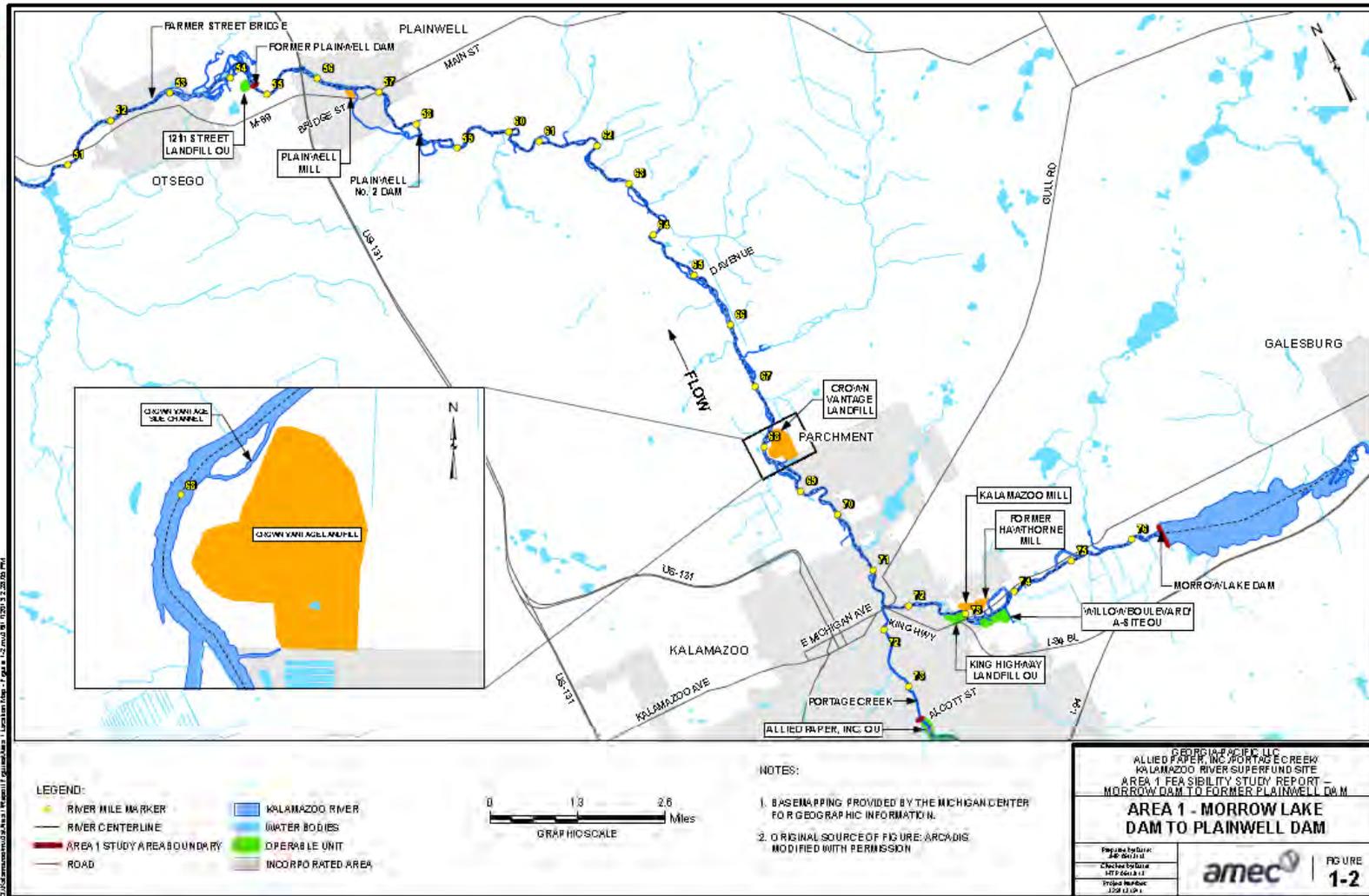


City View Development Co. created by: Lynne Wang, Last Saved By: pmm m/16/2011  
 Project Name: 06-000001  
 Project Number: 06-000001  
 Project Name: 06-000001  
 Project Number: 06-000001

