



# West Lake Landfill Superfund Site

## BRIDGETON, MO

May 9, 2023

Design Investigation



# Agenda

- **Introductions**
- **Key Takeaways**
- **Design Investigation Results Summary**
  - ▣ Background, Updated Maps, Use of Design Investigation Data
- **Operable Unit 1 (OU-1) Project Update**
- **Next Steps**
  - ▣ Remedial Design, Remedial Action
- **Question and Answer Session**

# Introductions



**Bob  
Jurgens**

Superfund and  
Emergency Management  
Division Director



**TJ  
Adkins**

Remedial Branch Chief

# Introductions (Cont.)



**Chris  
Jump**

Lead Remedial Project  
Manager



**Tom  
Mahler**

Remedial Project  
Manager (OU-1)



**Jamie  
Schwartz**

Remedial Project  
Manager (OU-2) &  
(OU-3)



**JP  
Curry**

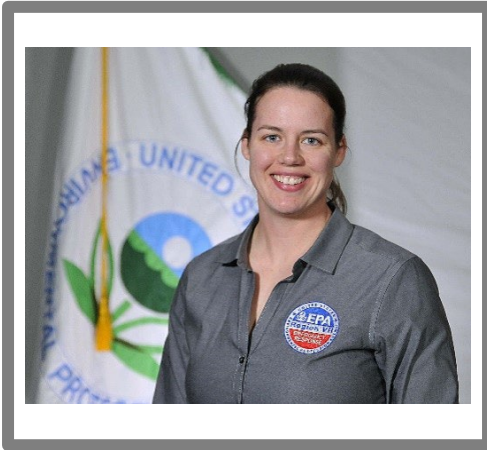
Remedial Project  
Manager



**Jessica  
Kidwell**

Hydrogeologist

# Introductions (Cont.)



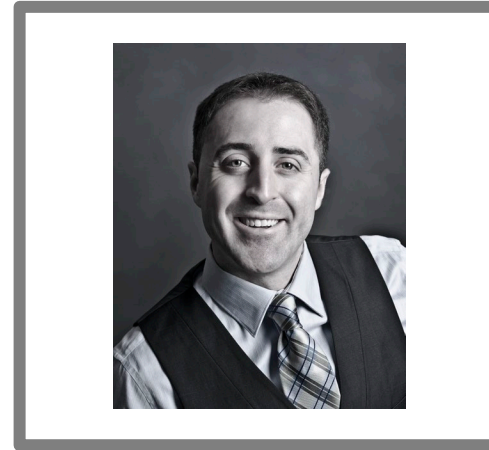
**Jessica  
Evans**

Community Involvement  
Coordinator



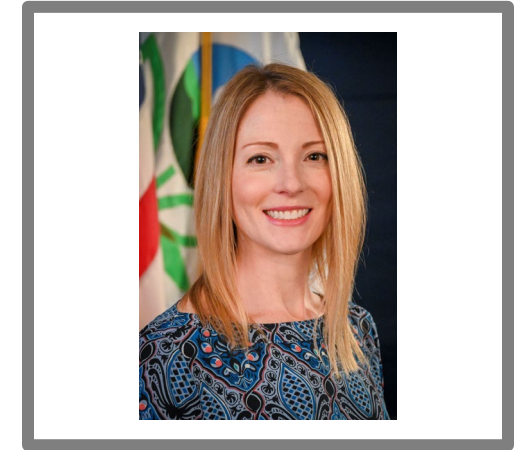
**Ben  
Washburn**

Office of Public  
Affairs



**Mark  
Hanson**

Office of Public  
Affairs



**Shannon  
Beisser**

Office of Public  
Affairs



# Key Takeaways

- **Design Investigation is complete**
- **Radiologically Impacted Material (RIM) is defined**
  - ▣ **Extent of RIM did increase**
  - ▣ **Risk remains unchanged; no current exposure to RIM**
- **Remedy remains partial excavation, off-site disposal, engineered cover**
- **Remedial Design is continuing to move forward**

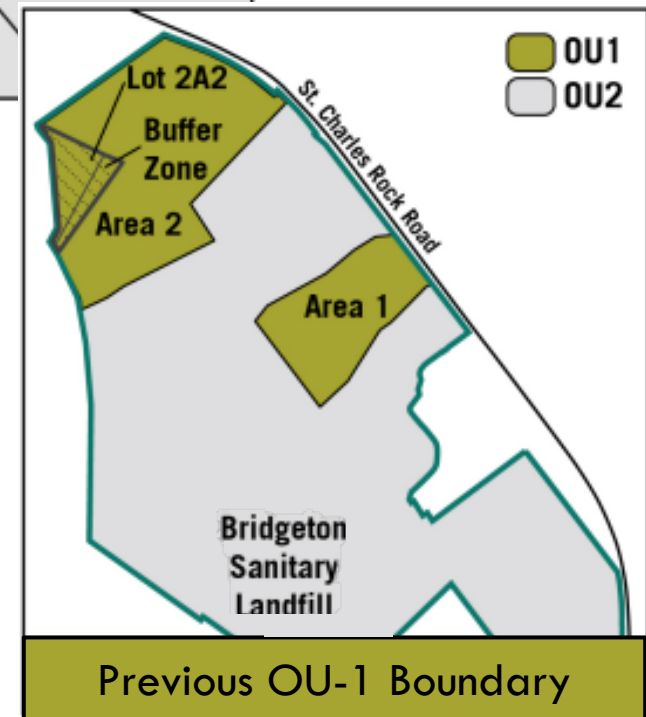


# Design Investigation Results Summary

- ❑ Background
- ❑ Updated Radiologically Impacted Material Areas
  - ❑ RIM - Combined Radium/Combined Thorium above 7.9 Picocuries per Gram
- ❑ Data Uses and Impacts to The Design

