

## Former Geneva Foundry (1868 - 1988)



Department of  
Environmental  
Conservation

# Agenda

- Introductions
- Public Meeting & Availability Sessions
- Geneva Foundry History
- The Remediation Process
- Environmental Investigation
- DOH Perspective
- Proposed Cleanup Plan
- Next Steps
- Keep Informed
- Questions & Comments

# Tonight's Meeting

- Discuss remedial investigation
- Take comments on proposed cleanup plan

# Availability Session

## Next Week (October 25):

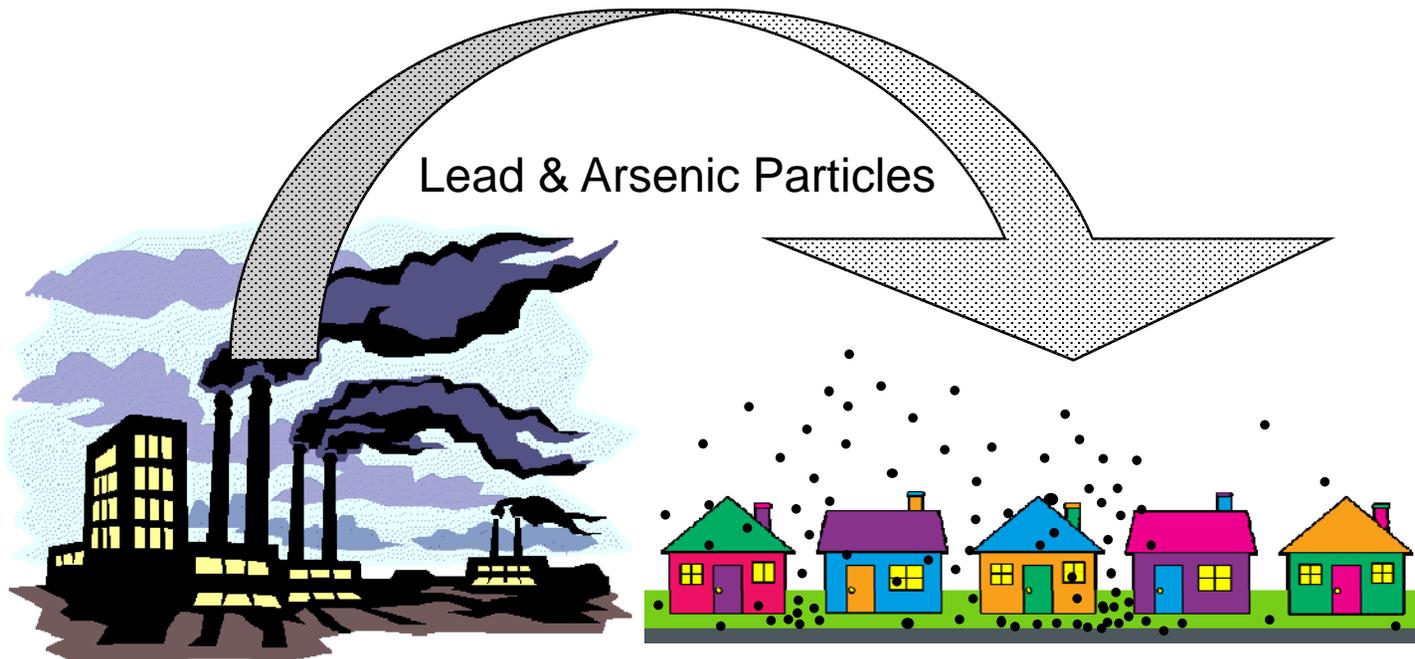
- Discuss property results 1 on 1.
- Two sessions:
  - **3:00 – 5:00 PM**
  - **6:00 – 8:00 PM**
- No presentation.
- No appointment needed, but let us know which session.

## History

- Geneva Foundry 1868 - 1988
- Produced cast iron stoves, boilers, farm equipment, etc.
- Burned coke mixed with scrap iron and unrefined iron.
- Some scrap iron had lead and coke had arsenic.
- Ash emitted through stack settled on areas around the foundry. The “fly ash” particles contained lead and arsenic.
- No pollution controls until 1970.
- NY Central Iron Works and a manufactured gas plant nearby.

