



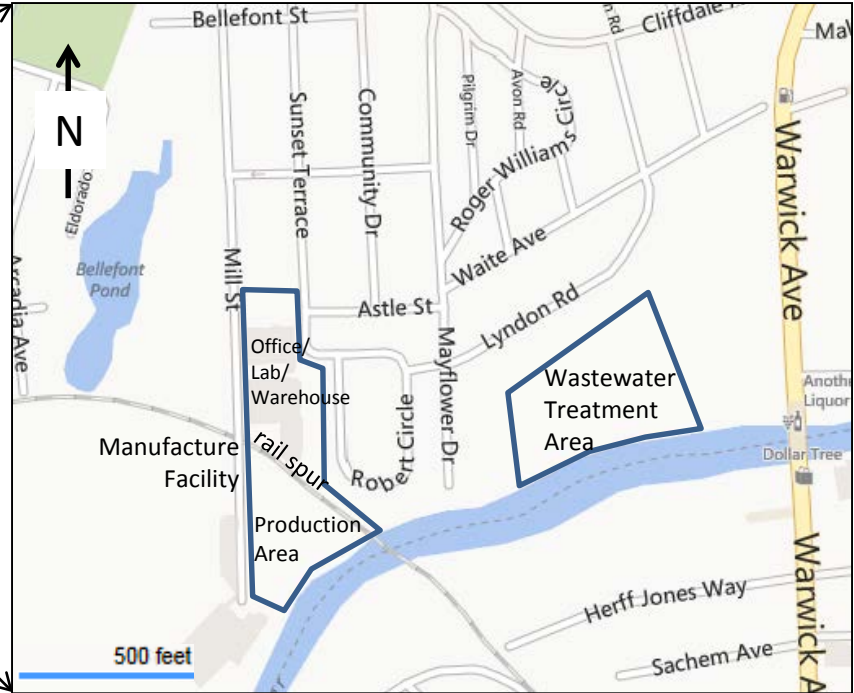
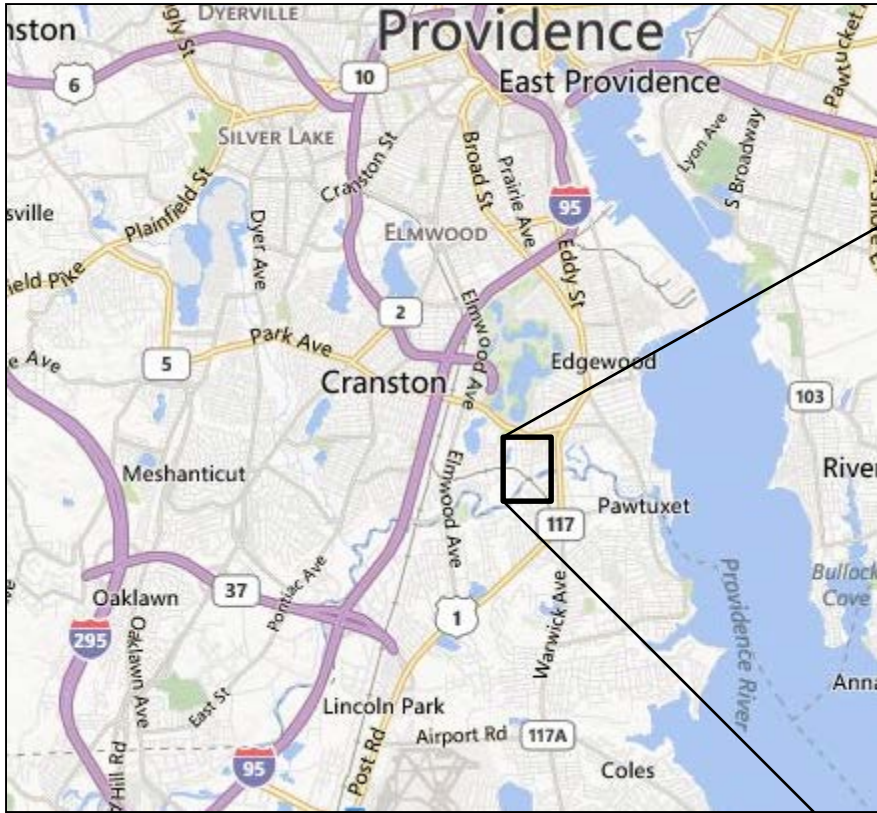
Region 1

**Former Ciba-Geigy Proposed Remedy
Determination Meeting
Wednesday June 15, 2016, 7:00pm
Park View Middle School Auditorium
Cranston, Rhode Island**

AGENDA

1. Introductions, Overview & Scope
2. EPA Process – RCRA Project
3. Site History
4. RCRA Project History
 - a) Soil & Groundwater Investigation
 - b) Interim Remedial Measures
5. Proposed Remedy Determination
 - a) On-site soils
 - b) On-site Groundwater
 - c) Pawtuxet River Sediment
6. Next Steps
7. Questions