# Operable Unit 5: Area 1

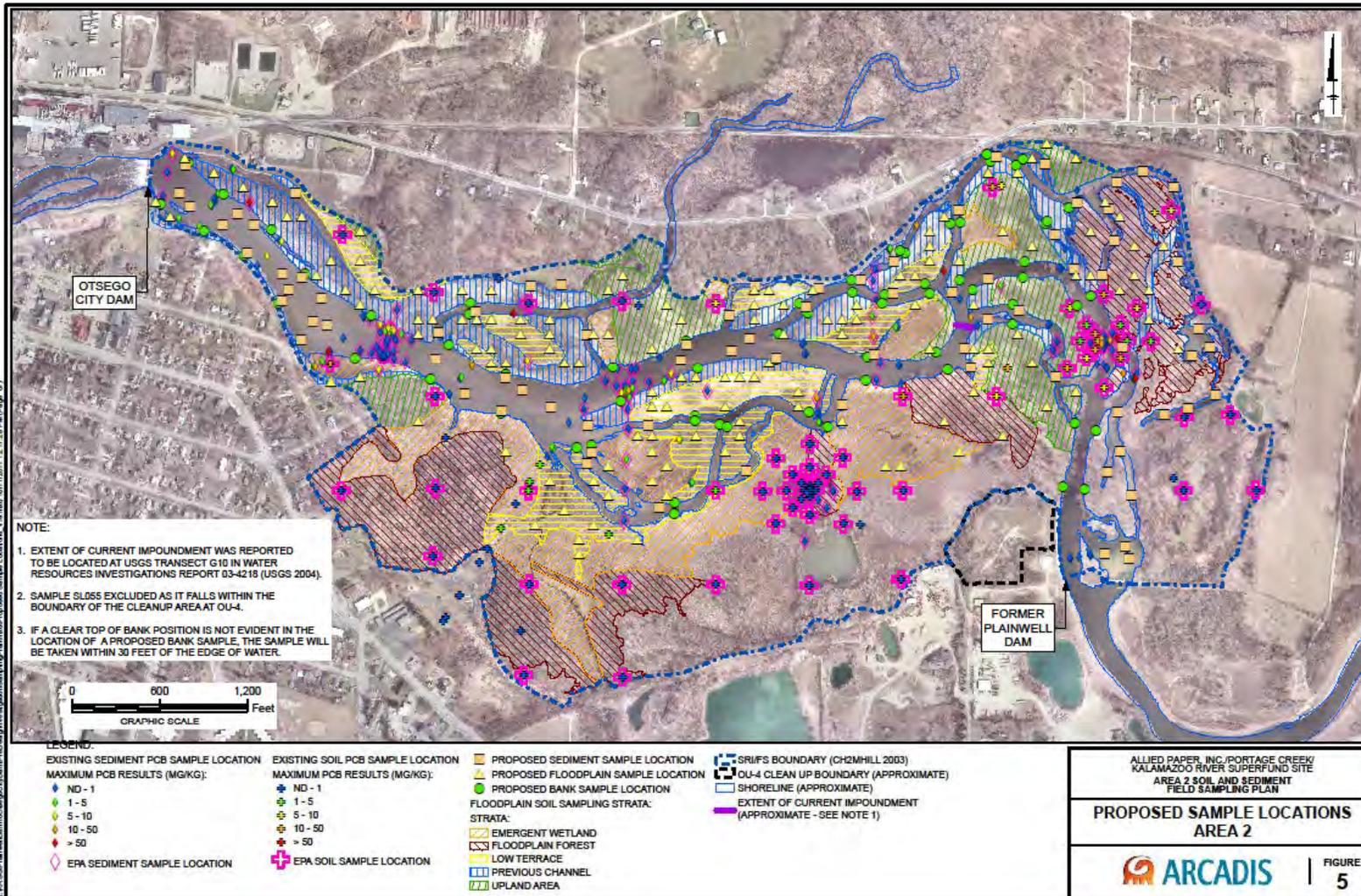


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DATE: 2/19/2013 10:00:00 AM  
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 CHECKED BY: [Name]  
 PROJECT: [Name]  
 SHEET: [Number] OF [Total]

