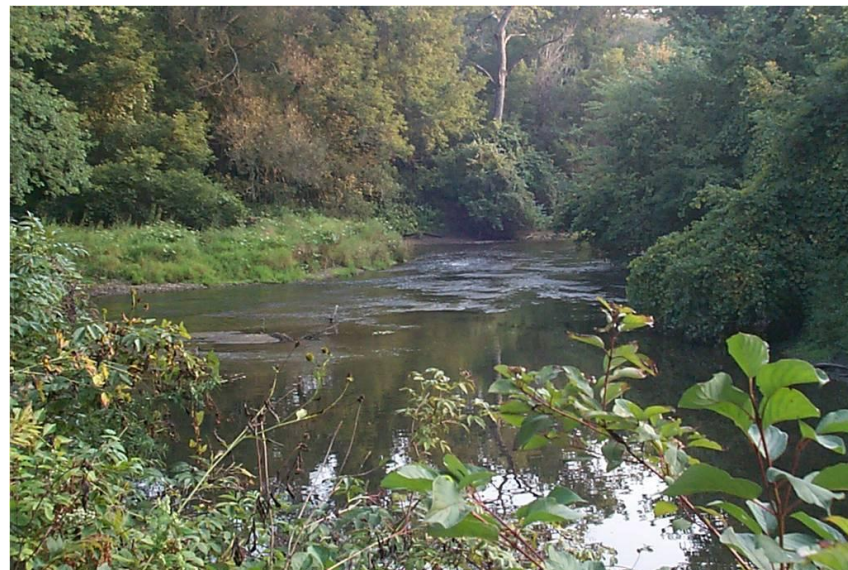


*LSPA PCB Course
March 28, 2013*



Management of PCBs Under the MCP

Eva V. Tor, P.E.

Deputy Regional Director

Massachusetts Department of Environmental Protection

Springfield, MA

Presentation Outline

1. Laws and Regulations
2. Notification Requirements
3. Risk Characterization
4. General Disposal Considerations
5. Case Studies - GE Pittsfield PCB Remediation



Regulation of PCBs in Massachusetts

- M.G.L. Chapter 21E
 - Massachusetts Oil and Hazardous Material Release Prevention and Response Act

<http://www.malegislature.gov/Laws/GeneralLaws/PartI/TitleII/Chapter21E>

- Massachusetts Contingency Plan (MCP)
 - 310 CMR 40.0000

<http://www.mass.gov/dep/cleanup/laws/mcptoc.htm>

Notification Requirements

2-Hr (verbal)



Sudden Release or Threat of Release

- ≥ 10 gal. PCB-contaminated material, PCBs unknown or < 500 ppm;
- ≥ 1 gal. PCB-contaminated material, PCBs ≥ 500 ppm;
- ≥ 1 lb. PCBs



- ▶ **Oil/Hazardous Material Leaks/Releases/Spills**
Examples: 10 Gal. Petroleum or 25 Gal. Transformer Oil to Ground, Petroleum to Surface Water Causing Sheen
- ▶ **Drinking Water Emergencies**
Examples: Contamination, Distribution/Plant Failures, Source Loss
- ▶ **Wastewater Emergencies**
Examples: Bypasses, Failures, Overflows, Power Outages
- ▶ **Other Environmental Emergencies**
Examples: Threats from Air Pollution, Industrial Wastewater, Large Quantities of Hazardous Waste

Notification Requirements

2-Hr (verbal)

Poses or Could Pose an Imminent Hazard

- PCBs ≥ 10 mg/kg in top 12" of soil, within 500 ft. of school, residence, or playground;
- Short-term (5 yrs.) risk levels $>$ Excess Lifetime Cancer Risk (ELCR = 1×10^{-5}) or Hazard Index (HI = 10)
- Long-term risk levels $>$ $10 \times$ ELCR (ELCR = 1×10^{-5}) or HI (HI = 1)

Notification Requirements

72-Hr (verbal)

- Condition of Substantial Risk Migration (SRM)
 - Discharge of separate-phase oil or hazardous material to surface waters, subsurface structures, or underground utilities or conduits
- $\geq \frac{1}{2}$ inch NAPL*



Notification Requirements

120-Day (written)

RC-S1	2 mg/kg	Soils within 500 ft. of school, residence, playground, or in RCGW-1 area
RC-S2	3 mg/kg	All other soils
RC-GW1	0.5 µg/l	Current Drinking Water Source Area or Potential Drinking Water Source Area
RC-GW2	5 µg/l	All other groundwater

Risk Characterizations



- Method 1 – Predetermined numeric standards for soil and groundwater
- Method 2 – Allows for some adjustment of the Method 1 for site-specific conditions
- Method 3 – Defined cleanup standards based on a site specific risk assessment; cumulative risk approach

Cleanup Standards

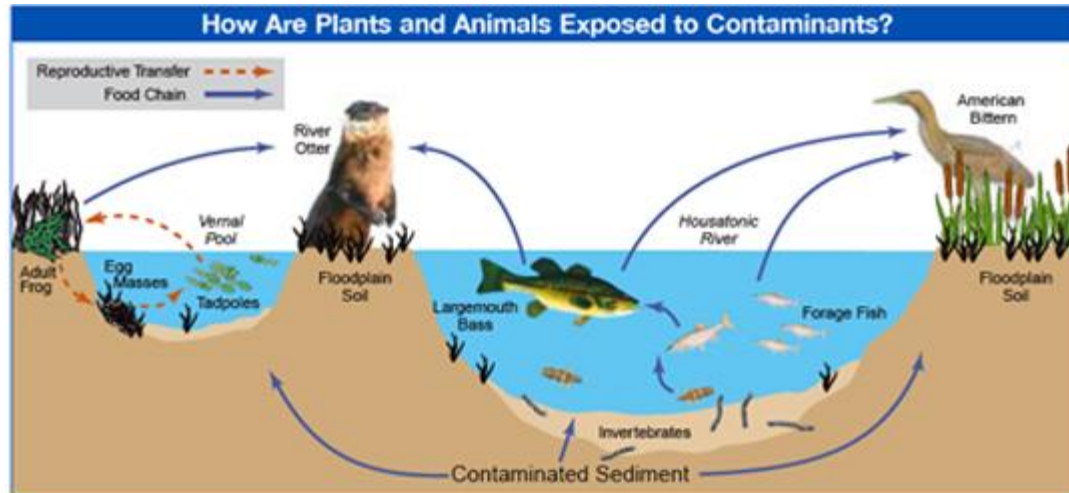
Method 1 Standards

Soil	Groundwater
S-1 = 2 mg/kg	GW-1 = 0.5 µg/l
S-2 = 3 mg/kg	GW-2 = 5 µg/l
S-3 = 3 mg/kg	GW-3 = 10 µg/l

Cleanup Standards

Method 3 Risk Characterization

- Site-specific risk characterization
- Cumulative Cancer Risk Limit = ELCR = 1×10^{-5}
- Cumulative Non-cancer Risk Limit = HI = 1
- Environmental Risk Characterization

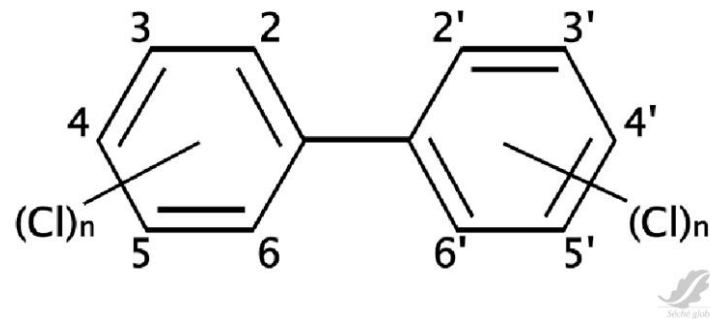


Simple Shortform Analysis

Example: Direct contact for PCBs in soil (only) and no other constituents.

Receptor	[PCB], mg/kg
Resident	6
Construction Worker	25
Park Visitor	10
Trespasser	100

Further Considerations



- Upper Concentration Limits (UCLs)
 - UCL (soil) = 100 mg/kg
 - UCL (gw) = 100 μ g/l
 - Remove, if feasible
 - If not, achieve Permanent Solution with AUL and
 - Permanently fixate or immobilize,
 - Construct Engineered Barrier, or
 - UCLs located > 15 ft. below grade
- Properly calculate your exposure point concentration
- Look for TSCA triggers ASAP

General Disposal Considerations

- Hazardous waste vs solid waste
- 310 CMR 30.000 – Massachusetts Hazardous Waste Regulations
- 310 CMR 30.105 – Exemption for PCB Waste Regulated Pursuant to TSCA