Ciba-Geigy RCRA Corrective Action Site Closure



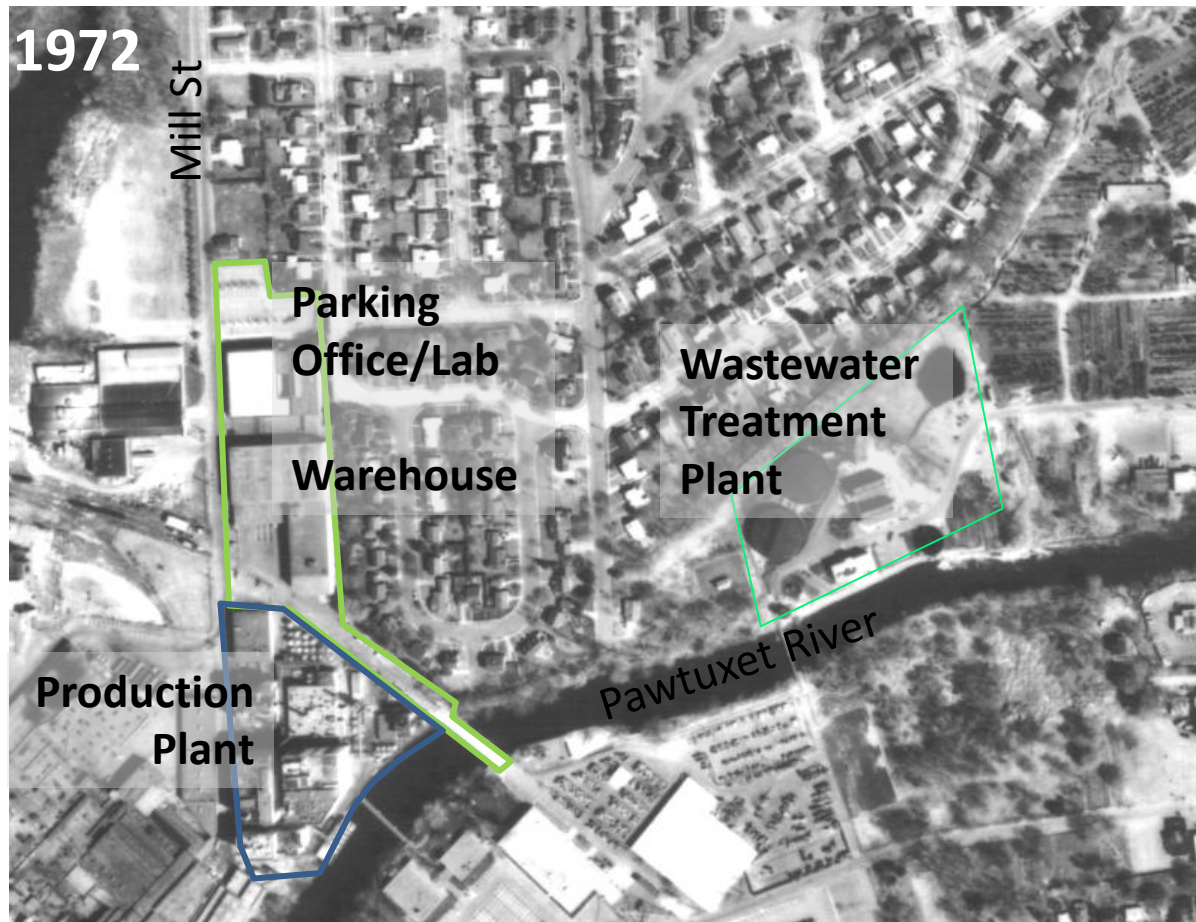
Facility Operating History

Remedial Investigations and Cleanup History

Proposed Closure Remedy

FACILITY HISTORY:

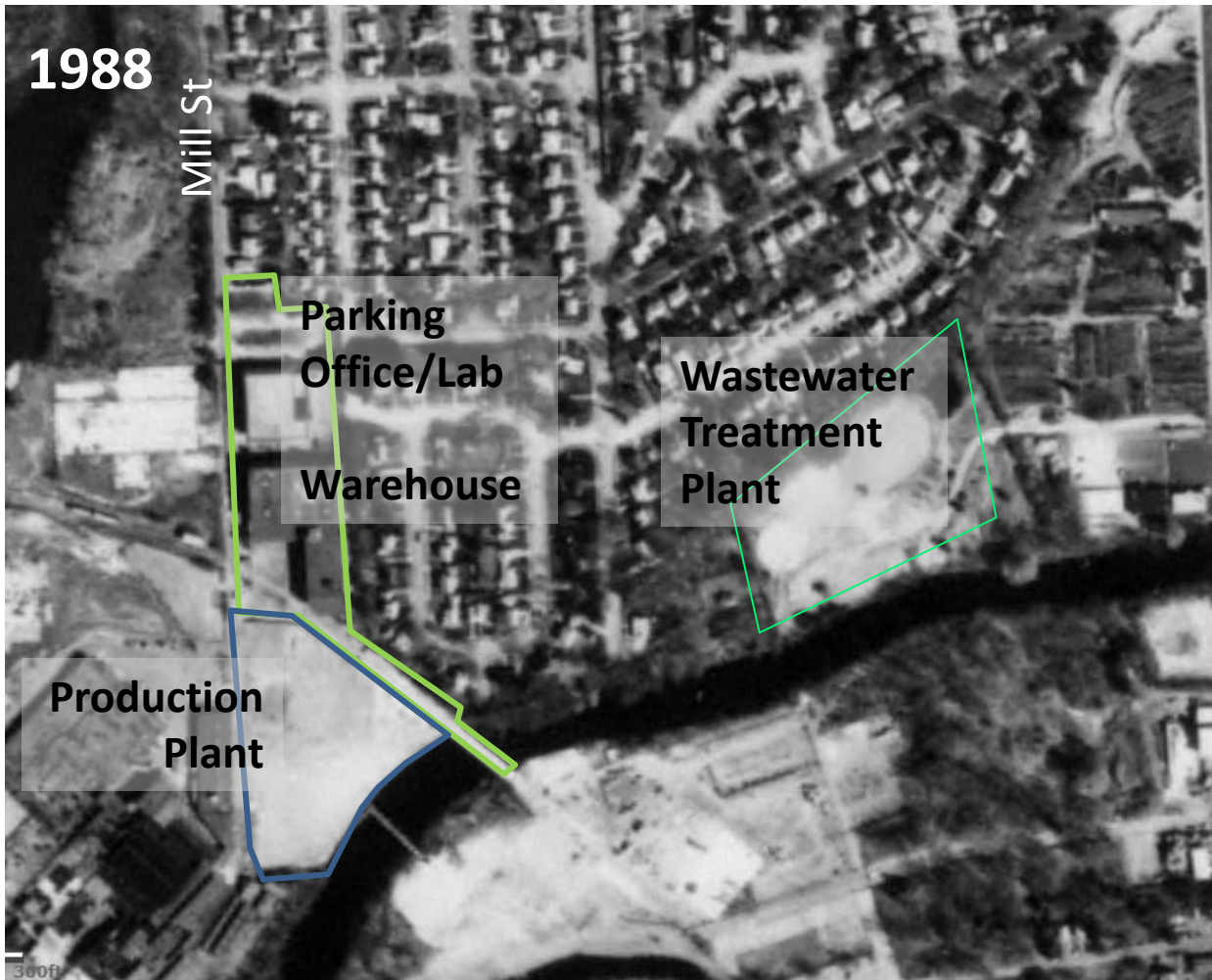
1952 to 1986 : Ciba-Geigy Operations



FACILITY HISTORY:

1986 to 1988 : Stop Production, Demolish Plant

1989 : Ciba-EPA Consent Order to Remediate the Property



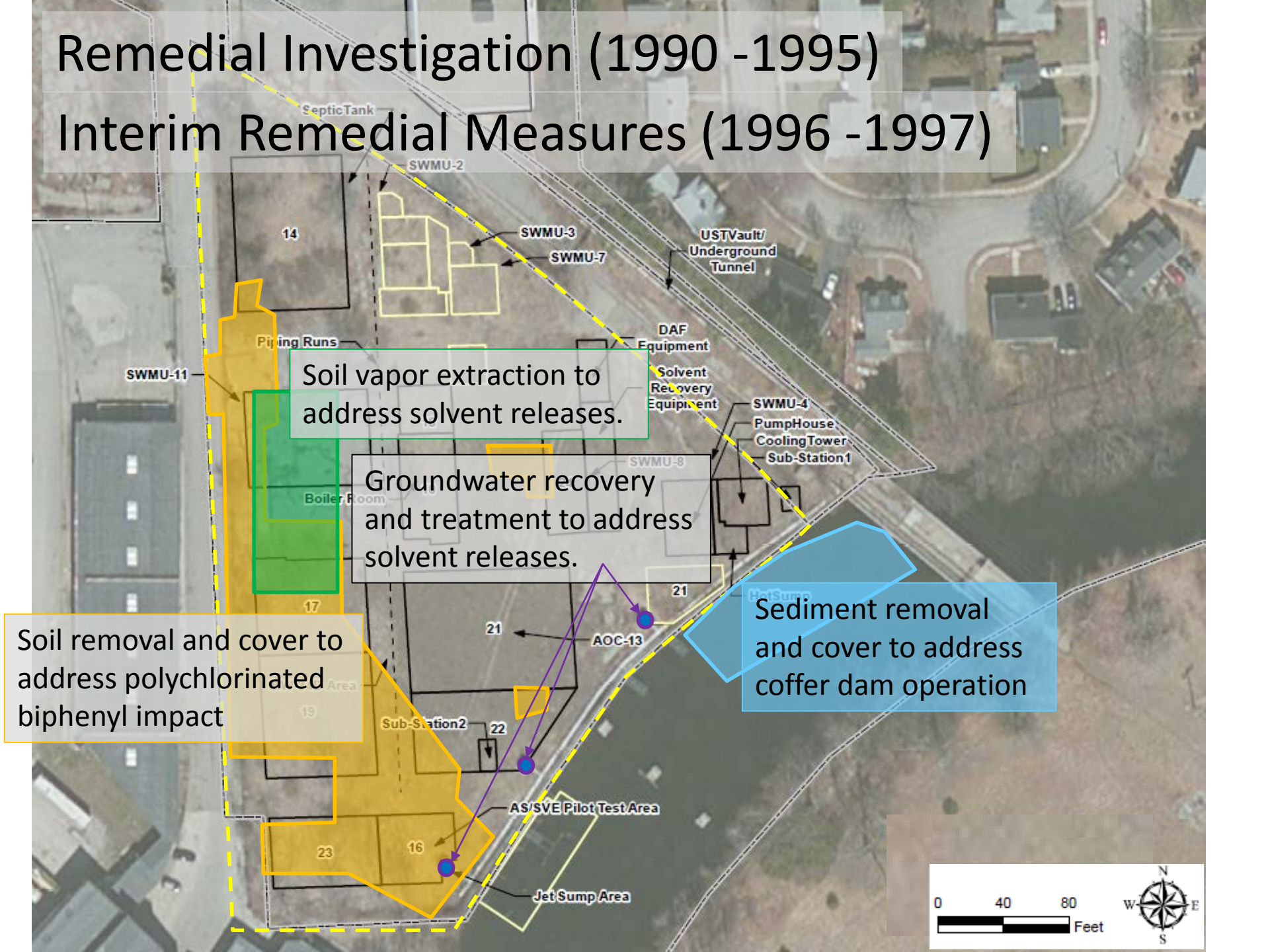
REGULATORY HISTORY (Ciba/EPA):