# Operable Unit 5: Area 2

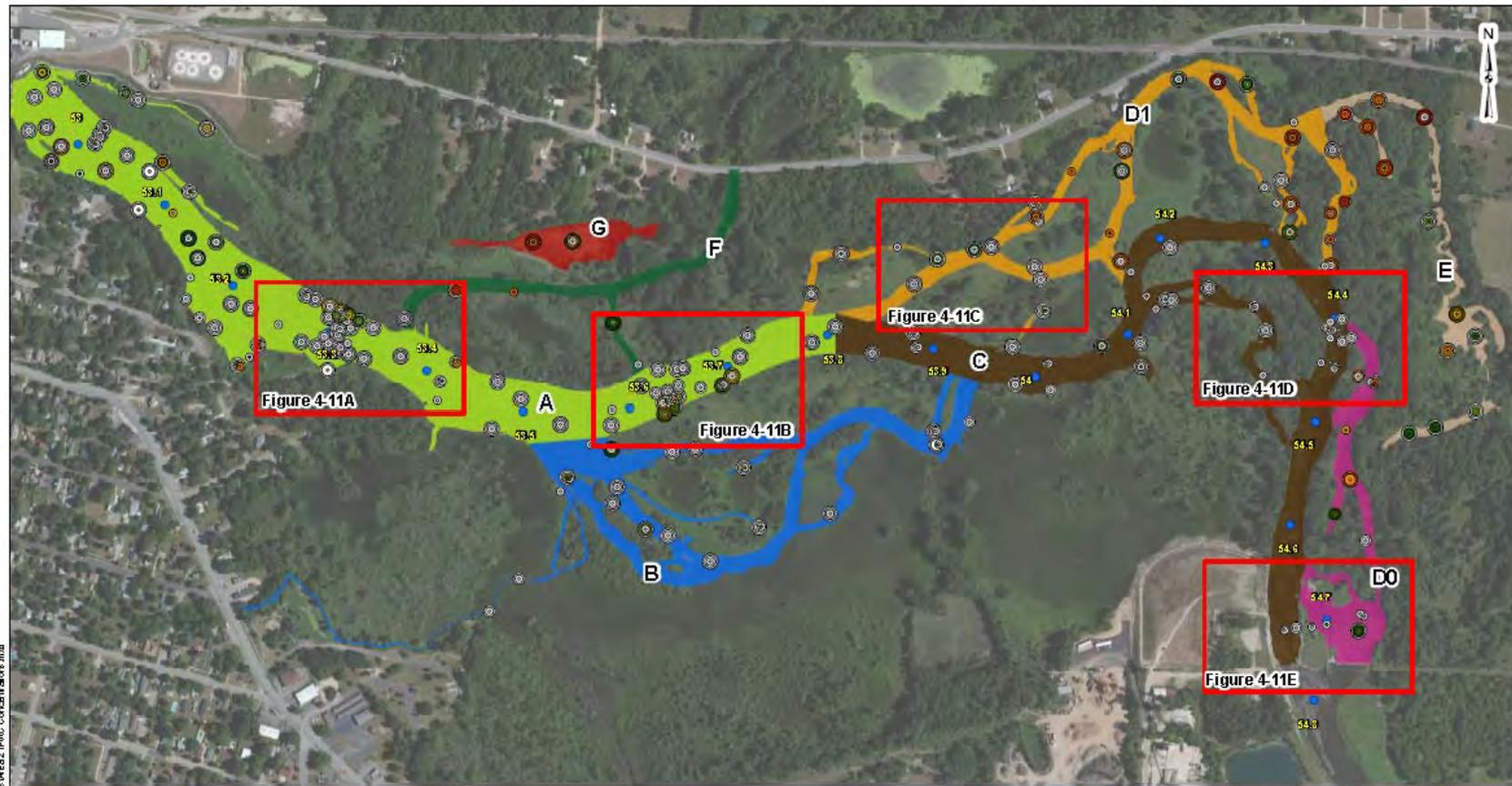




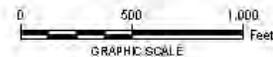
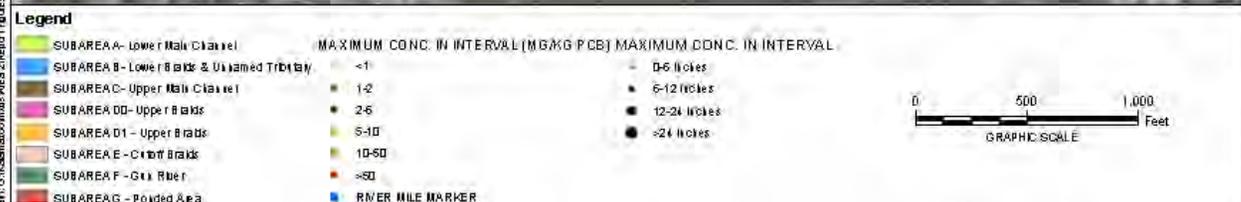
## Area 2 River Investigation Progress

- Supplemental Remedial Investigation (SRI)
  - Report submitted November 1, 2012
  - EPA disapproved Report April 8, 2013
  - Report (AMEC) resubmitted October 14, 2013
- Feasibility Study of potential remedial alternatives
  - Spring 2014