# Site Background

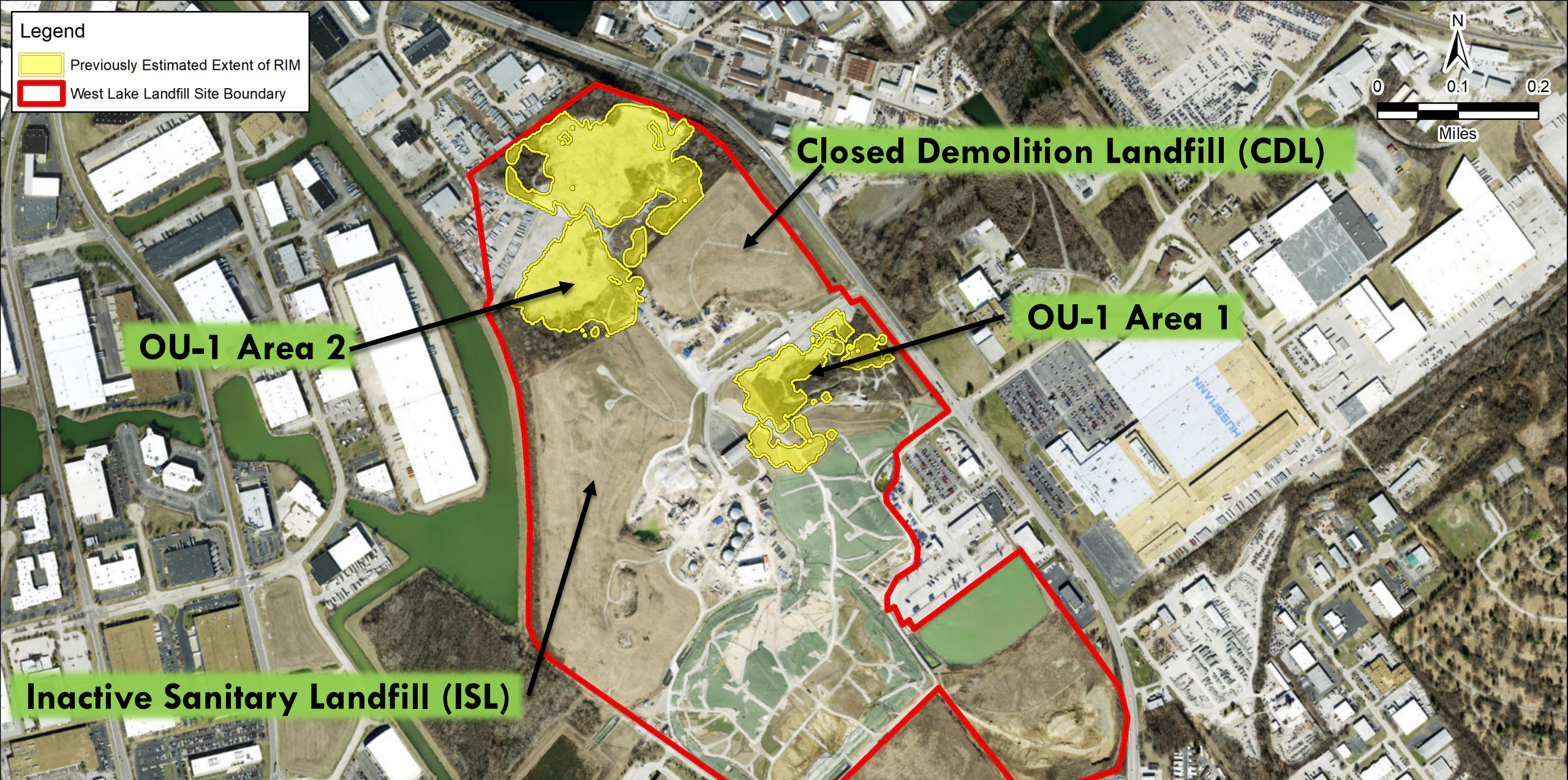
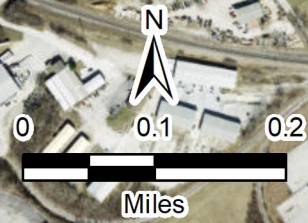
- Site Description
- Operable Units (OUs)
  - ▣ OU-1
    - Radiologically Contaminated Areas
  - ▣ OU-2
    - Non-Radiologically Contaminated Areas
  - ▣ OU-3
    - Sitewide Groundwater





**Legend**

- Previously Estimated Extent of RIM
- West Lake Landfill Site Boundary



**OU-1 Area 2**

**Closed Demolition Landfill (CDL)**

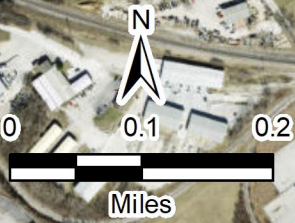
**OU-1 Area 1**

**Inactive Sanitary Landfill (ISL)**

**Pre-Design RIM Area Estimates**

**Legend**

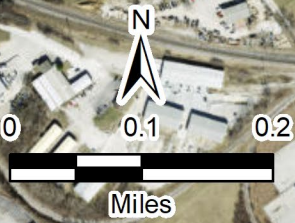
- All Boring Locations
- Boring Locations with RIM Present
- Previously Estimated Extent of RIM
- West Lake Landfill Site Boundary



# Design Investigation Borings

**Legend**

- Boring Locations with RIM Present
- All Boring Locations
- Draft DI Extent of RIM
- Previously Estimated Extent of RIM
- West Lake Landfill Site Boundary