1990 to 1997 : Remedial Investigation and Interim Remedial Measures



Remedial Investigation (1990 -1995)

Interim Remedial Measures (1996 -1997)



REGULATORY HISTORY (Ciba/EPA): 1996 to 2009 : Monitor and Maintain Property (2004 Ciba Sells Former Treatment Plant Parcel)



REGULATORY HISTORY (BASF/EPA):

[2009 BASF Acquires Ciba and all its holdings]

2010 to 2015 : BASF Review and Field Work

GOAL: determine the need for additional remedial actions to complete the RCRA project requirements.

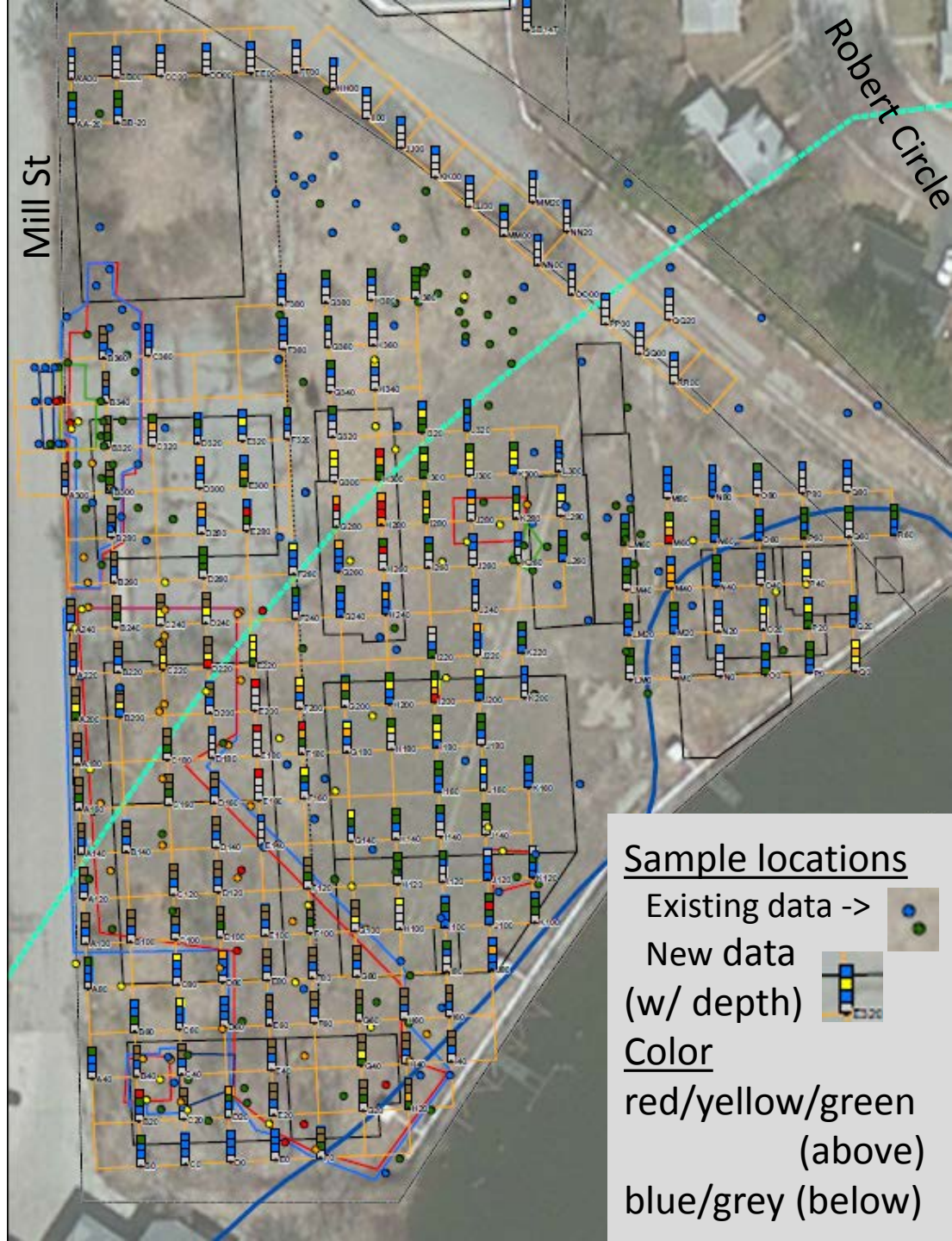
METHOD: conduct document review and field investigations and develop a remediation plan.