# Operable Unit 5: Area 2



I:\GIS\workspace\mxd\Area 2\Report Figures\Area 2 IPAC\_Concentration.mxd

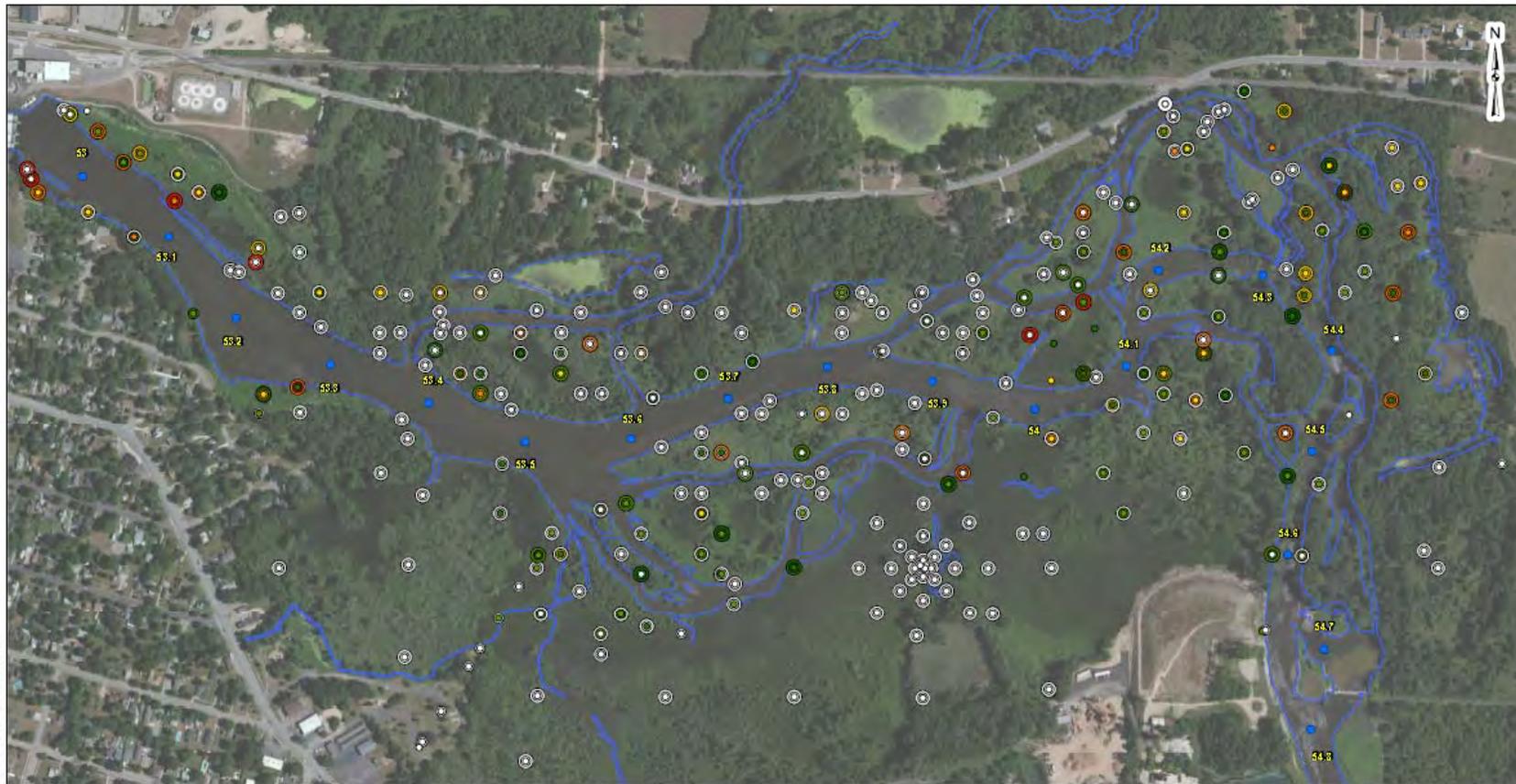


GEORGIA PACIFIC LLC  
 ALLIED PAPER, INC. PORTAGE CREEK/  
 KALAMAZOO RIVER SUPERFUND SITE  
 AREA 2 SUPPLEMENTAL REMEDIAL  
 INVESTIGATION REPORT

**AREA 2 SEDIMENT PCB  
 CONCENTRATION BY DEPTH INTERVAL**

Prepared by/Date: OLS 08/22/13		FIGURE 4-11
Checked by/Date: OED 08/22/13		
Project Number: www.gpac.com		

# Operable Unit 5: Area 2



**Legend**

MAXIMUM CONC. IN INTERVAL (MG/KG PCB) DEPTH INTERVALS

- |         |                           |
|---------|---------------------------|
| ○ <1    | ● 0-6 inches              |
| ● 1-2   | ● 6-12 inches             |
| ● 2-5   | ● 12-24 inches            |
| ● 5-10  | ● >24 inches              |
| ● 10-60 | ○ RIVER MILE MARKER       |
| ● >50   | □ Shoreline (Approximate) |



GEORGIA PACIFIC LLC  
ALLIED PAPER, INC./PORTAGE CREEK/  
KALAMAZOO RIVER SUPERFUND SITE  
AREA 2 SUPPLEMENTAL REMEDIAL  
INVESTIGATION REPORT

**AREA 2 PCB FLOODPLAIN SOIL  
CONCENTRATIONS**

Prepared by/Date:  
CJS 08/11/13  
Checked by/Date:  
CJS 12/22/13  
Project Number:  
329311642