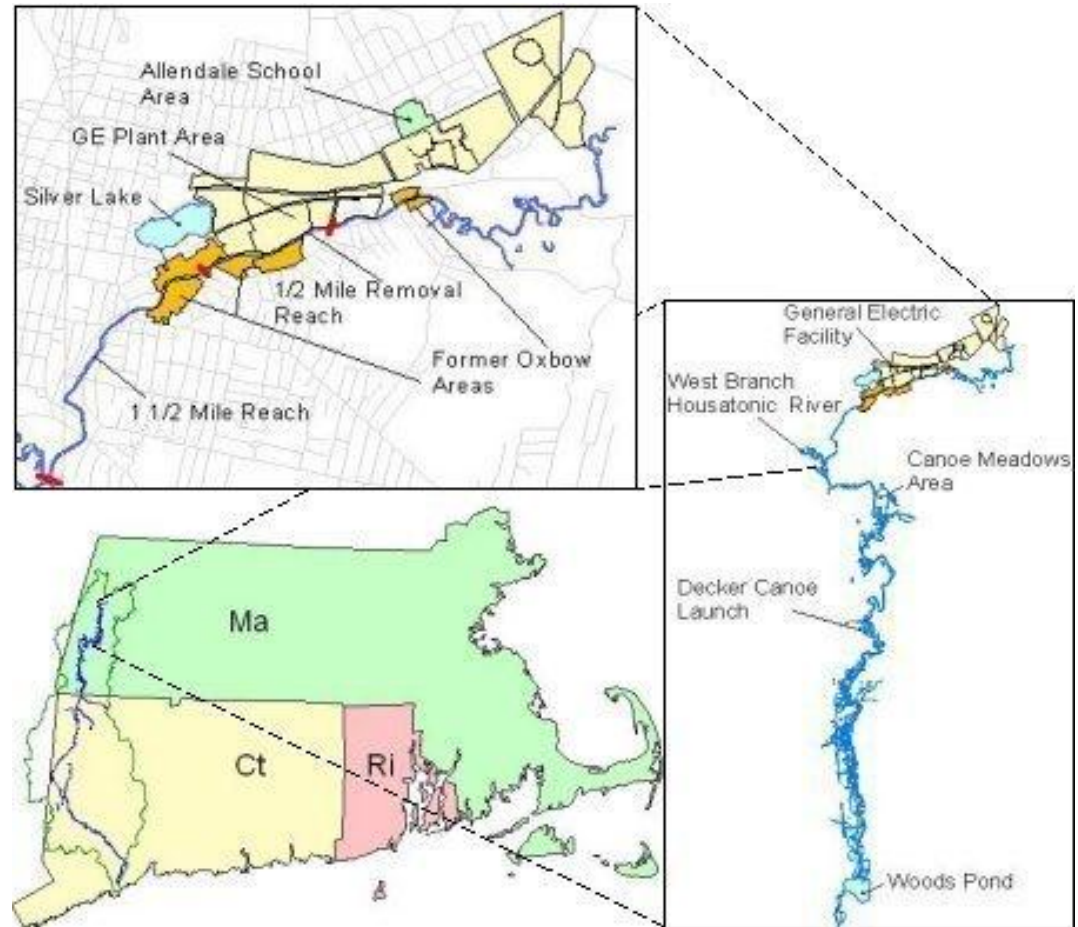
PCBs in Building Materials

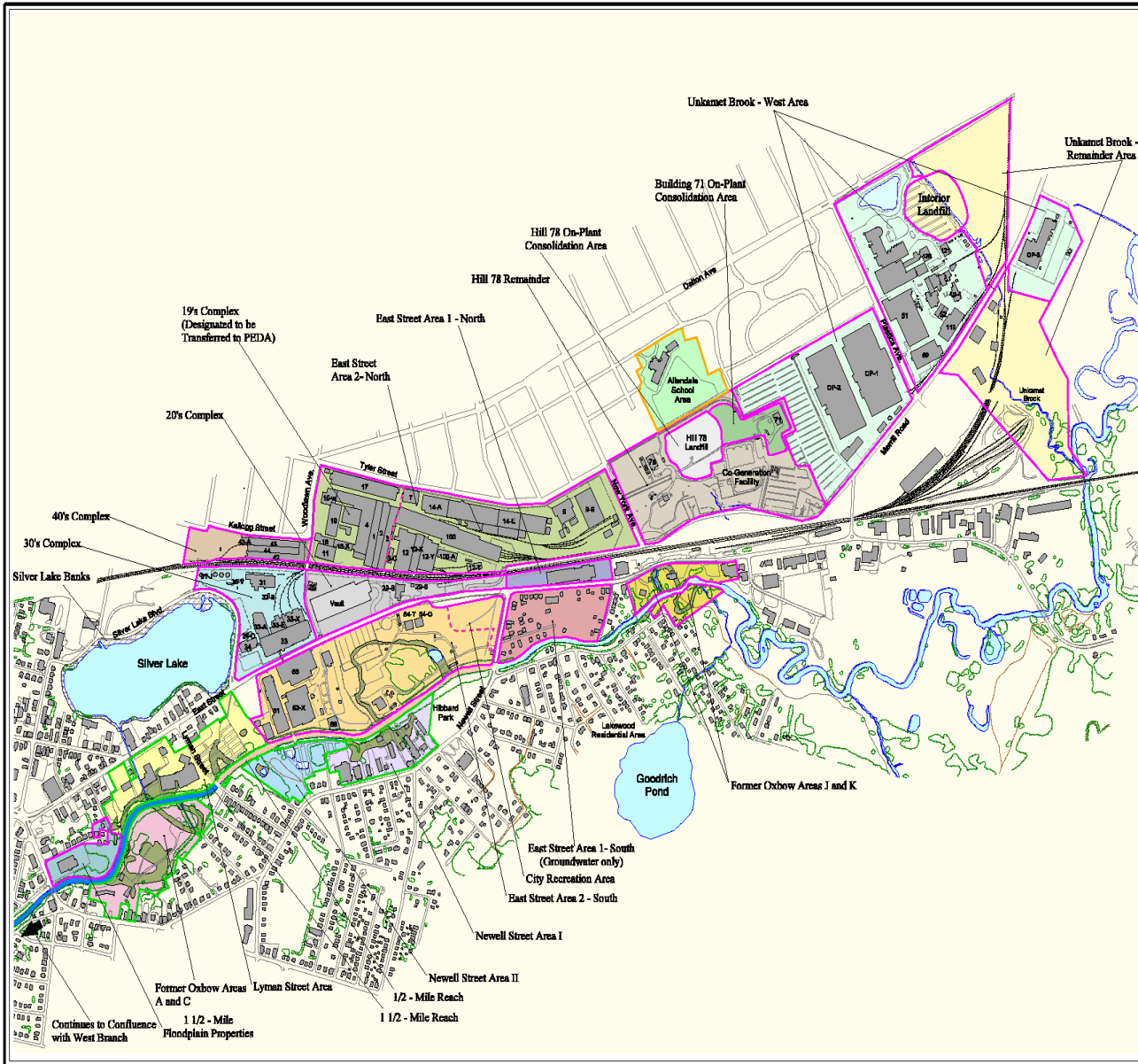
MassDEP Does Not Regulate the Removal of PCBs in Building Materials



GE/Housatonic River Project Pittsfield, MA

- Housatonic River
- GE Plant Site
- Oxbows
- School
- Silver Lake
- Commercial & Residential Properties





LEGEND:

- GE Plant Area:**
- 20's complex
 - 30's complex
 - 40's complex
 - East Street Area 1-North
 - East Street Area 1-South (Groundwater only)
 - East Street Area 2 - North
 - East Street Area 2 - South
 - Building 71 On-Plant Consolidation Area
 - Hill 78 On-Plant Consolidation Area
 - Hill 78 Remainder
 - Unkamek Brook - West Area
 - Unkamek Brook - Remainder Area

- Silver Lake:**
- Silver Lake Sediment
 - Silver Lake Banks

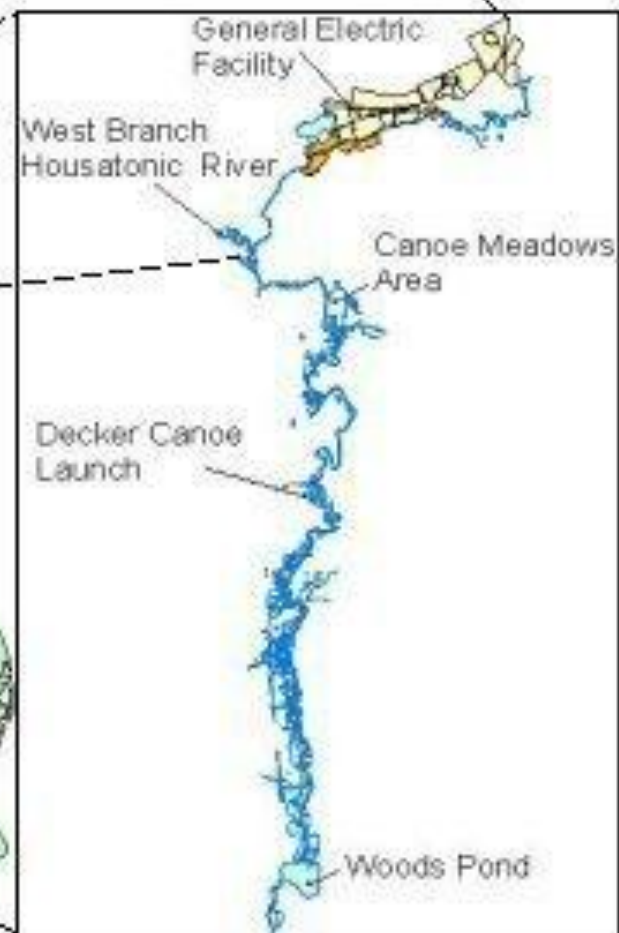
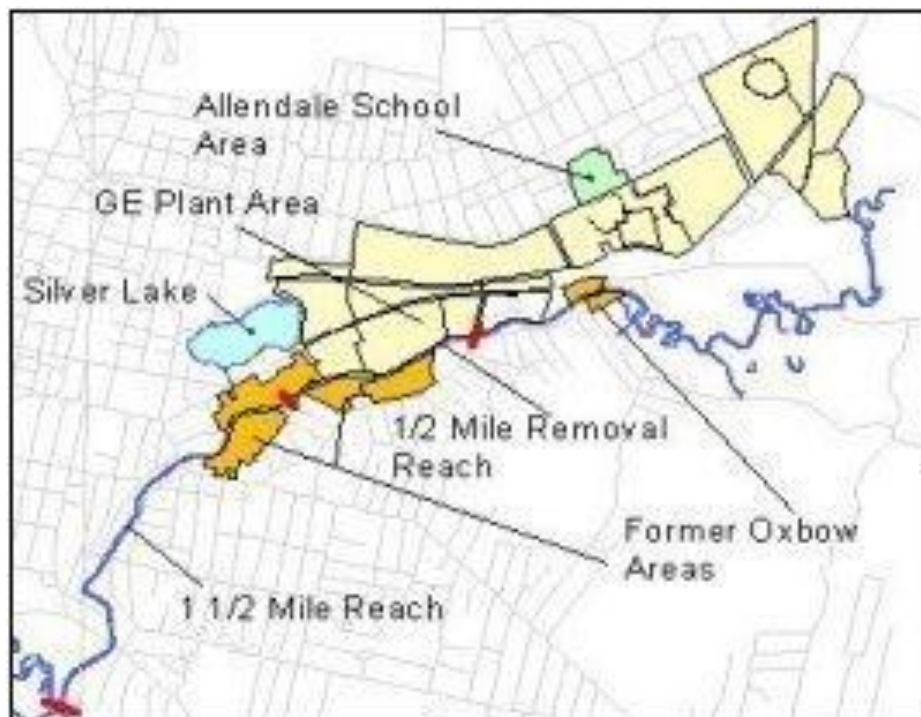
- Former Oxbow Areas:**
- Former Oxbow Areas A&C
 - Former Oxbow Areas J&K
 - Lyman Street Area
 - Newell Street Area I
 - Newell Street Area II
 - Allendale School Area
 - 1/2 - Mile Reach
 - 1 1/2 - Mile Reach
 - 1 1/2 - Mile Floodplain Properties
 - Former Oxbows