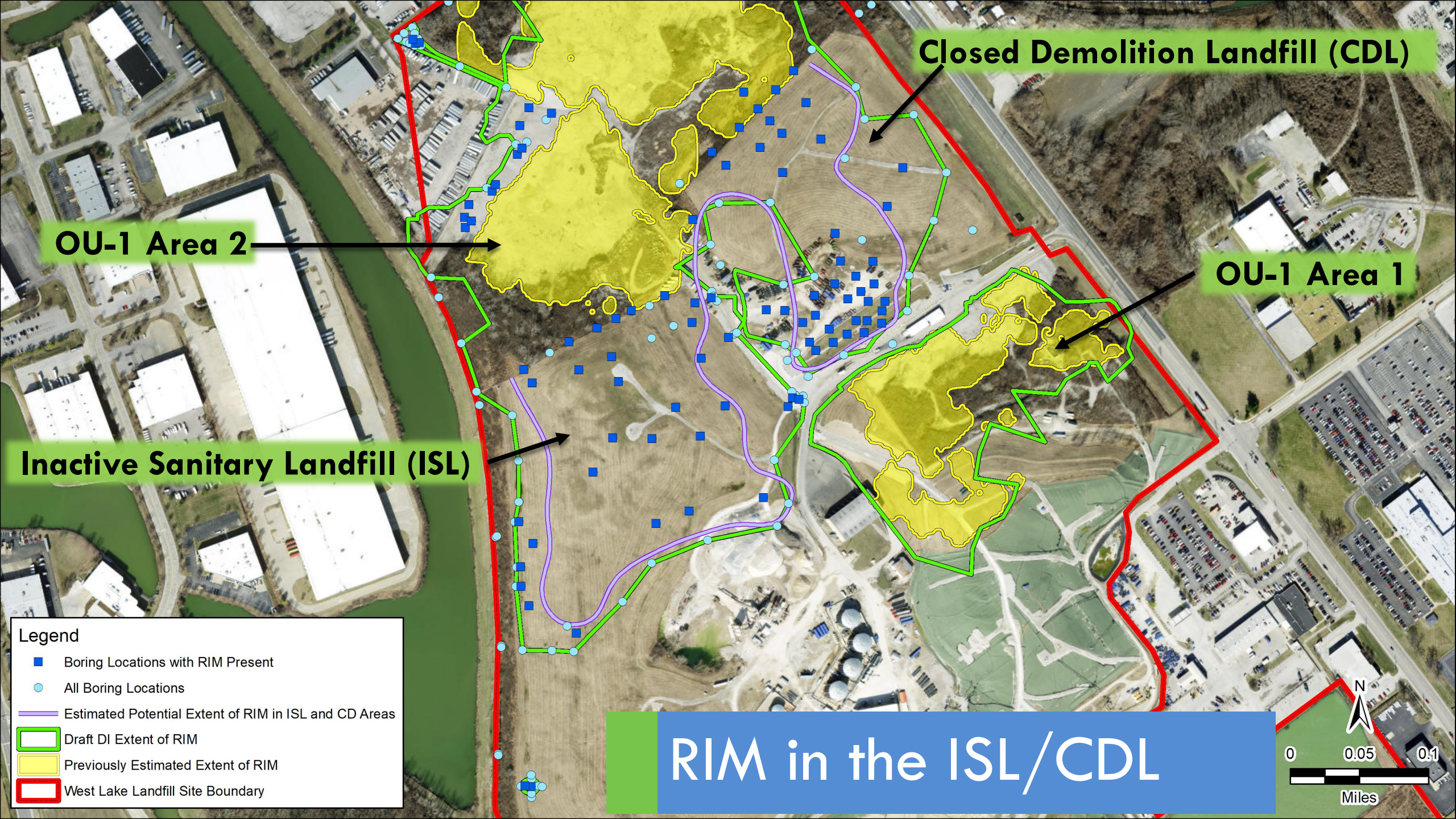


# Updated RIM Area Estimates



# Updated RIM Area Estimates

- ❑ Closed Demolition Landfill (CDL) Inactive Sanitary Landfill (ISL)
- ❑ North Surface Water Body
- ❑ Ditch Adjacent to Area 1
- ❑ Lot 2A2/Buffer Zone



**Closed Demolition Landfill (CDL)**

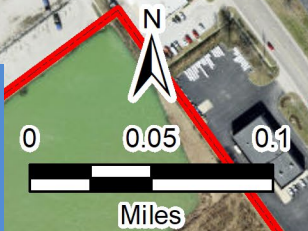
**OU-1 Area 2**

**OU-1 Area 1**

**Inactive Sanitary Landfill (ISL)**

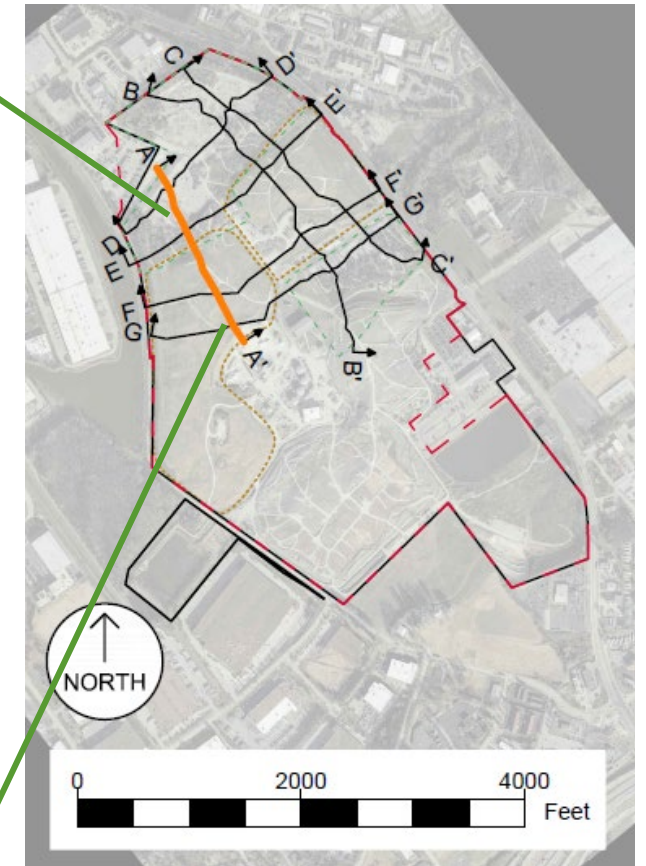
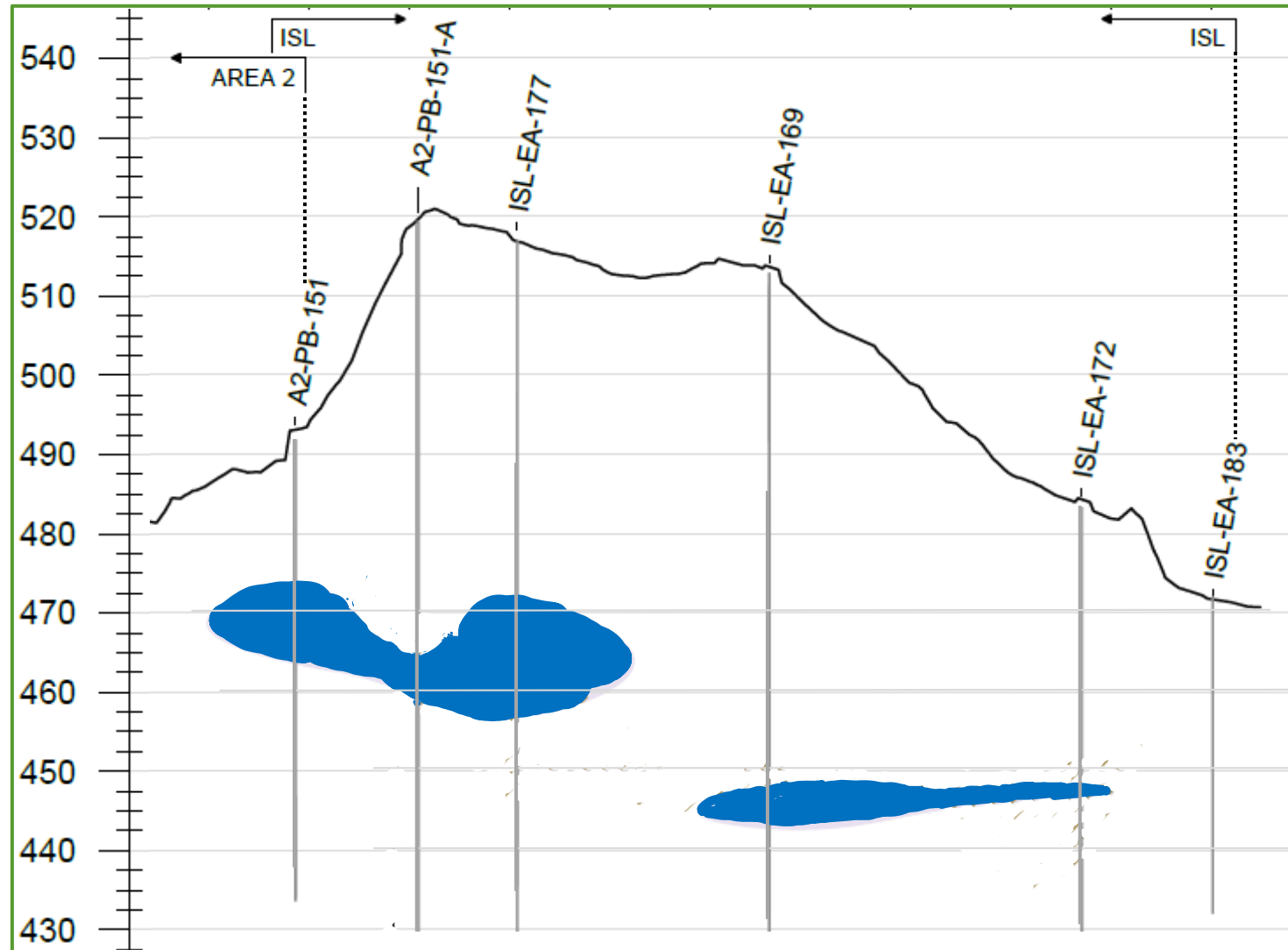
- Legend**
- Boring Locations with RIM Present
  - All Boring Locations
  - Estimated Potential Extent of RIM in ISL and CD Areas
  - ▭ Draft DI Extent of RIM
  - ▭ Previously Estimated Extent of RIM
  - ▭ West Lake Landfill Site Boundary