Soil Investigations


Former Production Area

As remedy drivers, polychlorinated biphenyls and volatile organic compounds used during production are present above current regulatory standards.



Sample locations

Existing data -> 

New data (w/ depth) 

Color
red/yellow/green (above)
blue/grey (below)

Soil Investigations

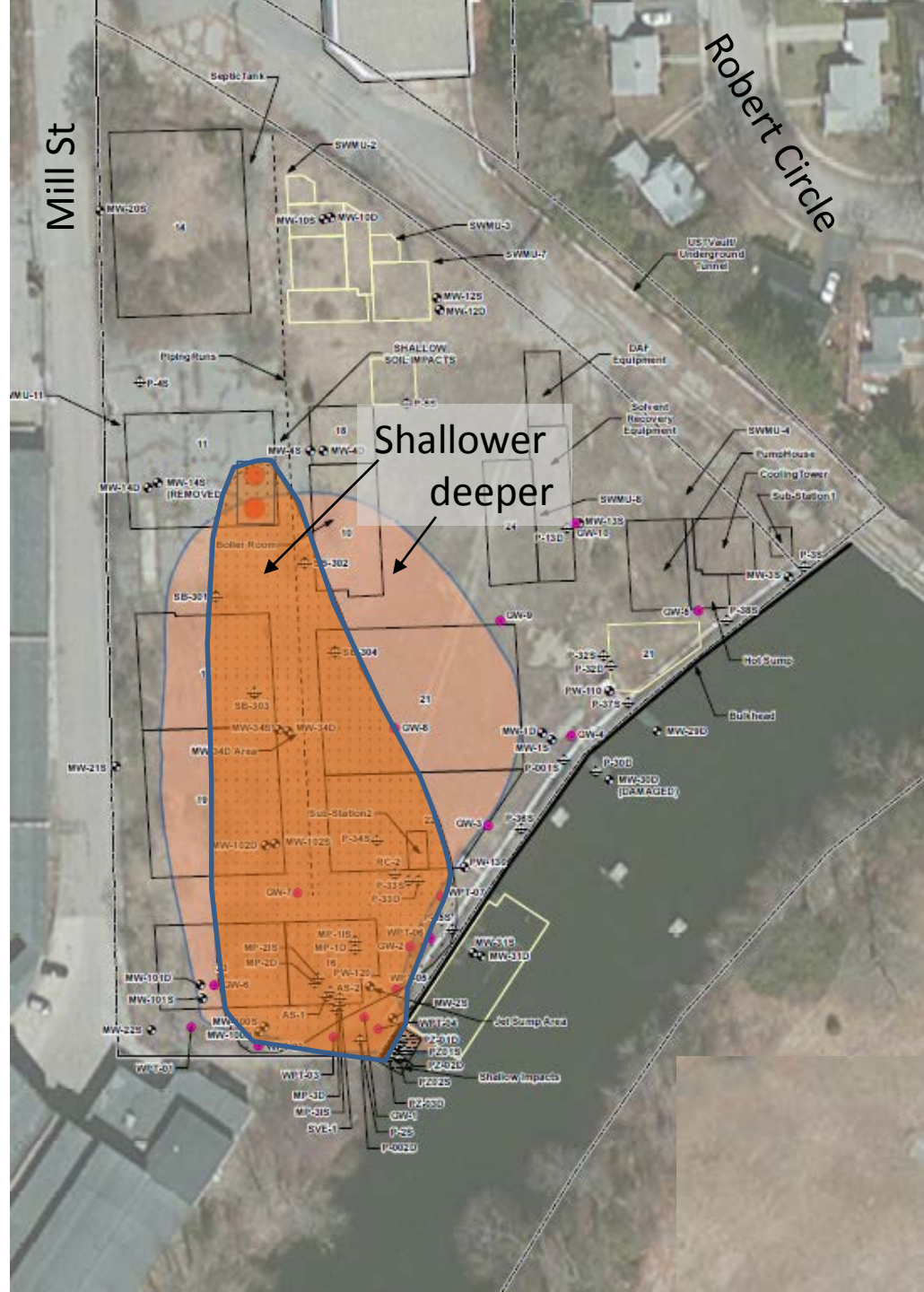
Office and Warehouse Area

Polycyclic aromatic hydrocarbons are present above RIDEM regulatory standards in the parking area and along a former rail spur.