- Notes:**
1. Some features provided by General Electric Construction.
 2. Not all physical features are shown.
 3. Site boundaries are approximate.
 4. Map produced by Weston Solutions, Inc.



GE-PITTSFIELD/HOUSATONIC RIVER SITE

SITE MAP



Regulatory History – 1980s



Two ACOs with MassDEP

- Specified Site Investigation Activities

Corrective Action Permit with EPA

- Under the Hazardous and Solid Waste Amendments to the Resource Conservation and Recovery Act (RCRA)

Federal Regulatory History – 1991



Re-issued RCRA Permit

- RCRA Corrective Action Permit issued to GE (became effective 1994)
 - 254-acre facility
 - Former oxbows
 - Silver Lake
 - Housatonic River (+floodplain, wetlands, and sediments)

Mass Regulatory History



Two ACOs with MassDEP in the 1980s and 1990s

- Specified investigatory work
- ACO entered into on November 13, 2000 with MassDEP replaced the 2 ACOs

Federal Regulatory History – 1997

- EPA proposed Site to Superfund National Priorities List
- Federal and State Governments began negotiations
- Tentative agreement reached in 1998
- Parties include
 - U.S. EPA
 - U.S. Department of Justice
 - MassDEP
 - CT DEP
 - City of Pittsfield



Federal Consent Decree

Entered on October 7, 1999

Approved by court October 27, 2000



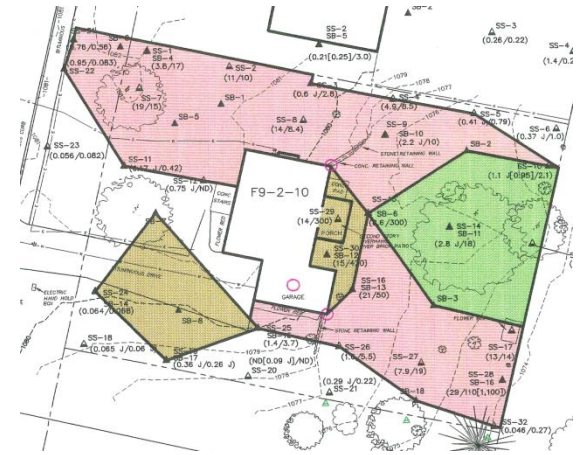
Major Components

- Cleanup of Contaminated Areas
- Restoration of Natural Resources
- Recovery of Government Costs
- Effect and Form of the Consent Decree

Additional Important Actions

- Enhanced Public Participation
- Brownfields Redevelopment and Economic Aid

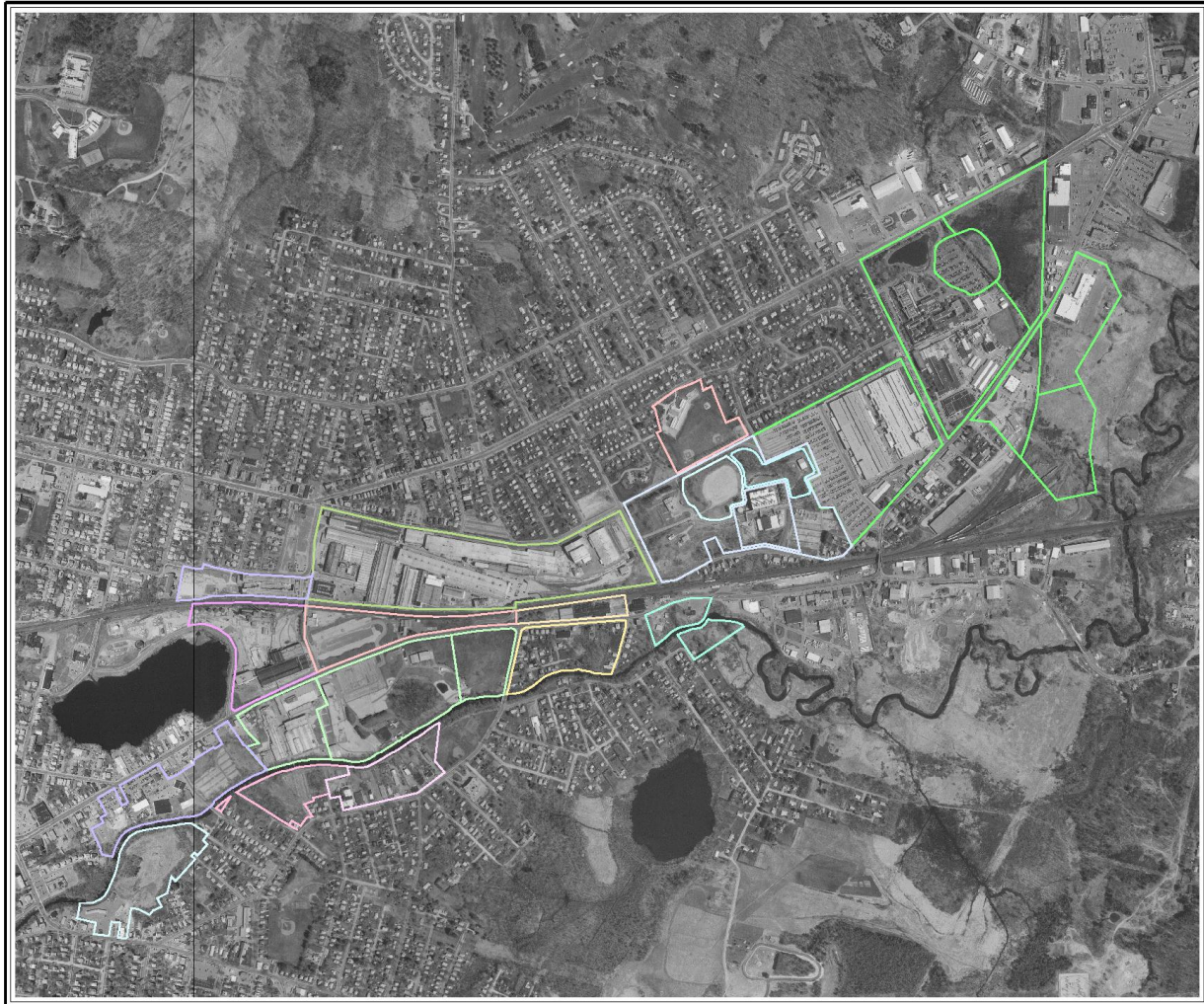
Cleanup of Contaminated Areas



Overall Principles of Cleanup Agreement

- Extensive sampling
- Remediation
- Material consolidated on site (OPCAs)
- Environmental Restrictions and Easements (EREs) to maintain commercial/industrial use

General Electric/Housatonic River Project



Removal Action Areas

- 20s Buildings Complex
- 30s Buildings Complex
- 40s Buildings Complex
- Building 71 Consolidation Area
- East Street Area - South (INAPL and Groundwater only)
- East Street Area 2 - South
- East Street Area 1 - North
- East Street Area 2 - North
- Former Oxbow Areas A&C
- Former Oxbow Areas A&K
- HS 78 Consolidation Area
- HS 78 Area
- Lynett St Area
- Newell St Area I
- Newell St Area II
- Ullswater Brook Area
- Atandale School Area

- Notes:
1. Base features provided by General Electric Contractors.
 2. Not all physical features are shown.
 3. Site boundaries are approximate.
 4. Maps produced by Roy F. Weston, Inc.
 5. Aerial Photography from 1987 by MassGIS.