FIGURE  
4-14





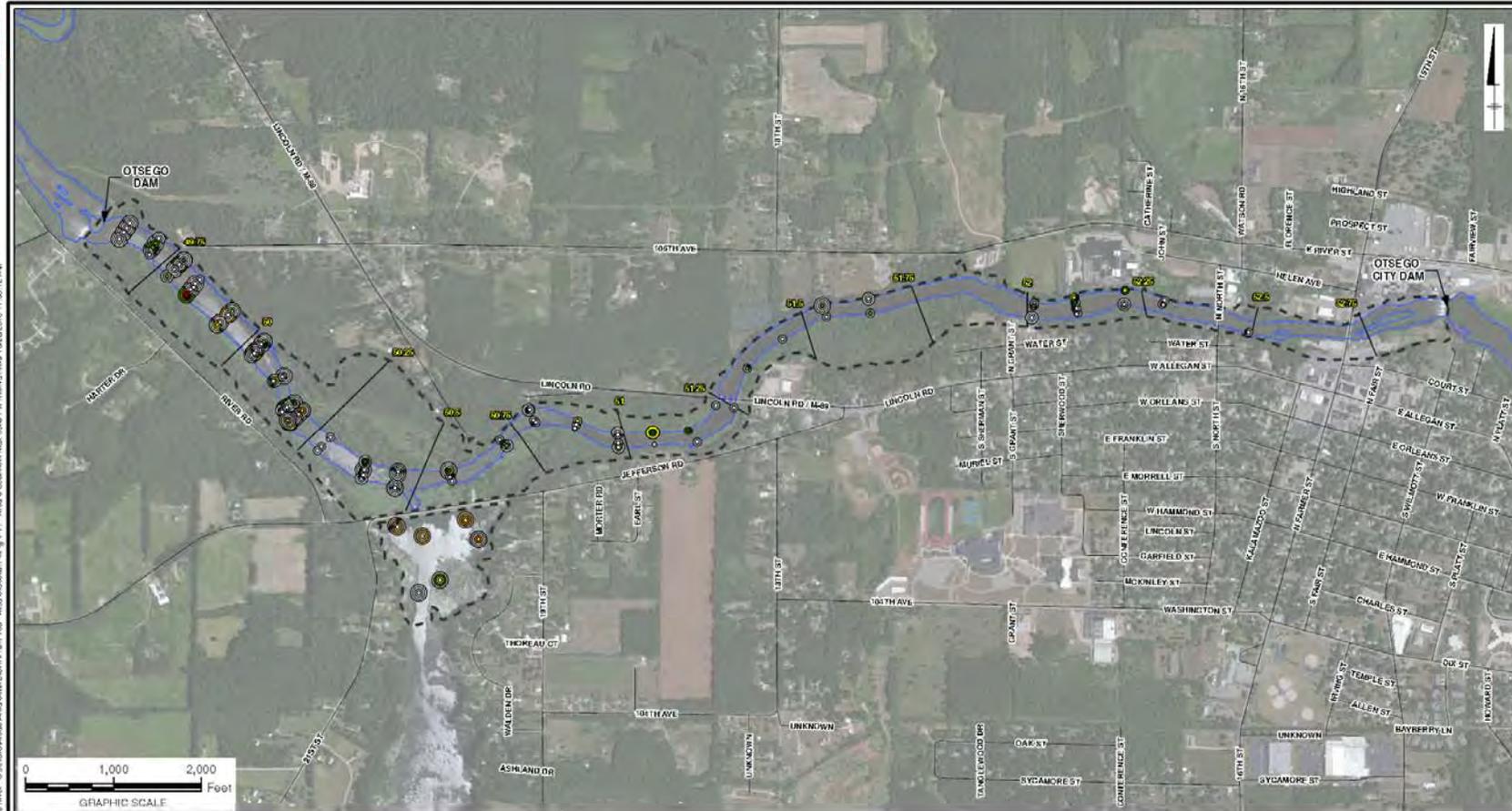
## Area 3 River Investigation Progress

- Supplemental Remedial Investigation (SRI)
  - 1100 Sediment and Soil samples collected during summer/fall 2012
- Additional sampling spring/summer 2013
- SRI to be submitted in January 2014

# Operable Unit 5: Area 3



DRAFT



Legend	
<b>SEDIMENT SAMPLE LOCATIONS</b>	<b>DEPTH INTERVAL</b>
<b>MAXIMUM PCB CONC. (HG/G PCB)</b>	0-6 inches
○ <1	● 6-12 inches
○ 1-2	● 12-24 inches
○ 2-5	● >24 inches
○ 5-10	■ AREA OF STUDY AREA BOUNDARY
○ 10-50	□ SHORELINE (APPROXIMATE)
○ 50+	
— RIVER MILE MARKER	

NOTES:  
 1. AERIAL IMAGE DERIVED FROM ORTHOGRAPIC DATA BY AXIS GEOSPATIAL, LLC. OTSEGO AREA FLOWN SPRING 2010.  
 2. STUDY AREA BOUNDARY DERIVED FROM OUTER EXTENT OF FEMA 100-YEAR FLOODPLAIN BOUNDARY, 683 FEET NGVD29, FORMER IMPOUNDMENT ELEVATION, AND VISUALLY IDENTIFIED IMPOUNDMENT AREAS FROM HISTORICAL PHOTOGRAPHS.  
 3. ORIGINAL SOURCE OF FIGURE ARCADIS MODIFIED WITH PERMISSION BY AMEC ES&I