Groundwater Investigations

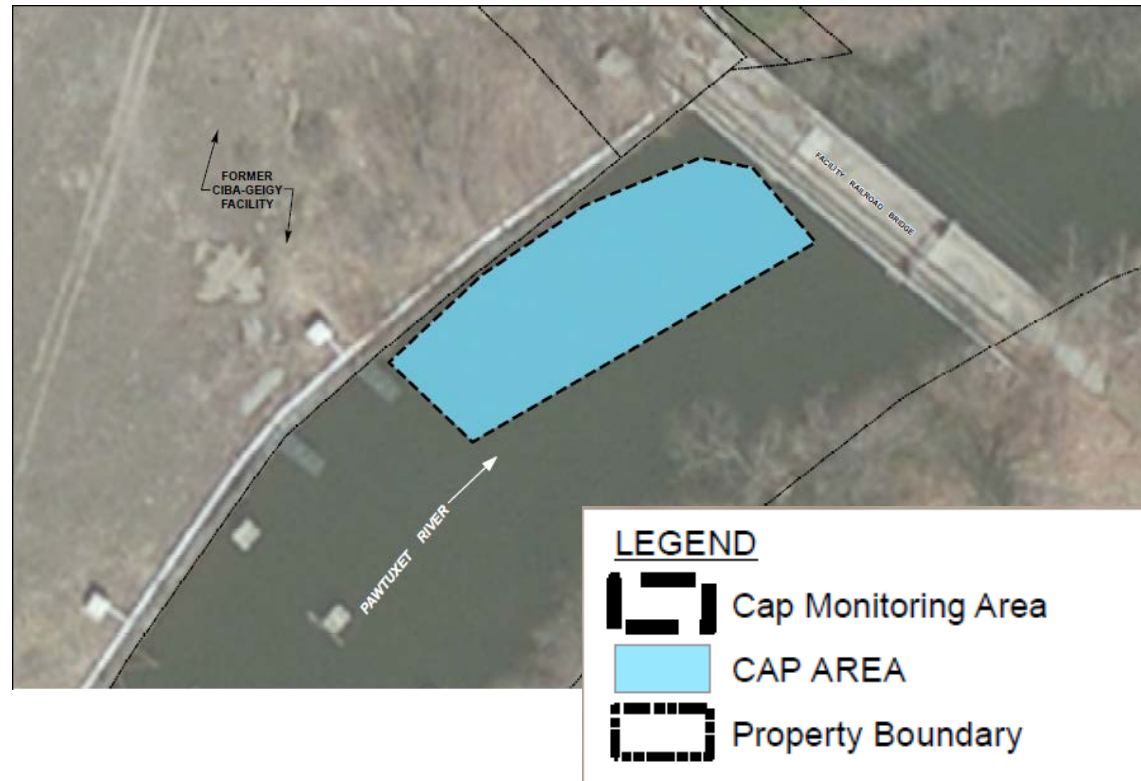
The southwest side of the former production area remains impacted with volatile organic compounds



Sediment Investigation

After the flood in spring 2010, conducted an investigation of sediment cap integrity.

Found the sand cap to be functioning as intended in terms of thickness and quality.



Investigation Summary

Previous conclusions confirmed

No current exposure concerns

Remedial measures are
required to complete closure.



Proposed Remedy

Soil: remove shallow soils that are above regulatory limits and replace with clean soil

Groundwater: treat concentrated areas, control migration, and monitor for restoration and protectiveness

Sediment: periodically monitor the sand cap that has been in place and effective since 1996