Scale in Feet



Pittsfield/Housatonic River Project
Pittsfield, MA

Remedial Action Areas (RAA)
Aerial Overview

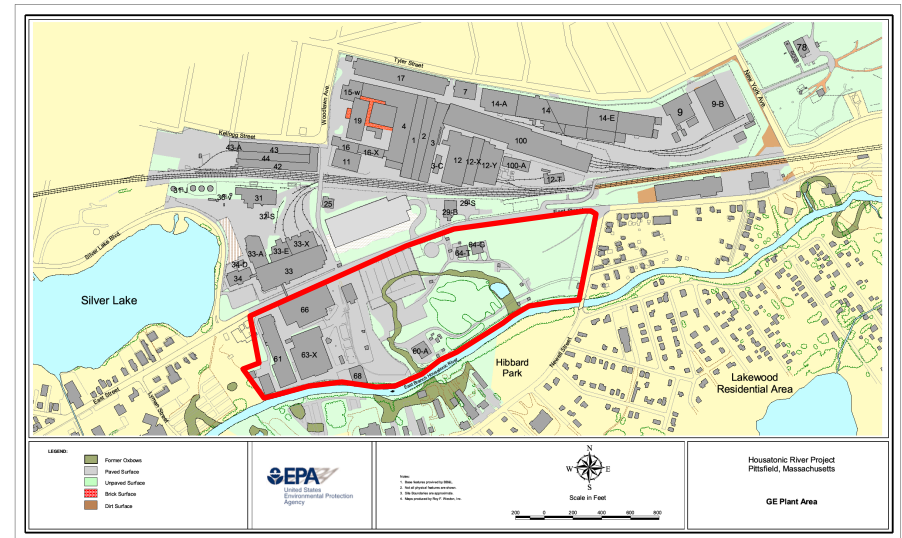
Remediation of GE Plant Site

- Objective: To remediate surface soils to levels that allow for commercial/industrial or recreational use, and to minimize exposure to contaminants in deeper soils
- Performance Standards
 - 0 to 1 foot - ≤ 25 ppm PCBs average
 - Engineered barrier where PCBs > 100 ppm average within top 15 feet
 - Utility corridors ≤ 25 ppm PCBs
 - No capping of unpaved soils in floodplain
 - Removal of pavement in 200-foot-wide buffer zone on northern side of river
 - Future City ballfield – one foot cap and meet recreational standard of 15 ppm PCB average in next two feet



Remediation of GE Plant Site

- Includes combination of soil removal and engineered barriers to achieve CD standards
- Remedial work ongoing currently at East Street I – South (red outline); all other areas complete
- 20s, 30s, 40s transferred or to be transferred to PEDAs (40s) (included building demolition); transfers include EREs which are under DEP oversight



Brownfields Redevelopment and Economic Aid

Objective- to utilize the former GE facility for new development thus preserving undisturbed "greenfields".

- GE, the City of Pittsfield and the Pittsfield Economic Development Authority (PEDA) entered into the Definitive Economic Development Agreement (DEDA).
- DEDA
 - GE will:
 - clean up its Plant Site to agreed upon Consent Decree standards
 - demolish several buildings
 - provide some funding for construction of new buildings and transfer portions of the property to PEDA for economic redevelopment.
 - provide economic aid to the City of Pittsfield for 10 years and make upgrades to the Plant Site and Silver Lake that will have aesthetic value and enhance local habitat.

Pittsfield Economic Development Authority

- Agreement
 - Remediate Plant site to CD standards
 - Demolish several buildings (20s, 30s, 40s)
 - Provide funding for new buildings
 - Transfer portions of property to PEDDA

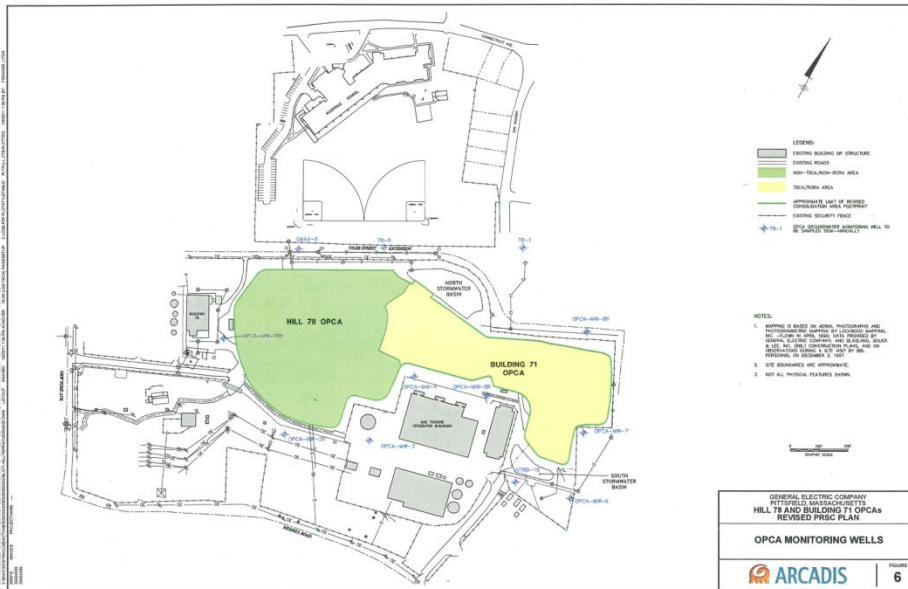


Pittsfield Economic Development Authority



On-Plant Consolidation Areas

- Objective: To eliminate risk of exposure to materials in the consolidation units through a combination of engineering controls and long-term monitoring
- Performance Standards
 - Install a protective cap over Hill 78 and Building 71 Consolidation Areas
 - Establish a groundwater monitoring network to monitor groundwater surrounding the landfill
 - Install a liner and leachate collection system for Building 71 Consolidation Area



On-Plant Consolidation Areas

Hill 78 OPCA

- 6 acres
- Includes former Hill 78 landfill, originally created in the early 1940s
- Designated a consolidation area for certain materials excavated under CD and for building demolition debris
- Material received between 1999 and 2009
- Final capping occurred in 2009

Building 71 OPCA

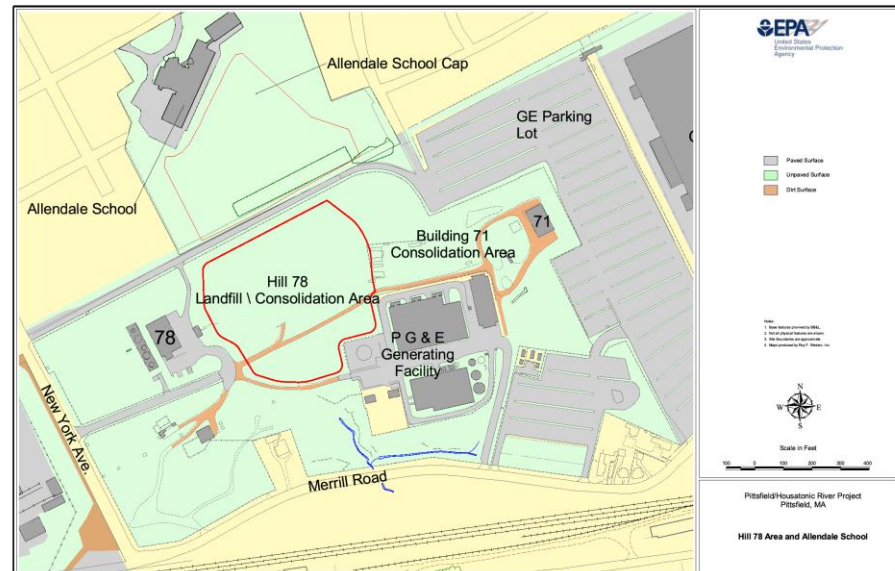
- 5 acres
- Also designated for consolidation of certain materials and building demolition debris under the CD
- Received materials from 2001 through 2006
- Final capping in 2006
- Includes liner and leachate collection system



Consent Decree

Remediation of Allendale School

- Objective: To remove contaminated fill (previously capped) from the schoolyard and restore the schoolyard
- Performance Standards
 - Remove all soils containing PCBs greater than 2 ppm



Consent Decree Remediation of Allendale School



Remediation of Former Oxbows

- Objectives: To achieve appropriate cleanup standards keyed to current uses and expected future uses and to allow for changes in property use



- Performance Standards
 - Lyman/Newell Parking Lots
 - Remove surface soils and replace with vegetative covers
 - Commercial/Industrial Areas
 - 25 ppm PCB average in surface
 - 200 ppm PCB average 1-6 feet
 - Engineered barrier where exceed 100 ppm PCB average top 15 feet
 - Recreational Areas
 - 10 ppm PCB average in surface
 - 15 ppm PCB average 1-3 feet
 - Engineered barrier where exceed 100 PCB average top 15 feet
 - Residential Areas
 - 2 ppm PCB average

Remediation of Former Oxbows

- River was re-channelized in late 1930s and early 1940s, creating number of oxbows
- 11 former oxbows identified near GE facility that received industrial waste
- Remediation conducted between 2003 and 2009
- Approximately 49,000 cy of soil removed and approximately 8.2 acres of engineered barriers installed
- Approximately 42,000 cy of soil disposed at OPCAs with remaining 7,000 cy sent to off-site disposal facilities