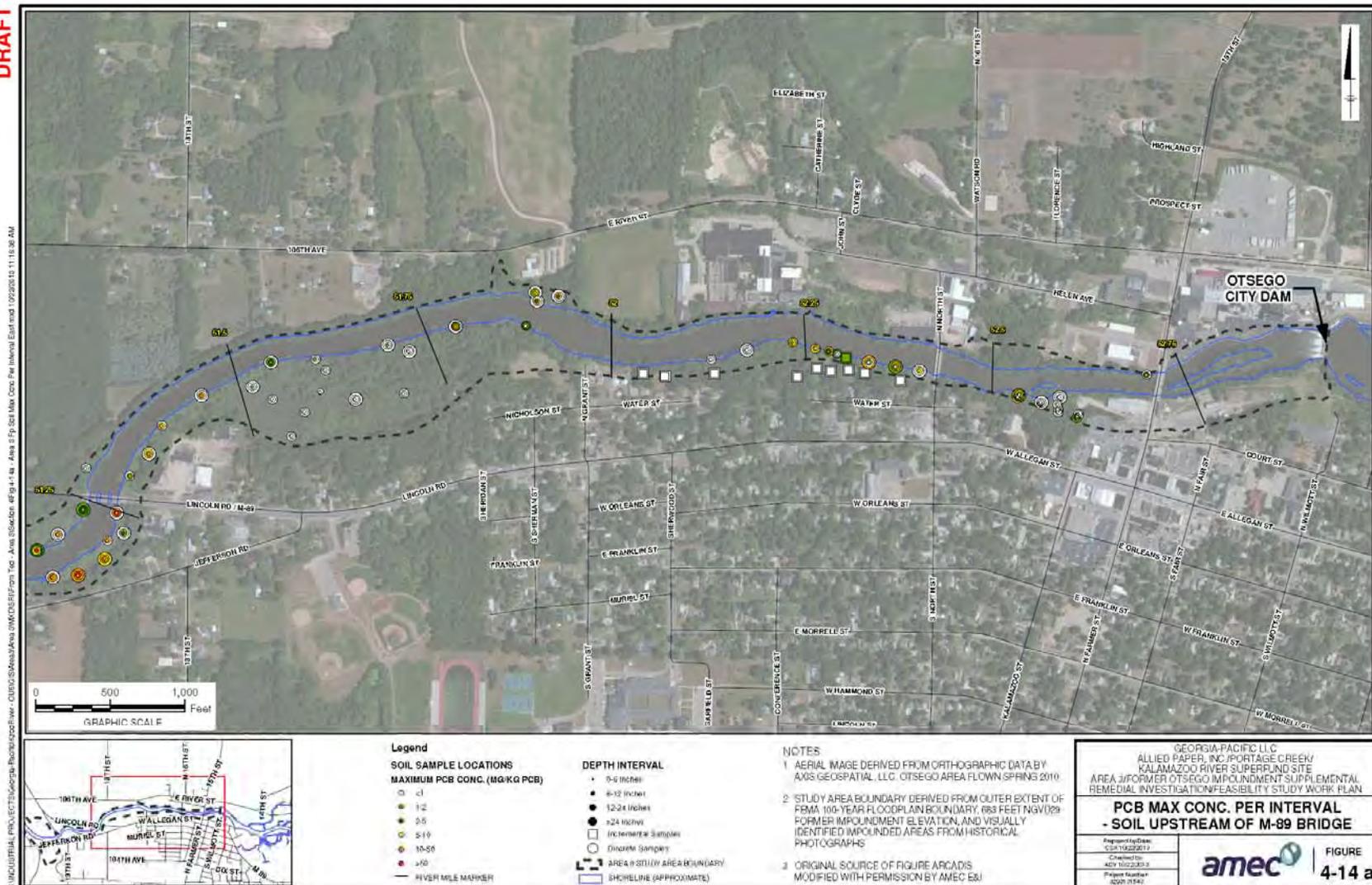
GEORGIA PACIFIC LLC ALLIED PAPER, INC./PORTAGE CREEK/ KALAMAZOO RIVER SUPERFUND SITE AREA 3/FORMER OTSEGO IMPOUNDMENT SUPPLEMENTAL REMEDIAL INVESTIGATION/FEASIBILITY STUDY WORK PLAN	
<b>PCB MAX CONC. PER INTERVAL                  - SEDIMENT</b>	
Prepared by Date: 2/14/10 02:29:13	FIGURE <b>4-11</b>
Created by: 10/1/10 02:29:13	
Project Number: 0291101540	

K:\INDUSTRIAL PROJECTS\Georgia-Pacific\KPCB River - OUS\GIS\Area3\Area3\MXD\GRIP Form T40 - Area 3\Doc\Level Max Conc Plr (river) map 10022913 11:06:12 AM