Proposed Soil Remedy

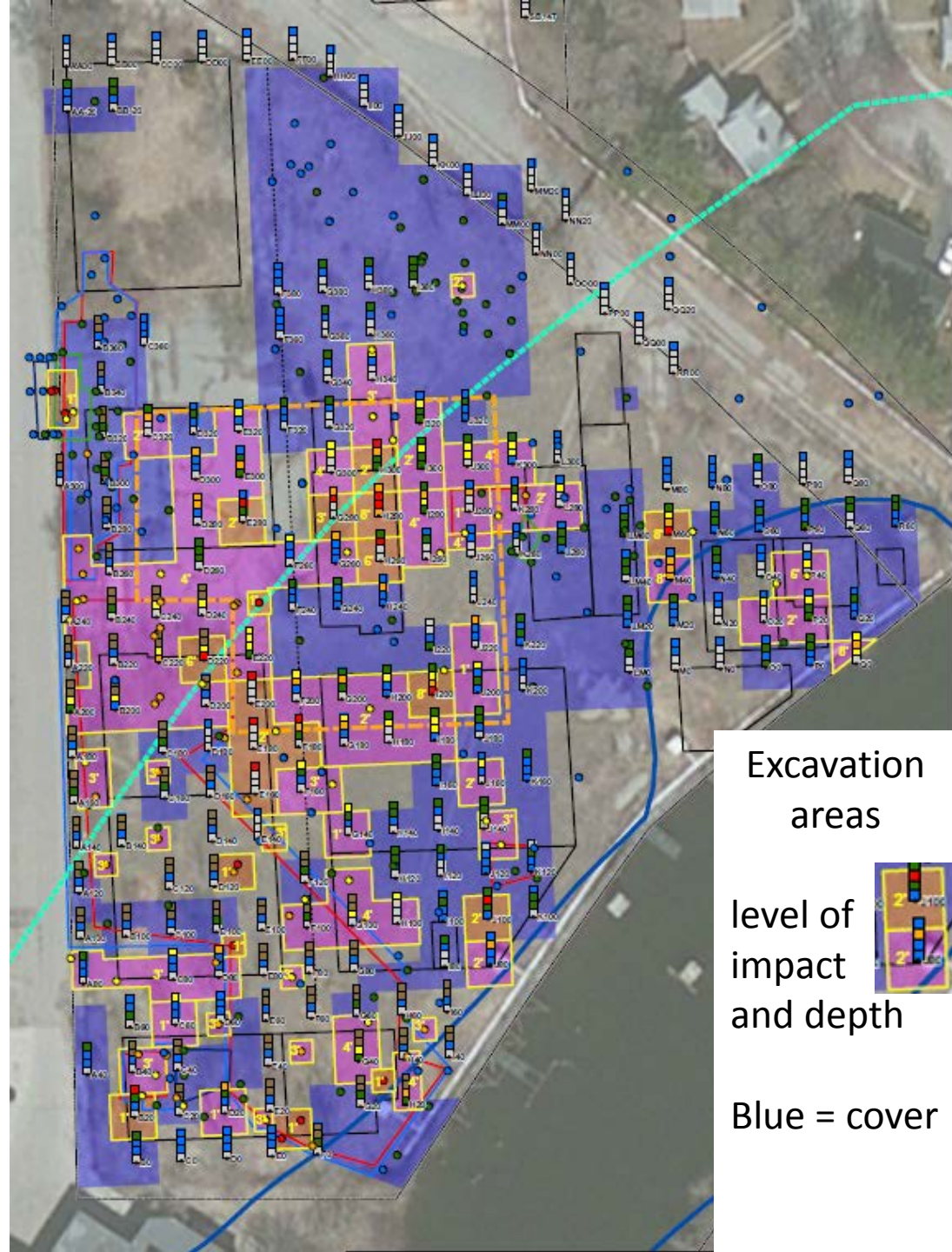
Former Production Area

Remove soils that exceed EPA and RIDEM requirements to support a future open space reuse scenario.

Restore the property to support a diversified native upland habitat.

Restrict future use to open space.

Maintain the area in the long-term



Proposed Soil Remedy

Concept: Develop an ecologically varied native upland habitat that is relevant to the needs of the surrounding ecosystem.

Example elements: **various pollinator gardens and a maintenance and monitoring program**



Proposed Soil Remedy

Office/Warehouse Area

Remove shallow soils along former rail spur, replace with clean soil and vegetate

Restrict future use to non-residential

Maintain the parking and vegetated areas

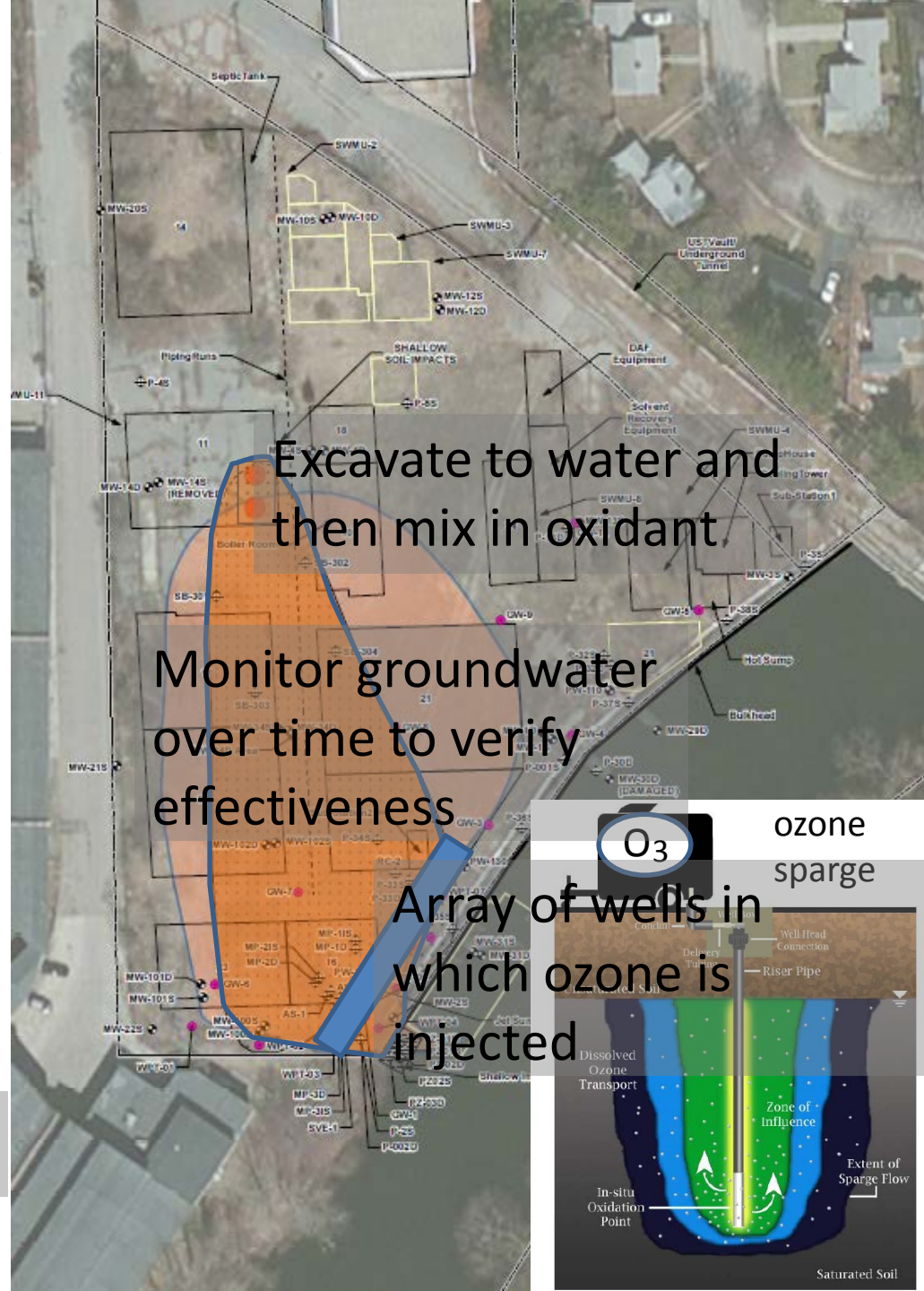


Proposed Groundwater Remedy

Treat the concentrated areas and control migration with a combination of excavation and in-place destruction with natural oxidants.