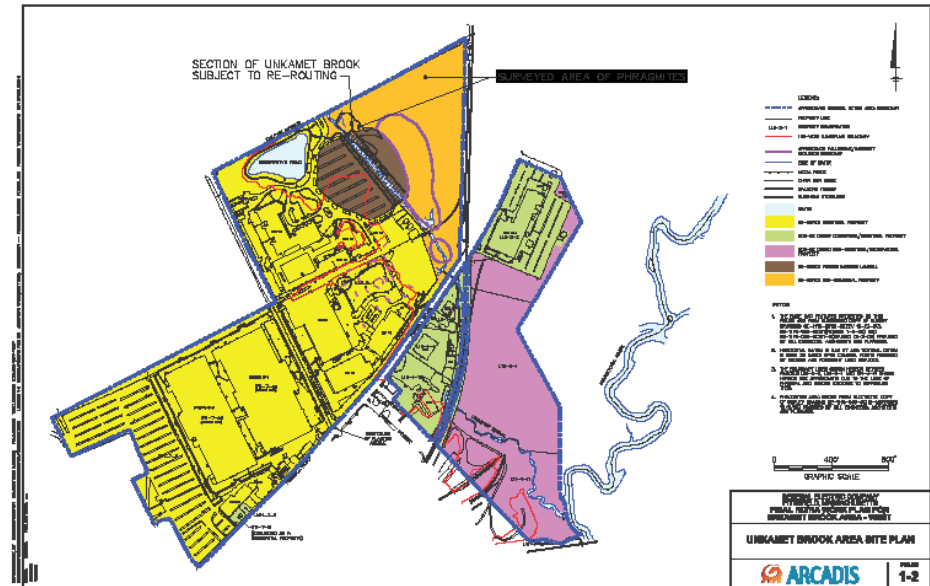
Remediation of Unkamet Brook

- Objective: To provide protection for human recreational users and biological receptors in portions of the brook and its floodplain from Dalton Avenue downstream to the Housatonic River
- Performance Standards
 - Reroute brook to its former channel and cap entire existing industrial landfill
 - Remove brook sediments to achieve 1 ppm PCB average in surface sediments
 - Remove soils in floodplain to achieve 10 ppm PCB average in top foot and 15 ppm average in 1 to 3 foot depth (recreational use)



Remediation of Unkamet Brook

- Divided into West (industrial portion) and Remainder (former landfill, brook, wetland)
- West
 - Industrialized portion
 - Final RD/RA Work Plan June 2010
 - Removal of 3,700 cy soil and installation of engineered barrier
- Remainder
 - Reroute brook around landfill
 - Cap landfill (approx 7 acres)
 - Remove 22,390 cy floodplain soil/sediment
 - Final RD/RA Work Plan Spring 2011



Remediation of Silver Lake

- Objective: To provide a clean-up that is protective of human and ecological use of the lake

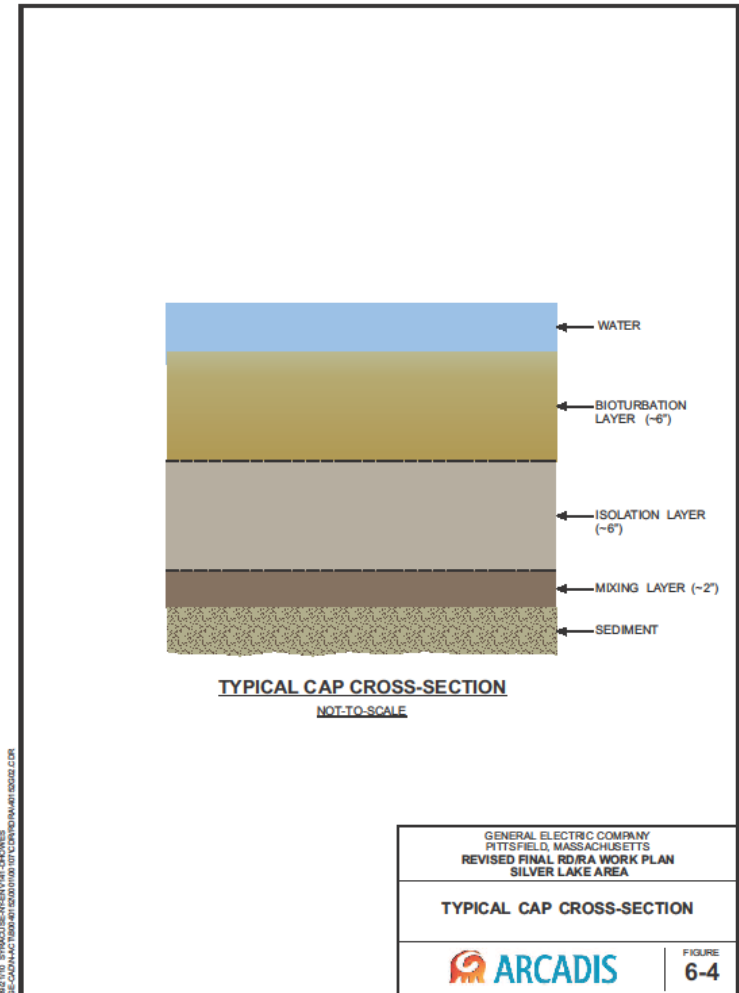


- Performance Standards
 - Remove bank soils to achieve 10 ppm PCB average in top foot and 15 ppm PCB average from 1-3 feet (residential properties to achieve 2 ppm average)
 - Remove and replace hot spot sediments near outfall
 - Cap entire 26 acres lake bottom and armor perimeter of lake
 - Periodic review of effectiveness of cap

Remediation of Silver Lake

Silver Lake

- 26 acres; discharges to Housatonic River
- Final RD/RA work plan calls for removal of 1,500 cy of sediment, placement of cap, removal of 10,200 cy of bank soil, and armoring of shoreline.
- Remediation occurring currently



Consent Decree

Housatonic River – Half Mile Reach

- Remediation completed in September 2002
- Addressed contaminated river banks and sediment
- Restored riverbed capped with sorptive layer and armoring stone
- Approximately 12,000 cy of sediment and 6,400 cy of bank soil removed; majority of material disposed at OPCAs



Consent Decree

Housatonic River – 1.5 Mile Reach

- Remediation of sediment and bank soils completed in 2006
- Remediation resulted in 99% reduction of PCB concentrations in sediment
- Approximately 92,000 cy of sediment and bank soil removed for disposal
- Approximately 51,000 cy of material disposed at OPCAs

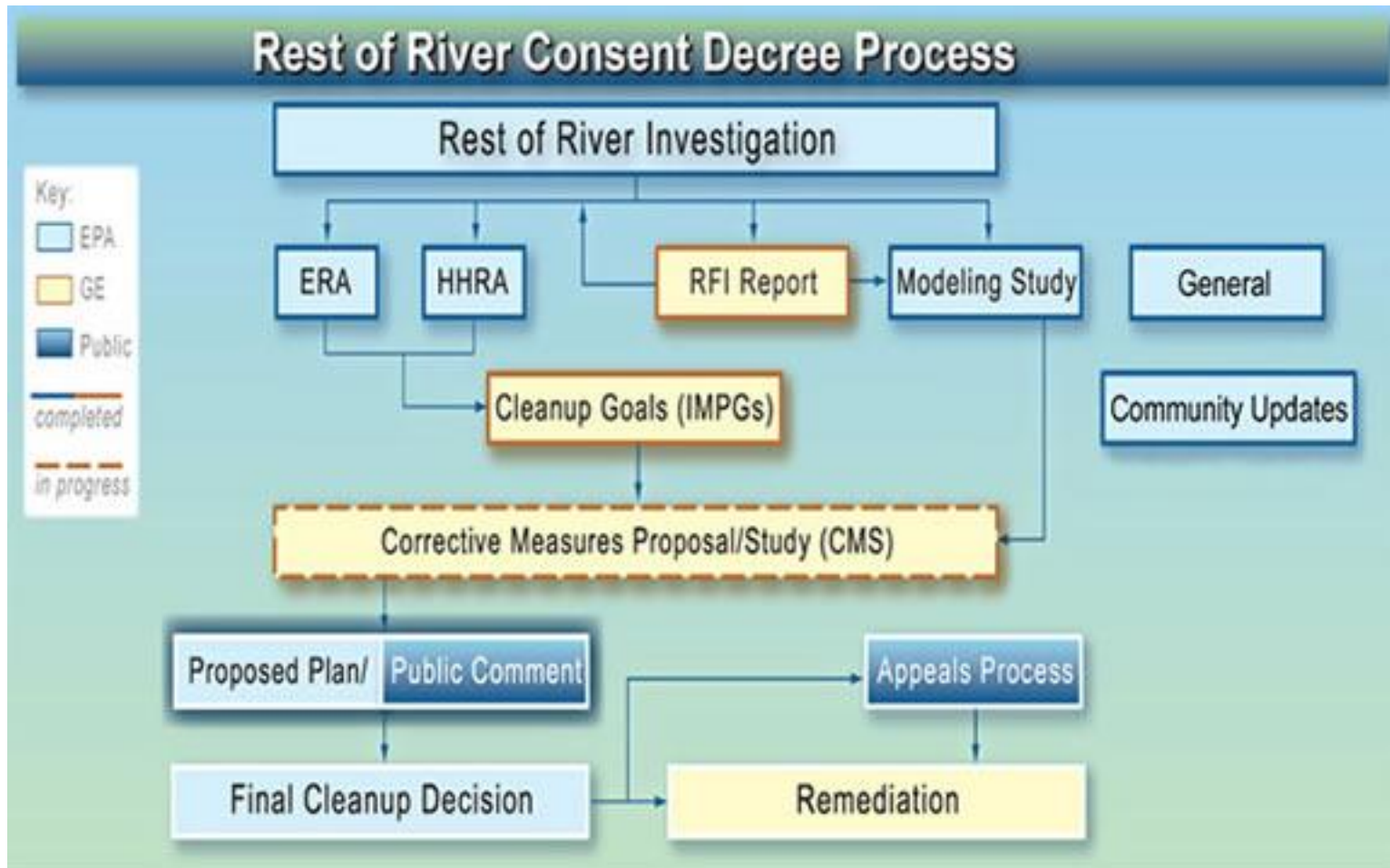


Rest of River



- Confluence of East and West Branch to Long Island Sound, CT
- CD – Implement Process for Remedy
- Remedy through RCRA permit
- Appeals Process

ROR Process Flow



MassDEP Administrative Consent Order



- Dorothy Amos Park
- West Branch Housatonic River
- Fill Properties
 - Residential and Commercial Sites