# Operable Unit 5: Area 3



DRAFT

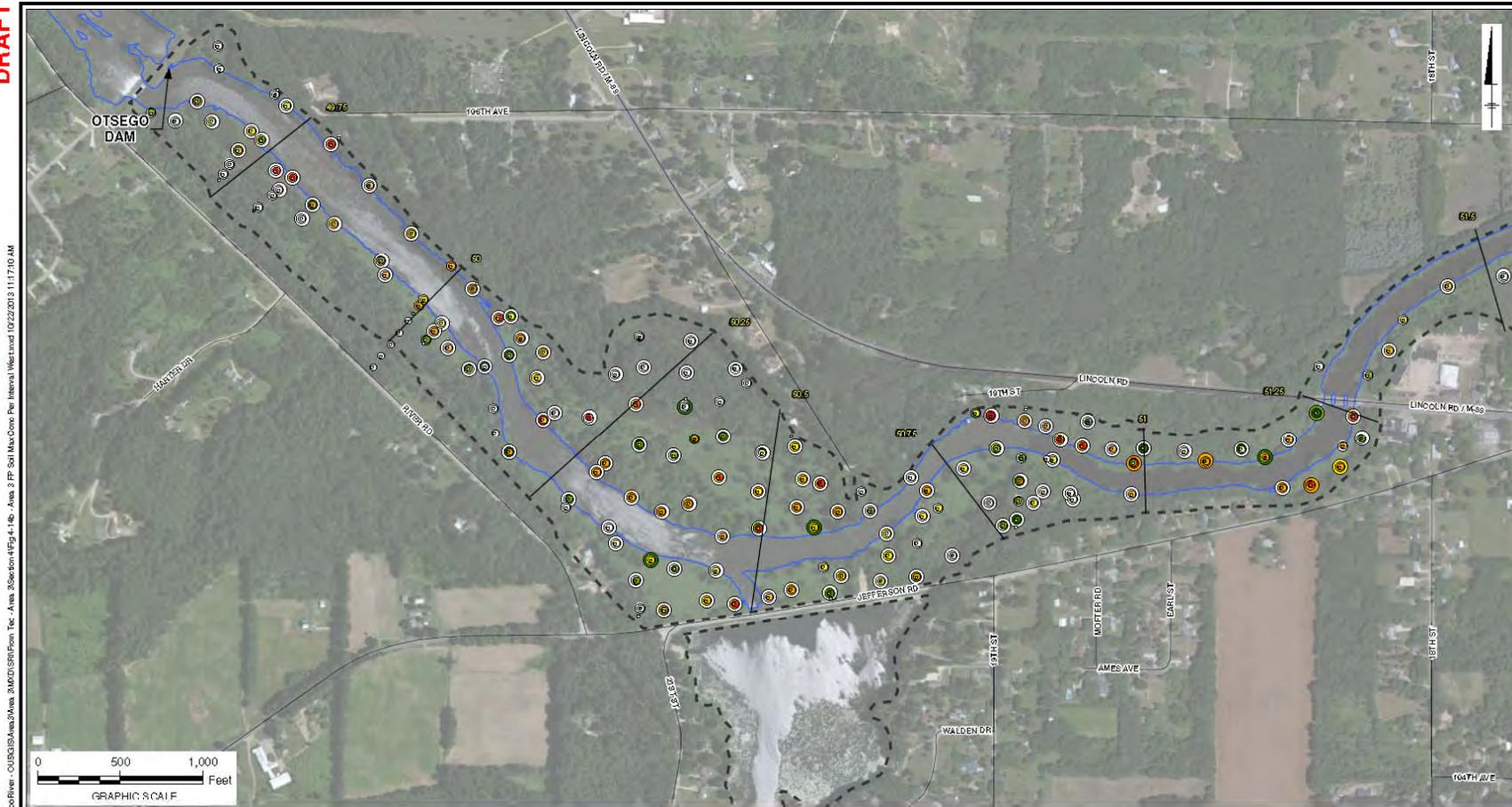


N:\INDUSTRIAL PROJECTS\GIS\Area 3\Area 3\MapDocs\Map 100 - Area 3\Doc\Area 3\MapDocs\Fig 100 - Area 3\Fig 100 Max Conc Per Interval Ext.mxd 10/22/2013 11:16:38 AM

# Operable Unit 5: Area 3



DRAFT



**Legend**

**SOIL SAMPLE LOCATIONS**

**MAXIMUM PCB CONC. (MG/KG PCB)**

- <1
- 1-2
- 2.5
- 5-10
- 10-30
- >50
- Incremental Samples
- Discrete Samples

**DEPTH INTERVAL**

- 0-6 Inches
- 6-12 Inches
- 12-24 Inches
- >24 Inches

○ Incremental Samples  
○ Discrete Samples

— AREA 3 STUDY AREA BOUNDARY  
— SHORELINE (APPROXIMATE)

— RIVER MILE MARKER

**NOTES:**

1. AERIAL IMAGE DERIVED FROM ORTHOGRAPHIC DATA BY AXIS GEOSPATIAL, LLC. OTSEGO AREA FLOWN SPRING 2010.
2. STUDY AREA BOUNDARY DERIVED FROM OUTER EXTENT OF FEMA 100-YEAR FLOODPLAIN BOUNDARY, 683 FEET NGVD29 FORMER IMPOUNDMENT ELEVATION, AND VISUALLY IDENTIFIED IMPOUNDED AREAS FROM HISTORICAL PHOTOGRAPHS.
3. ORIGINAL SOURCE OF FIGURE ARCADIS MODIFIED WITH PERMISSION BY AMEC E&I

GEORGIA-PACIFIC LLC  
ALLIED PAPER, INC./PORTAGE CREEK/  
KALAMAZOO RIVER SUPERFUND SITE  
AREA 3/FORMER OTSEGO IMPOUNDMENT SUPPLEMENTAL  
REMEDIATION INVESTIGATION/FEASIBILITY STUDY WORK PLAN

**PCB MAX CONC. PER INTERVAL  
- SOIL DOWNSTREAM OF M-36**

Prepared by: CSK 10/25/09 13  
Checked by: ADW 10/25/09 13  
Project Number: 050110543