# RIM in the ISL/CDL



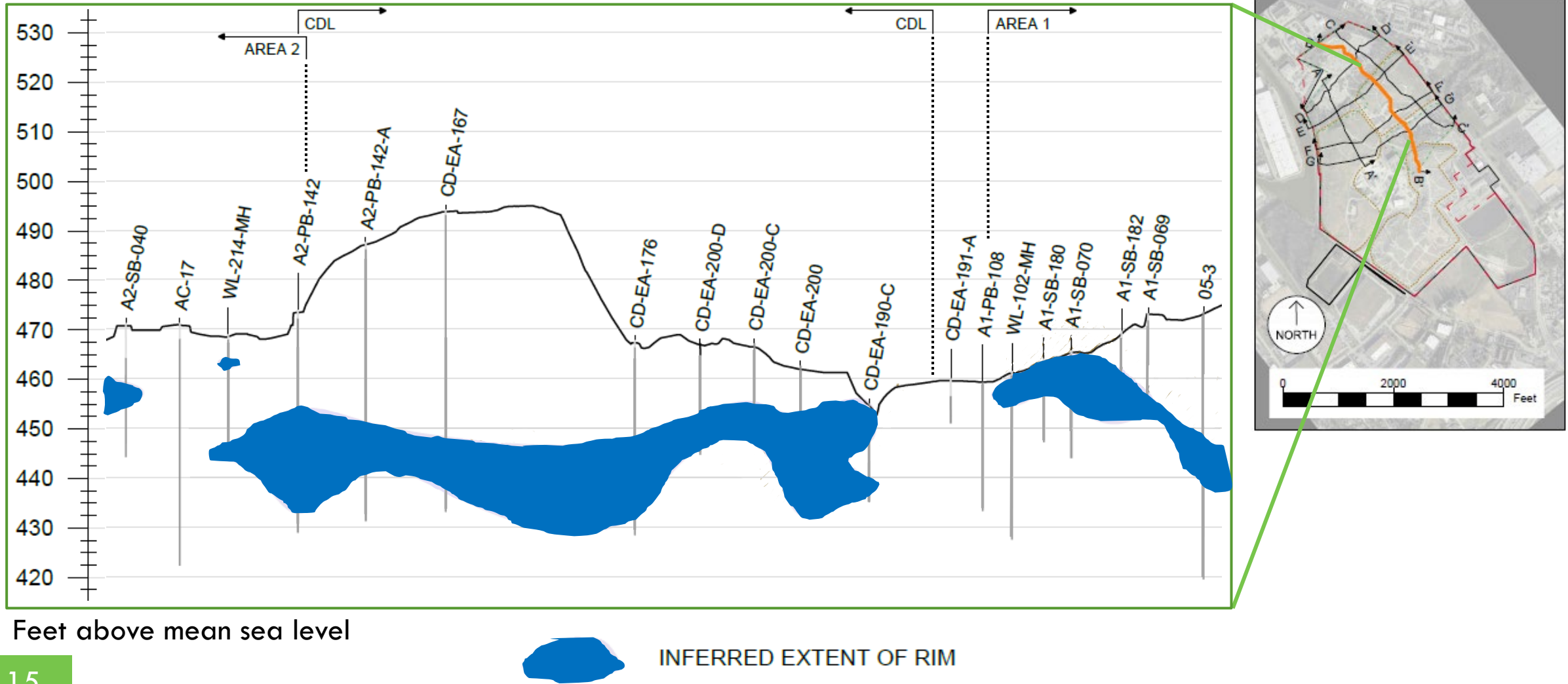
# Radiologically Impacted Material (RIM) Depth