Dorothy Amos Park

- Former junkyard that took in PCB transformers for scrap metal
- City obtained in 1973 and converted to park in 1975
- Remediated in 1998
- Adjacent to West Branch Housatonic River

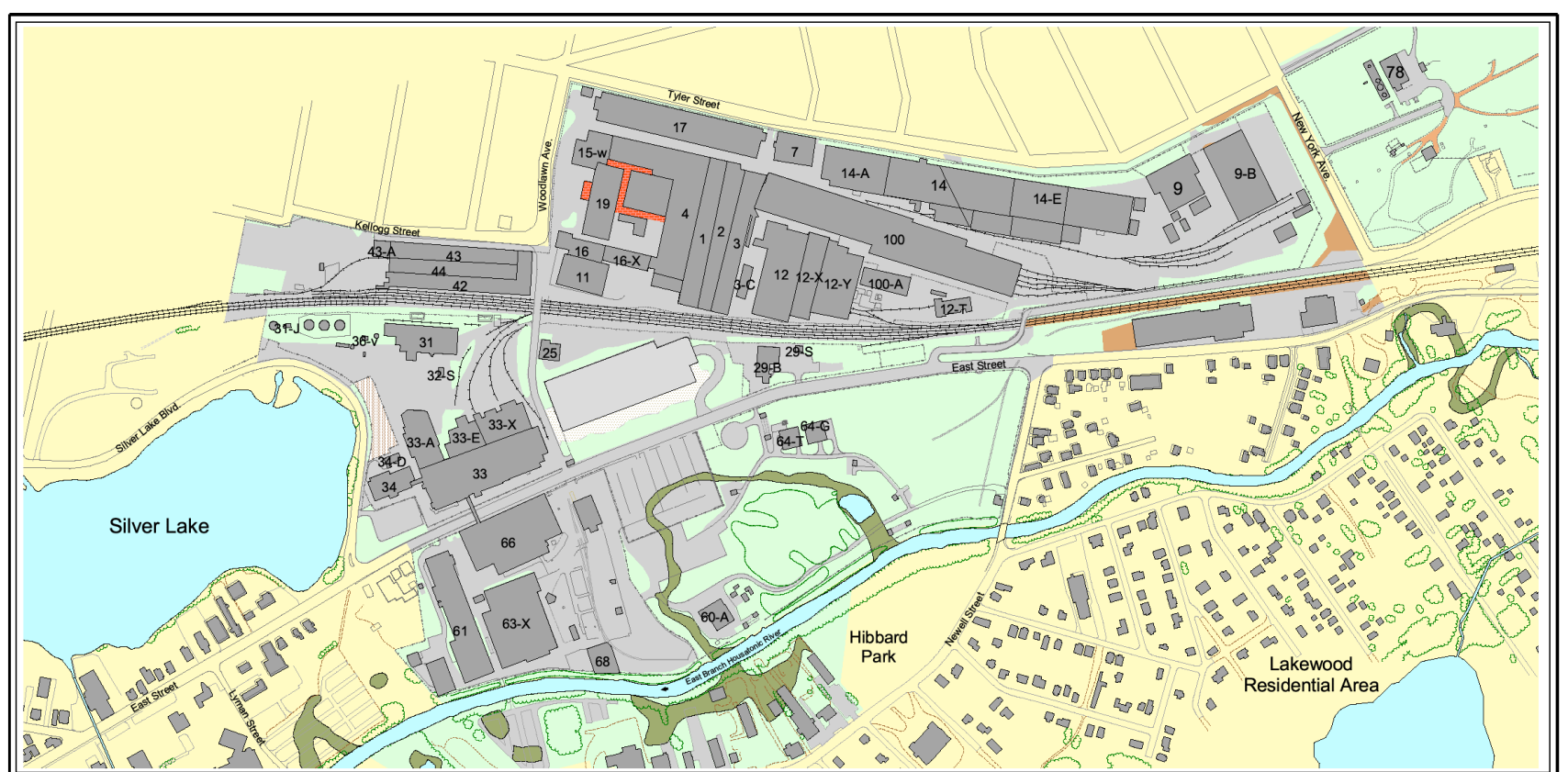


West Branch


- Adjacent to Dorothy Amos Park
- Remediated between July 2009 and November 2009
- Removed all PCB containing sediment – 900 cy
- Removed 430 cy bank soil



General Electric Facility Pittsfield, Massachusetts



LEGEND:

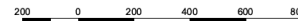
-  Former Oxbows
-  Paved Surface
-  Unpaved Surface
-  Brick Surface
-  Dirt Surface



- Notes:
1. Base features provided by GISBL.
 2. Not all physical features are shown.
 3. Site boundaries are approximate.
 4. Maps produced by Roy F. Weston, Inc.



Scale in Feet



Housatonic River Project
Pittsfield, Massachusetts

GE Plant Area

**POLYCHLORINATED BIPHENYLS
(PCBs)**

A FACT SHEET

**Providing Answers to
Commonly Asked Questions
Regarding PCB Exposure at the
Hazardous Waste Sites Associated with the
General Electric Pittsfield Facility
and the Housatonic River**



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup
AND
United States Environmental Protection Agency
Office of Site Remediation and Restoration

August 1997

**Residential Properties
which may contain
Contaminated Fill from the
General Electric Company
(GE)**

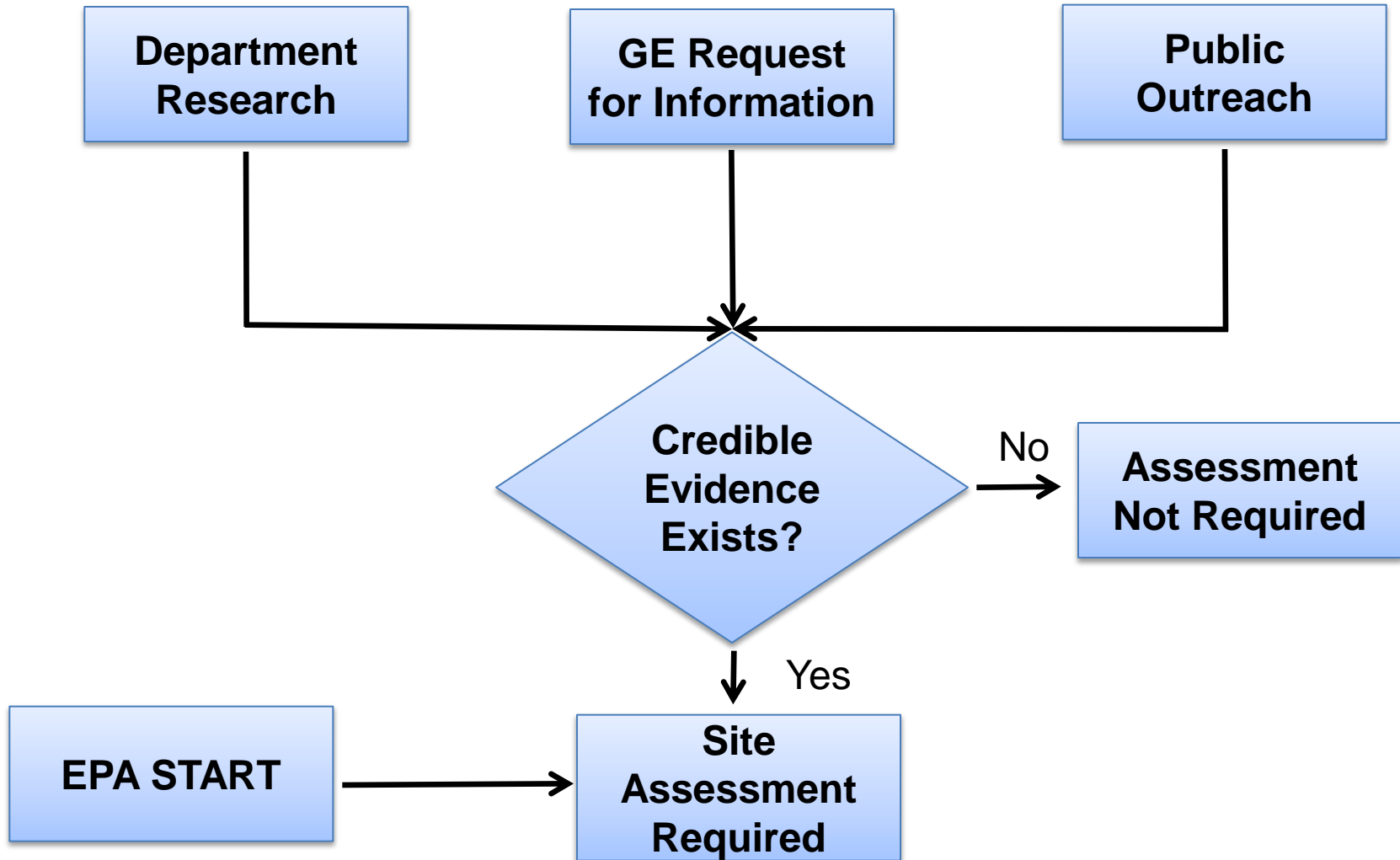
Questions & Answers

Prepared by:

The Massachusetts Department of Environmental Protection (DEP)
in conjunction with
The United States Environmental Protection Agency (EPA),
together, "the Agencies"

August 7, 1997

Site Discovery



Credible Evidence

- Presence of transformer electrical equipment
- Wood blocks
- Fuller's earth
- Direct knowledge
- RFI documents
- Adjacent property
- EPA data