Employ a monitoring plan to determine effectiveness.

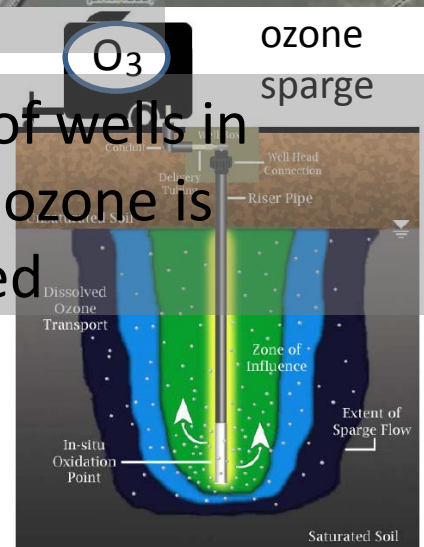
Operation time-line = 3 + years.



Excavate to water and then mix in oxidant

Monitor groundwater over time to verify effectiveness

Array of wells in which ozone is injected



Proposed Remedy Summary

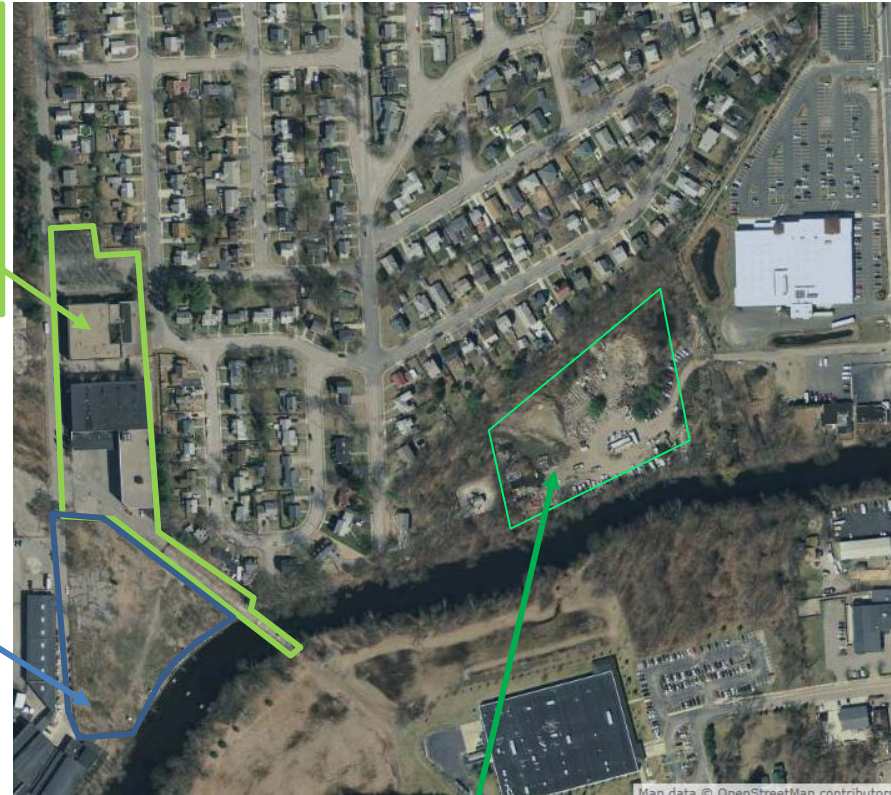
Building Lot: remove shallow soils that are above regulatory limits and replace with clean soil to support non-residential reuse

Production Area:

Soil: remove shallow soils that are above regulatory limits and replace with clean soil to support open space reuse

Groundwater: treat concentrated areas in-place and monitor for restoration and protectiveness

Sediment: periodically monitor the sand cap that has been in place and effective since 1996



Former Treatment Plant:
no further action required for commercial use

Public Comment



Project Information

1. **This meeting (presentation and Q&A)**
2. **DOCUMENT REVIEW:**
 - **View at EPA Region 1 Records Center,**
5 Post Office Square, Boston, MA 02109
Monday-Friday - 9:00 A.M. to 5:00 P.M., (617) 918-1420
 - **View on the internet:** <https://semspub.epa.gov/src/collection/01/SC33961>
 - **View at the Library:**
Cranston (William Hall) Public Library,
1825 Broad Street, Cranston, RI 02905
Monday-Thursday - 12:00 P.M. to 8:00 P.M: Saturday -10:00 A.M. to 5:00 P.M.

BASF Contact: David Johnson: 973 245 5389 david.p.johnson@basf.com

Submit Comments

When: now until June 28, 2016.

How:

1. **Questions provided here will be recorded (verbally or in writing)**
2. **Mail or email your comments to EPA** at the following address (postmarked no later than **June 28, 2016**) making sure to clearly indicate that you are commenting on this proposal:

Mr. Frank Battaglia

USEPA Region 1

5 Post Office Square, Suite 100, OSRR07-3

Boston, MA 02109

email: battaglia.frank@epa.gov

Call 617 918-1362 if you have any questions.