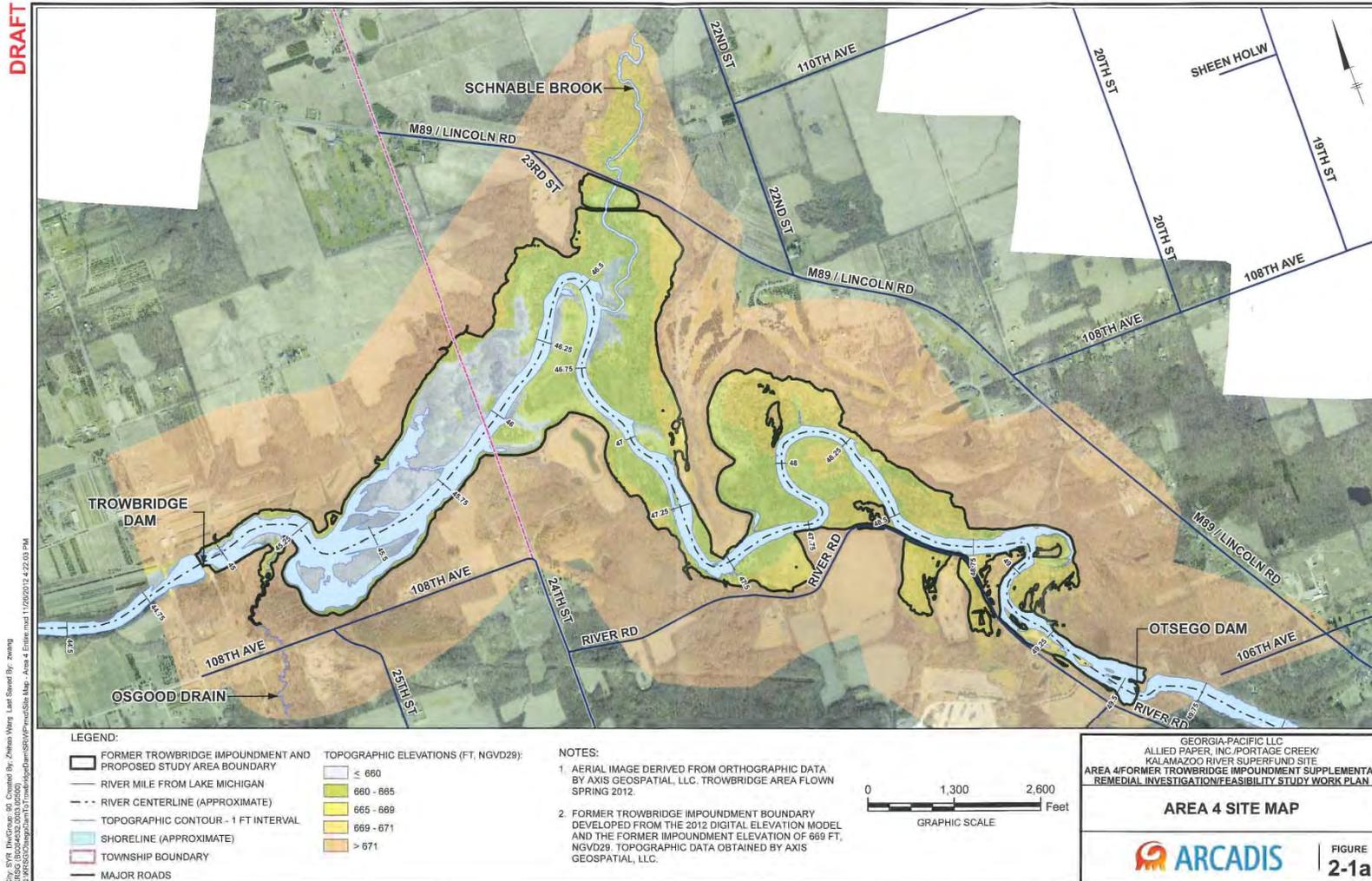
**amec** | **FIGURE 4-14 b**

N:\INDUSTRIAL PROJECTS\KalamazooRiver - OUS\GIS\Area3\Area\_3\MCD\SRM\From\_Tec\_Area\_3\Section4\Fig-4-14b - Area\_3 FP Soil Max Conc Per Interval Westward 10/22/2013 11:17:10 AM

# Operable Unit 5: Area 4



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 ALLIED PAPER, INC./PORTAGE CREEK/  
 KALAMAZOO RIVER SUPERFUND SITE  
 AREA 4/FORMER TROWBRIDGE IMPOUNDMENT SUPPLEMENTAL  
 REMEDIAL INVESTIGATION/FEASIBILITY STUDY WORK PLAN

**AREA 4 SITE MAP**

**ARCADIS** | **FIGURE 2-1a**



## Area 4 River Investigation Progress

- Workplan for sample collection approved June 17, 2013
- Field reconnaissance initiated in Fall 2013 and sampling to occur during 2014-2015



# Contact Information

**Jim Saric**  
**(312) 886-0992**

**[Saric.james@epamail.epa.gov](mailto:Saric.james@epamail.epa.gov)**

**[www.epa.gov/region5/sites/kalproject](http://www.epa.gov/region5/sites/kalproject)**