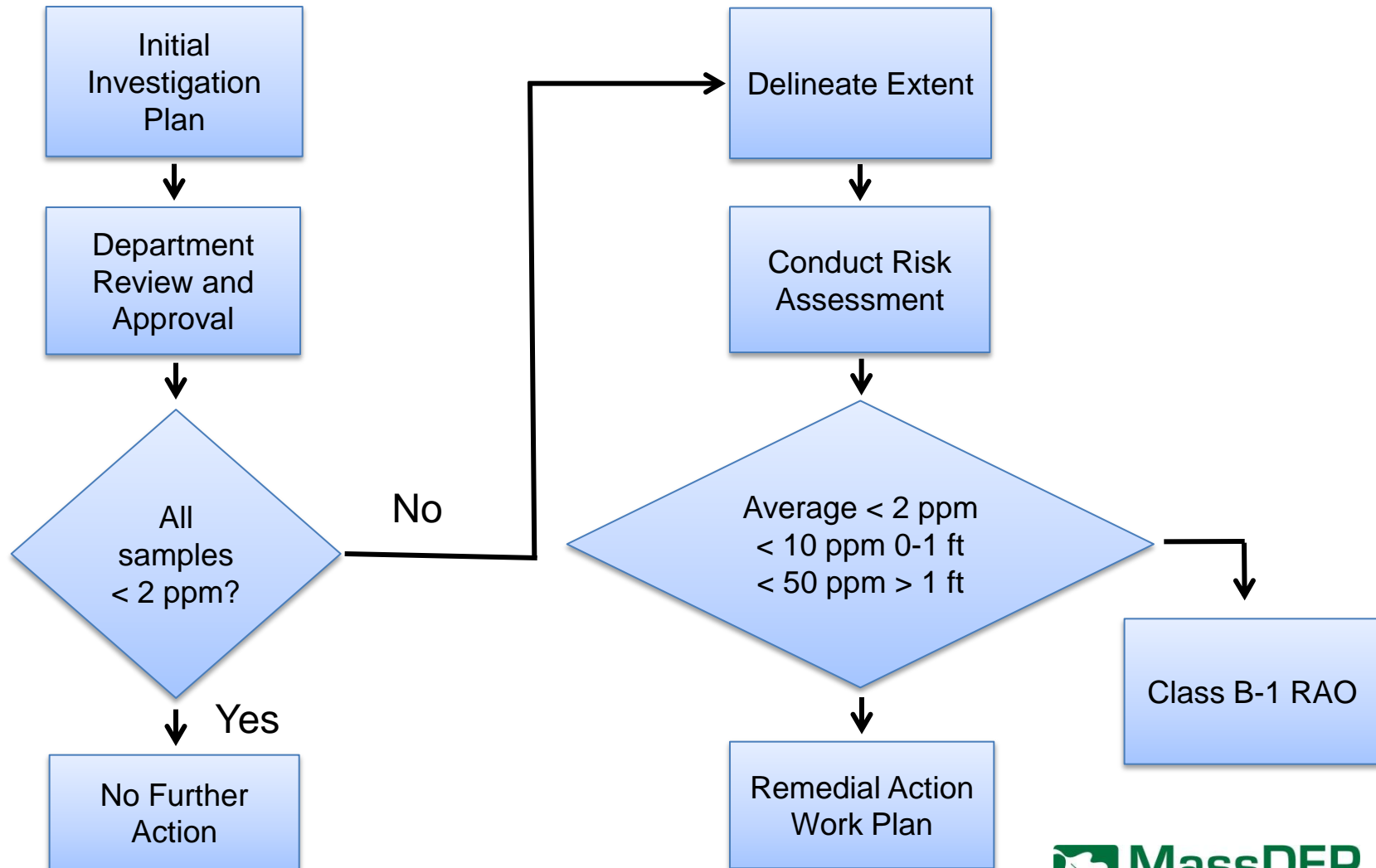




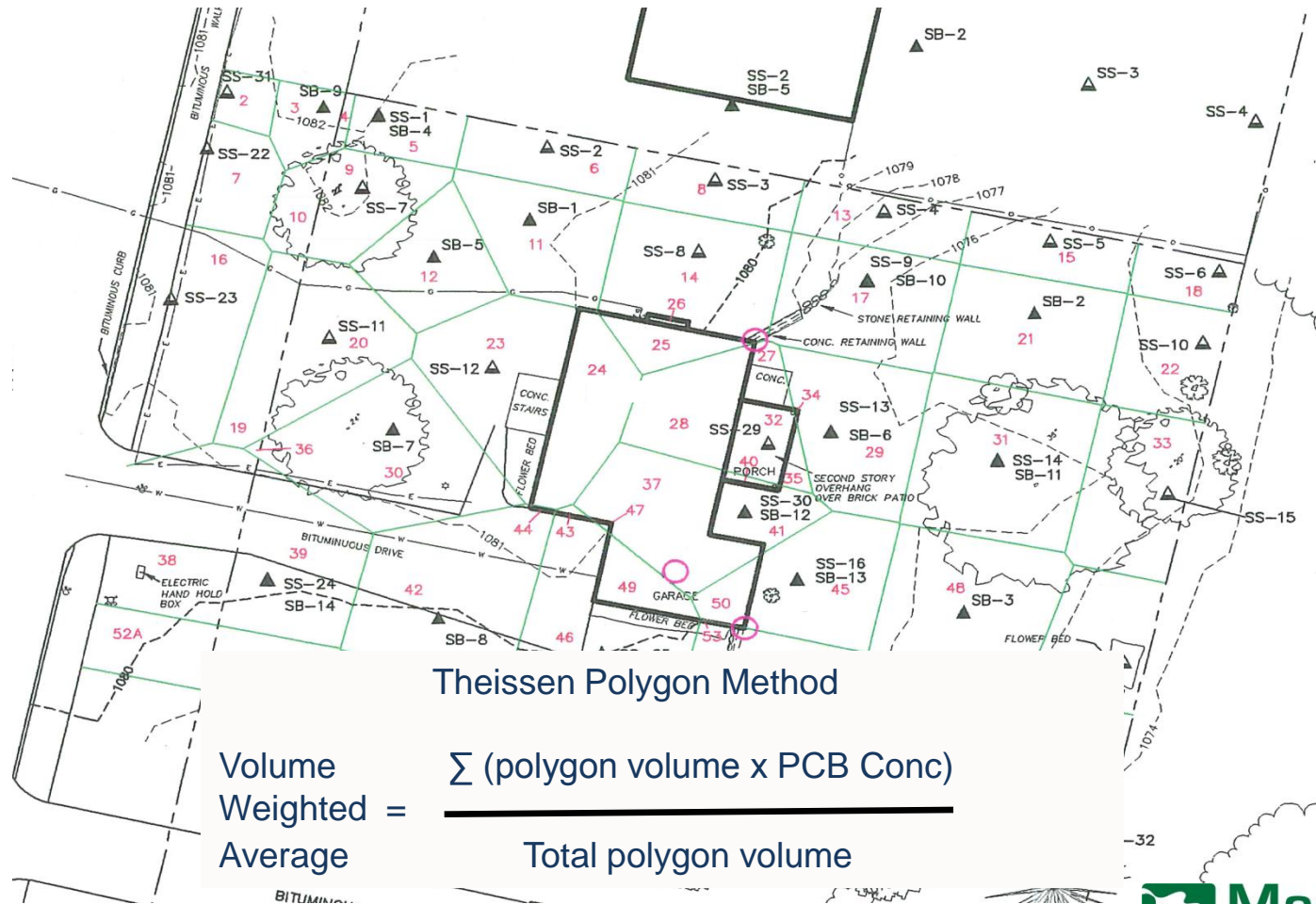
Site Discovery Summary

- Majority of sites discovered between 1997 and 2001
- Evaluated approximately 700 sites throughout city
- Concentrated near GE Plant
- Sampled 470 sites

Site Assessment



Exposure Point Concentration 0 – 1 Foot



Existing Conditions 0-1 Foot

Sample ID	Polygon ID	Polygon Area (sq. ft.)	Sample Depth (ft.)	PCB Conc (ppm)	Volume (cumulative) (cy)	Average PCB Concentration Per Foot (ppm)	Average PCB Conc. TIMES Total Volume
SB-1	11	362	0-0.5	5.2	6.71	53.1	712.07
			0.5-1	101	13.41		
SB-2	21	461	0-0.5	8.5	8.53	33.25	567.23
			0.5-1	58	17.06		
SB-3	48	549	0-0.5	14.7	10.17	18.35	373.06
			0.5-1	22	20.33		
SB-5	12	308	0-0.5	0.38	5.7	5.74	65.45
			0.5-1	11.1	11.4		
SB-7	30,36	614	0.0.5	1.9	11.37	1.09	24.79
			0.5-1	0.28	22.74		
SB-8	42	634	0.0.5	1.7	11.74	2.15	50.48
			0.5-1	2.6	23.48		
SB-9	3,4	130	0.0.5	4	2.41	8	38.58
			0.5-1	12	4.82		
SB-18	59	278	0.0.5	1	5.15	3.45	35.51
			0.5-1	5.9	10.29		
Totals		13,984			517.94		11,235.21
					Volume-Weighted Average		21.69

Exposure Point Concentration > 1 Foot



Existing Conditions > 1 Foot

Sample ID	Polygon ID	Polygon Area (sq. ft.)	Sample Depth (ft.)	PCB Conc (ppm)	Volume (cumulative) (cy)	Average PCB Concentration Per Foot (ppm)	Average PCB Conc. TIMES Total Volume
SB-8	28	635	1-2	39	23.5	27	1,903.64
			2-4	21	70.51		
SB-11	19	1,005	1-2	53	37.21	17.19	3,197.40
			2-4	16.35	111.63		
			4-6	0.113	186.06		
SB-16	35	536	1-2	26.5	19.86	5.35	531.64
			2-4	0.11	59.58		
			4-6	0.024	99.31		
SB-17	36	330	1-2	2.2	12.21	0.3	33.19
			2-4	0.23	36.62		
			4-6	0.0095	61.04		
			6-8	0.01	85.45		
			8-10	0.01	109.86		
SB-18	37	711	1-2	6.4	26.33	1.3	171.71
			2-4	0.05	79		
			4-6	0.0105	131.66		
Totals		13,979			3735.15	15,726.54	
					Volume-Weighted Average		4.21