Feet  
above  
mean  
sea  
levels

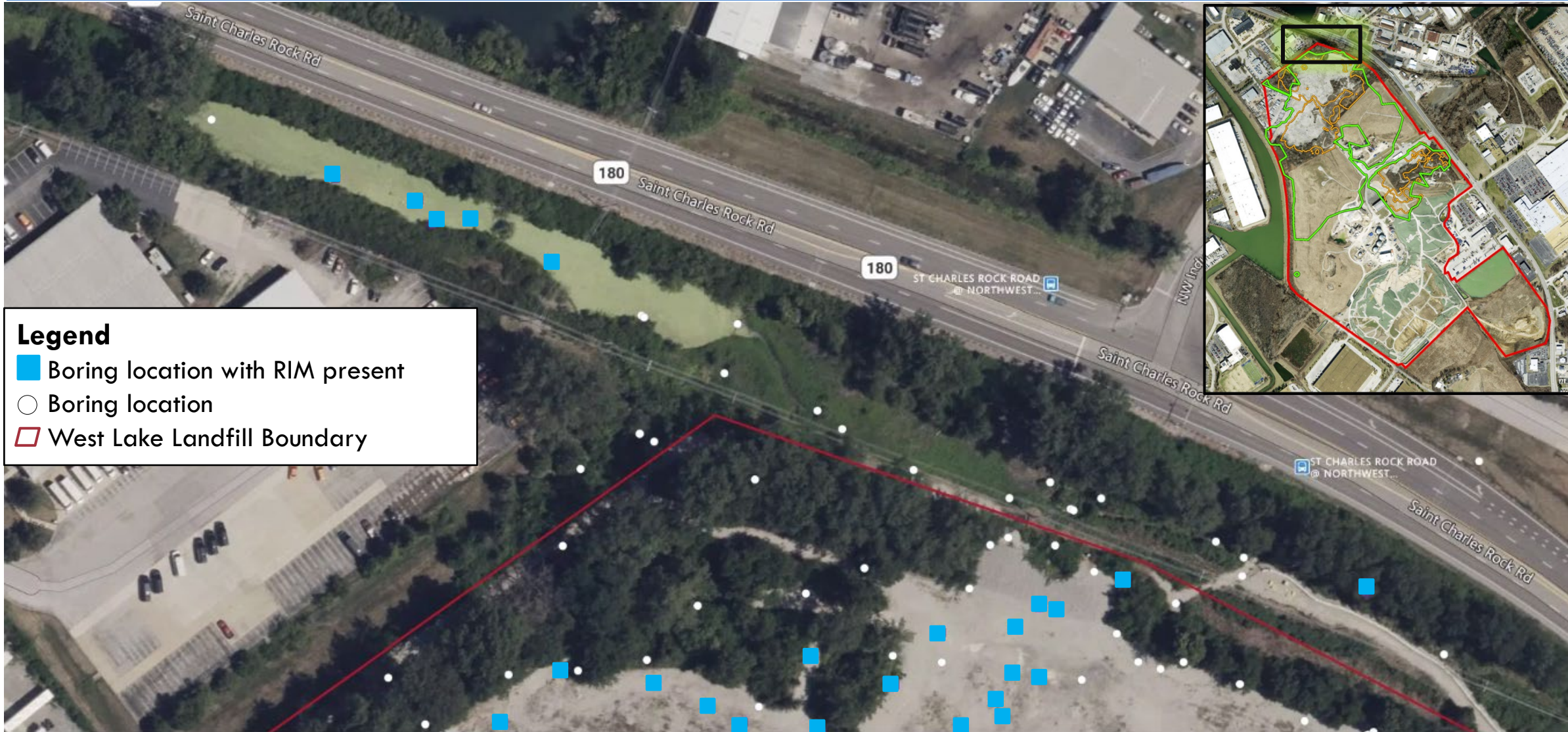


INFERRED EXTENT OF RIM

# Radiologically Impacted Material (RIM) Depth

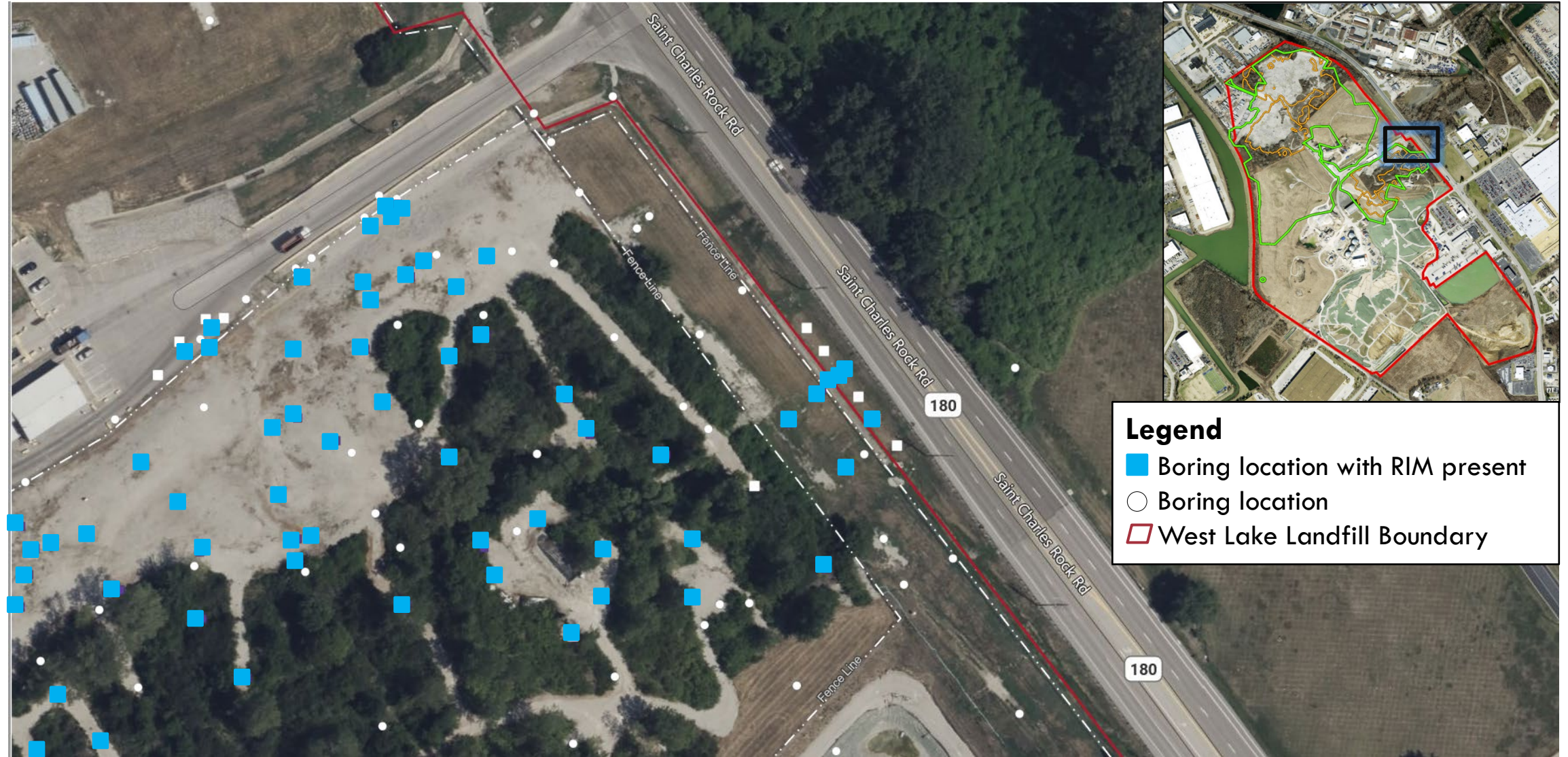


# North Surface Water Body

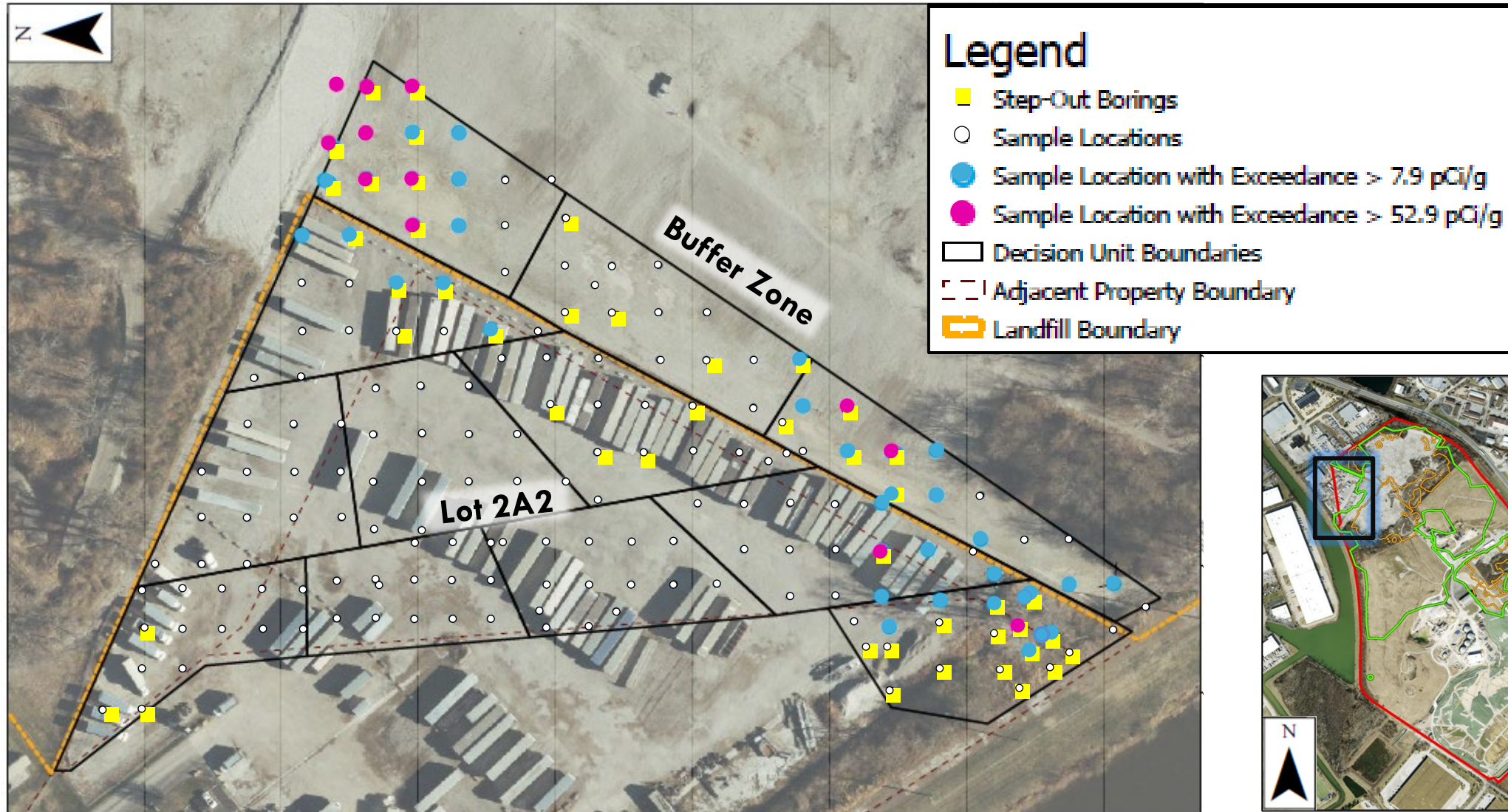




# Ditch Adjacent to Area 1



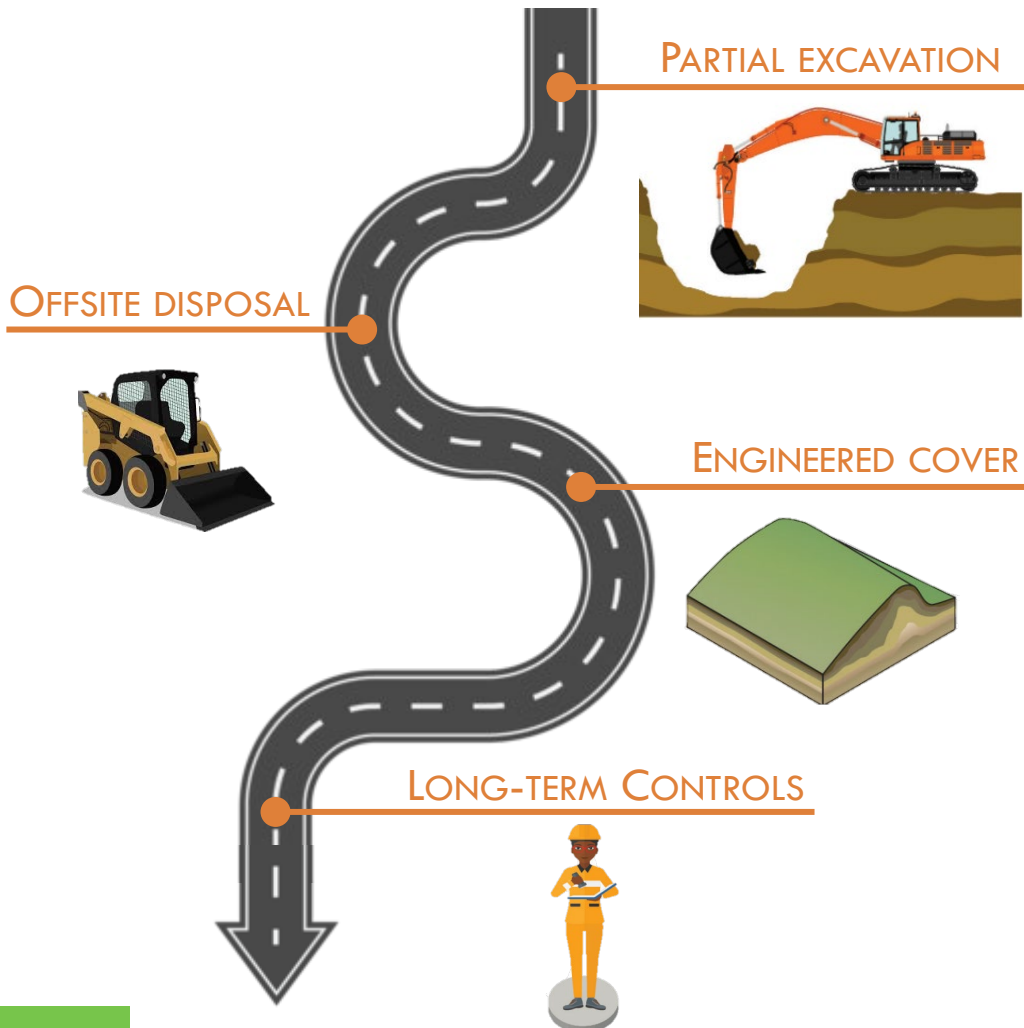
# Buffer Zone Lot 2A2



# Background Characterization

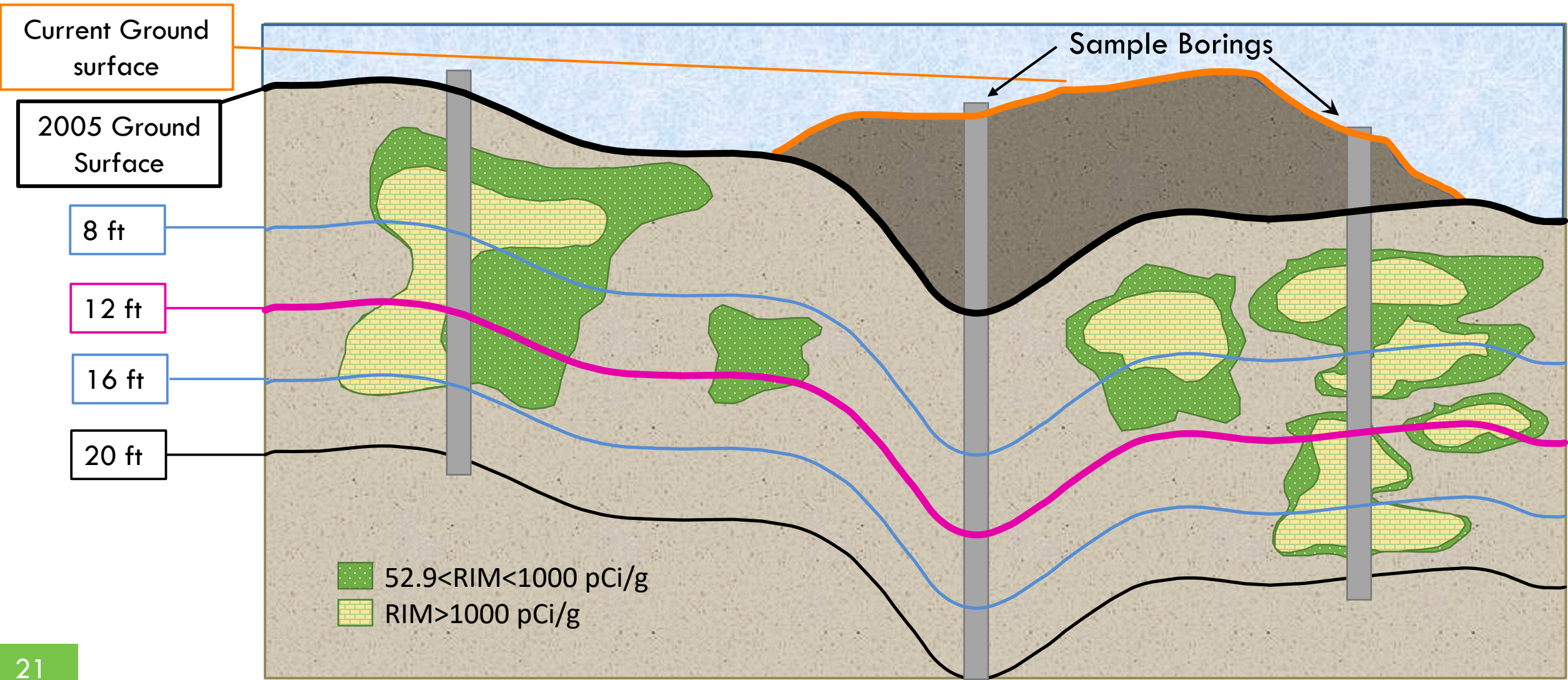


# 2018 Remedy Overview



- Operable Unit 1 excavation based on concentration and depth
  - ▣ Deeper excavation focused on high concentration
- Buffer Zone/Lot 2A2 cleaned up to background
- Design Investigation included in Record Of Decision Amendment (RODA) to inform excavation and extent of engineered cover

# 2018 RODA Excavation Requirements





# Overview of Design Investigation Results

- OU-1 becomes larger and OU-2 becomes smaller; OU-1 engineered cover increases in size
- RIM identified during the Design Investigation is subject to the remedy excavation requirements
  - ▣ Most of additional RIM deeper than 20 feet below the surface
  - ▣ Minor additional excavation of RIM (Southwest corner of CDL)
  - ▣ Excavation along the two areas of the drainage ditch west of the road
- Does NOT require fundamental change to remedy
- Risk remains unchanged



## Next Steps

- ❑ What needs to happen before excavation can begin
  - ❑ Complete Remedial Design
  - ❑ Remedial Action Steps

# WEST LAKE LANDFILL SUPERFUND SITE (OPERABLE UNIT 1)

This 200-acre site is located about one mile north of the Interstate 70/270 interchange and four miles west of Lambert-St. Louis International Airport. The landfill received soil contaminated with radiological materials.