Site Remediation

- Remedial Action Work Plan
 - Baseline Site Survey
 - Site Control
 - Backfill
 - Post-Restoration Monitoring



Post Remediation 0-1 Foot

Existing Conditions

Sample ID	Polygon ID	Polygon Area (sq. ft.)	Sample Depth (ft.)	PCB Conc (ppm)	Volume (cumulative) (cy)	Average PCB Concentration Per Foot (ppm)	Average PCB Conc. TIMES Total Volume
SB-1	11	362	0-0.5	5.2	6.71	53.1	712.07
			0.5-1	101	13.41		
SB-2	21	461	0-0.5	8.5	8.53	33.25	567.23
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SB-3	48	549	0-0.5	14.7	10.17	18.35	373.06
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SB-5	12	308	0-0.5	0.38	5.7	5.74	65.45
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SB-8	42	634	0.0.5	1.7	11.74	2.15	50.48
			0.5-1	2.6	23.48		
SB-9	3,4	130	0.0.5	4	2.41	8	38.58
			0.5-1	12	4.82		
SB-18	59	278	0.0.5	1	5.15	3.45	35.51
			0.5-1	5.9	10.29		
Totals		13,984			517.94	11,235.21	
					Volume-Weighted Average	21.69	

Post Remediation Conditions

Sample ID	Polygon ID	Polygon Area (sq. ft.)	Sample Depth (ft.)	PCB Conc (ppm)	Volume (cumulative) (cy)	Average PCB Concentration Per Foot (ppm)	Average PCB Conc. TIMES Total Volume
SB-1	11	362	0-0.5	0.0375	6.71	0.04	0.5
			0.5-1	0.0375	13.41		
SB-2	21	461	0-0.5	0.0375	8.53	0.04	0.64
			0.5-1	0.0375	17.06		
SB-3	48	549	0-0.5	0.0375	10.17	0.04	0.76
			0.5-1	0.0375	20.33		
SB-5	12	308	0-0.5	0.0375	5.7	0.04	0.43
			0.5-1	0.0375	11.4		
SB-7	30,36	614	0.0.5	1.9	11.37	1.09	24.79
			0.5-1	0.28	22.74		
SB-8	42	634	0.0.5	1.7	11.74	2.15	50.48
			0.5-1	2.6	23.48		
SB-9	3,4	130	0.0.5	0.0375	2.41	0.04	0.18
			0.5-1	0.0375	4.82		
SB-18	59	278	0.0.5	1	5.15	3.45	35.51
			0.5-1	5.9	10.29		
Totals		13,984			517.94	434.37	
					Volume-Weighted Average	0.84	

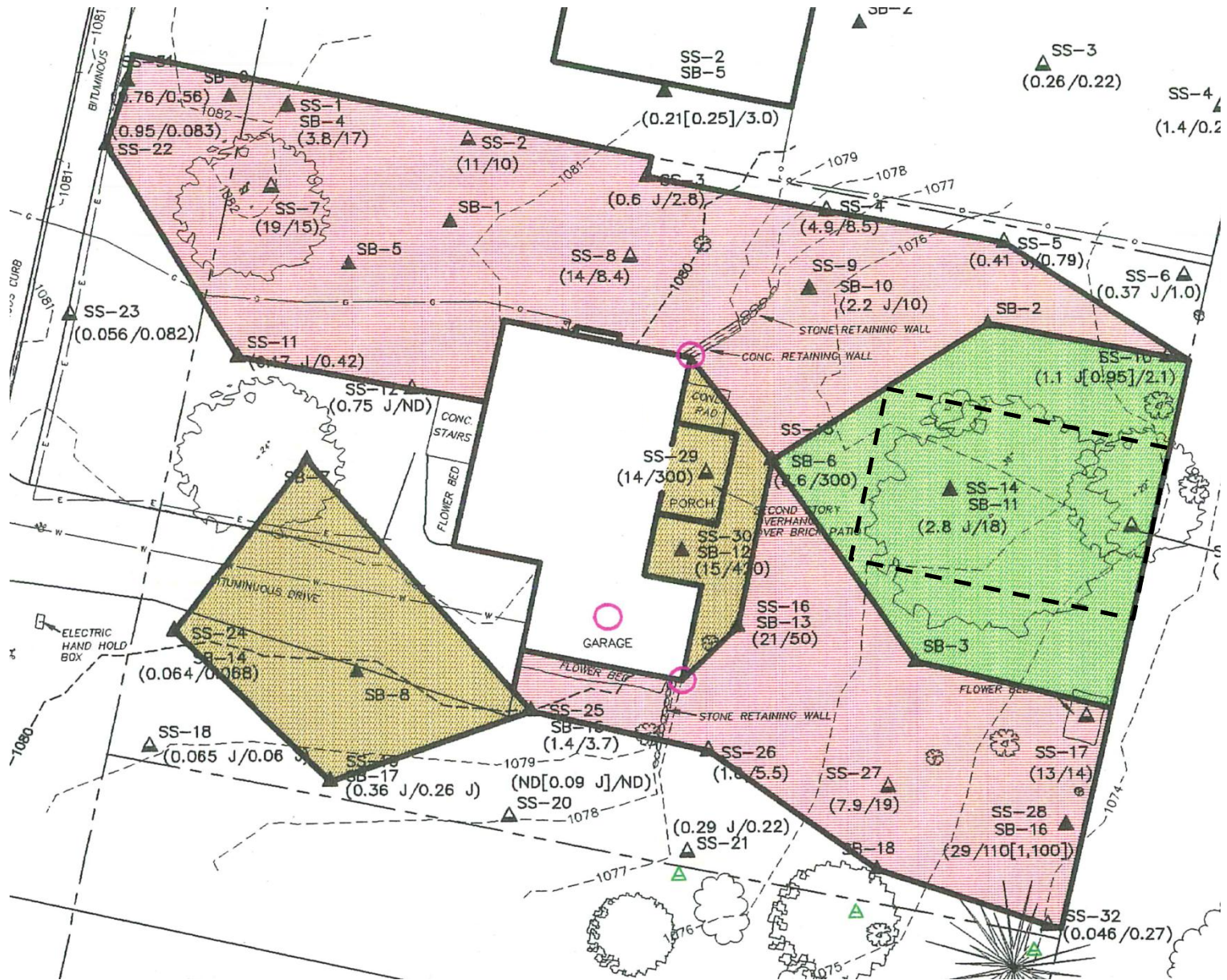
Post Remediation > 1 Foot

Existing Conditions

Sample ID	Polygon ID	Polygon Area (sq. ft.)	Sample Depth (ft.)	PCB Conc (ppm)	Volume (cumulative) (cy)	Average PCB Concentration Per Foot (ppm)	Average PCB Conc. TIMES Total Volume
SB-8	28	635	1-2	39	23.5	27	1,903.64
			2-4	21	70.51		
SB-11	19	1,005	1-2	53	37.21	17.19	3,197.40
			2-4	16.35	111.63		
			4-6	0.113	186.06		
SB-16	35	536	1-2	26.5	19.86	5.35	531.64
			2-4	0.11	59.58		
			4-6	0.024	99.31		
SB-17	36	330	1-2	2.2	12.21	0.3	33.19
			2-4	0.23	36.62		
			4-6	0.0095	61.04		
			6-8	0.01	85.45		
			8-10	0.01	109.86		
SB-18	37	711	1-2	6.4	26.33	1.3	171.71
			2-4	0.05	79		
			4-6	0.0105	131.66		
Totals		13,979			3735.15		15,726.54
					Volume-Weighted Average		4.21

Post-Remediation Conditions

Sample ID	Polygon ID	Polygon Area (sq. ft.)	Sample Depth (ft.)	PCB Conc (ppm)	Volume (cumulative) (cy)	Average PCB Concentration Per Foot (ppm)	Average PCB Conc. TIMES Total Volume
SB-8	28	635	1-2	0.0375	23.5	0.04	2.64
			2-4	0.0375	70.51		
SB-11	19	1,005	1-2	0.0375	37.21	6.59	1,226.61
			2-4	16.35	111.63		
			4-6	0.113	186.06		
SB-16	35	536	1-2	26.5	19.86	5.35	531.64
			2-4	0.11	59.58		
			4-6	0.024	99.31		
SB-17	36	330	1-2	2.2	12.21	0.3	33.19
			2-4	0.23	36.62		
			4-6	0.0095	61.04		
			6-8	0.01	85.45		
			8-10	0.01	109.86		
SB-18	37	711	1-2	6.4	26.33	1.3	171.71
			2-4	0.05	79		
			4-6	0.0105	131.66		
Totals		13,979			3735.15		7,376.55
					Volume-Weighted Average		1.97



Project Facts

- 700 properties evaluated
- 470 properties sampled
- 255 properties > 2 ppm
- 180 properties remediated
- Max. PCB concentration – 44,000 ppm
- Max. PCB concentration surface – 20,600 ppm
- Potential IH conditions at 103 properties

Acknowledgements



- Michael Gorski, Regional Director, MassDEP
WERO
- John Ziegler, Audits Section Chief, MassDEP
WERO
- Joanne Fagan, Section Chief, MassDEP
NERO

Questions



Downtown Pittsfield looking east to the William Stanley Business Park

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