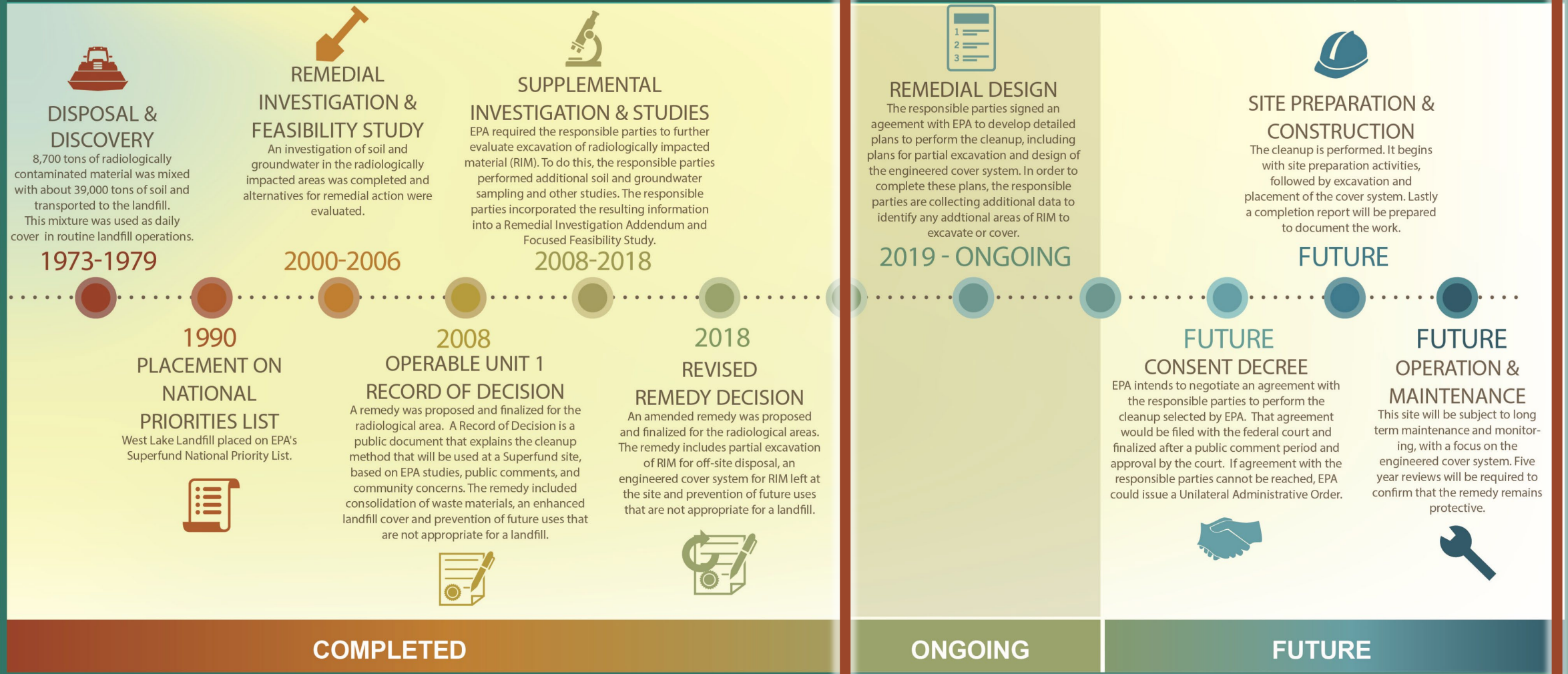
## TIMELINE

May 2023

Visit: <https://www.epa.gov/superfund/westlakelandfill>

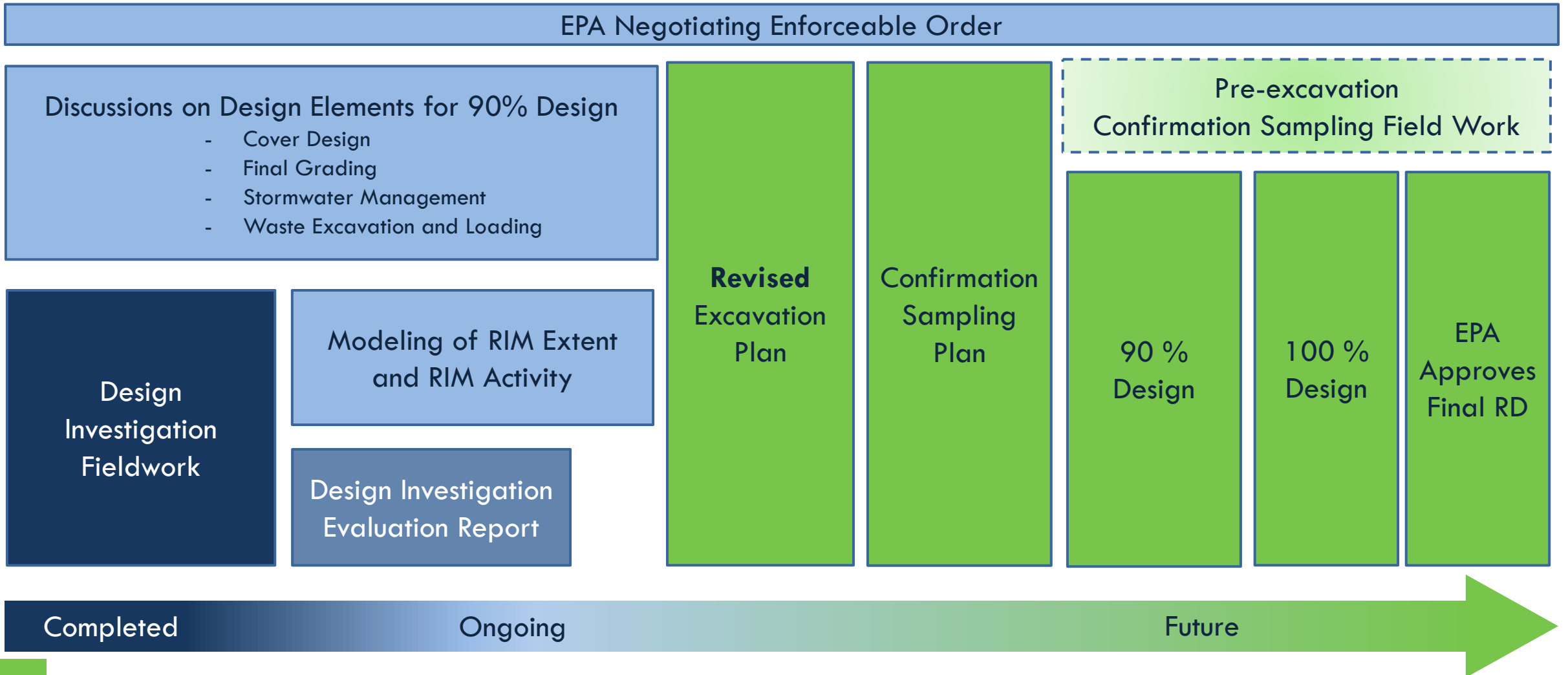
Contact: Jessica Evans, Community Involvement Coordinator  
[evans.jessica@epa.gov](mailto:evans.jessica@epa.gov) | (314) 296-8182 | Toll-free: (800) 223-0425

### MORE INFORMATION





# Next Steps: Remedial Design





# Potential Adjustments to the RODA

- ROD Amendment remedy remains:
  - ▣ Partial excavation/engineered cover
- Potential Adjustments to the RODA
  - ▣ Extending Operable Unit 1 boundary to incorporate all RIM
  - ▣ Changing timing of confirmation sampling
  - ▣ On-site Lab no longer necessary

EPA prepares an ESD when *"the differences in the remedial or enforcement action, settlement, or consent decree significantly **change but do not fundamentally alter the remedy selected in the ROD..."***

# Next Steps: Remedial Action

Pre-excitation Confirmation Sampling

Enforceable Order in place

Contractor Selected

RA Workplan Submitted and Approved

RA Supporting Workplans Submitted and Approved

- Site Management Plan
- Transportation Plan
- Wildlife Mitigation Plan
- Air Monitoring Plan
- Stormwater Management Plan

Site Preparation Activities (roads, temp offices, etc)

Disposal Facility Contract

Excavation and Regrading

Cover System Installation





# Key Takeaways

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# Question and Answer Session

- Resources:
  - West Lake Landfill Site Profile Page:  
[www.epa.gov/superfund/westlakelandfill](http://www.epa.gov/superfund/westlakelandfill)
  - West Lake Landfill Dashboard:  
[www.epa.gov/mo/west-lake-landfill-dashboard](http://www.epa.gov/mo/west-lake-landfill-dashboard)
  - EPA Region 7 Facebook:  
[www.facebook.com/eparegion7](http://www.facebook.com/eparegion7)
  - Jessica Evans, Community Involvement Coordinator:  
[evans.jessica@epa.gov](mailto:evans.jessica@epa.gov) or (314) 296-8182