## Geneva (circa 1880)







## Other Past Sources of Lead & Arsenic

### LEAD:

- Lead Paint
- Leaded Gasoline



### Arsenic:

- Coal Ash
- Older Pressure Treated Lumber



# Cleanup Levels

Higher

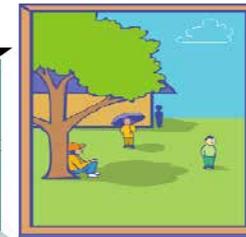
Unrestricted Use



Residential



Restricted Residential



Commercial



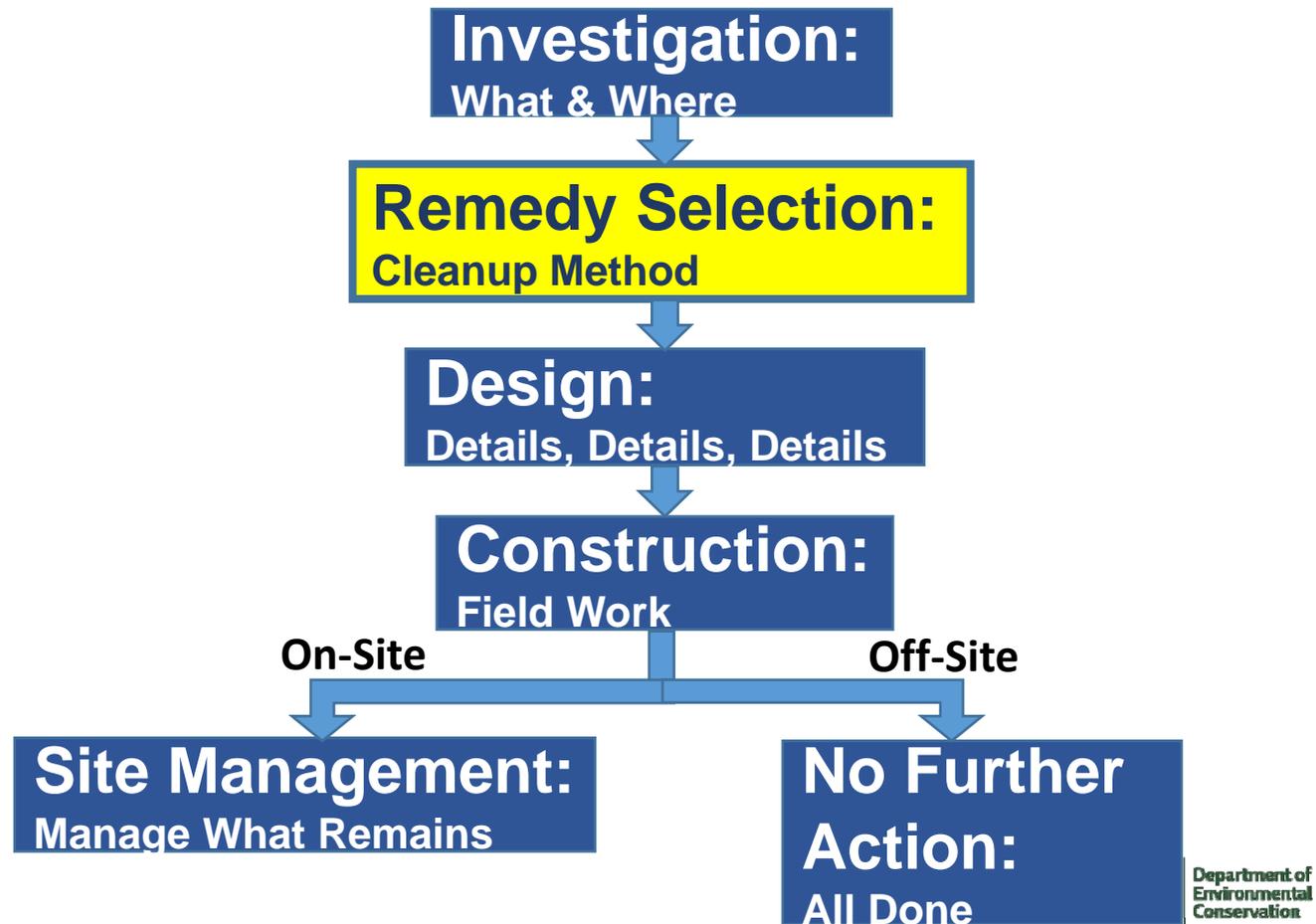
Industrial



Lower

# The Remediation Process

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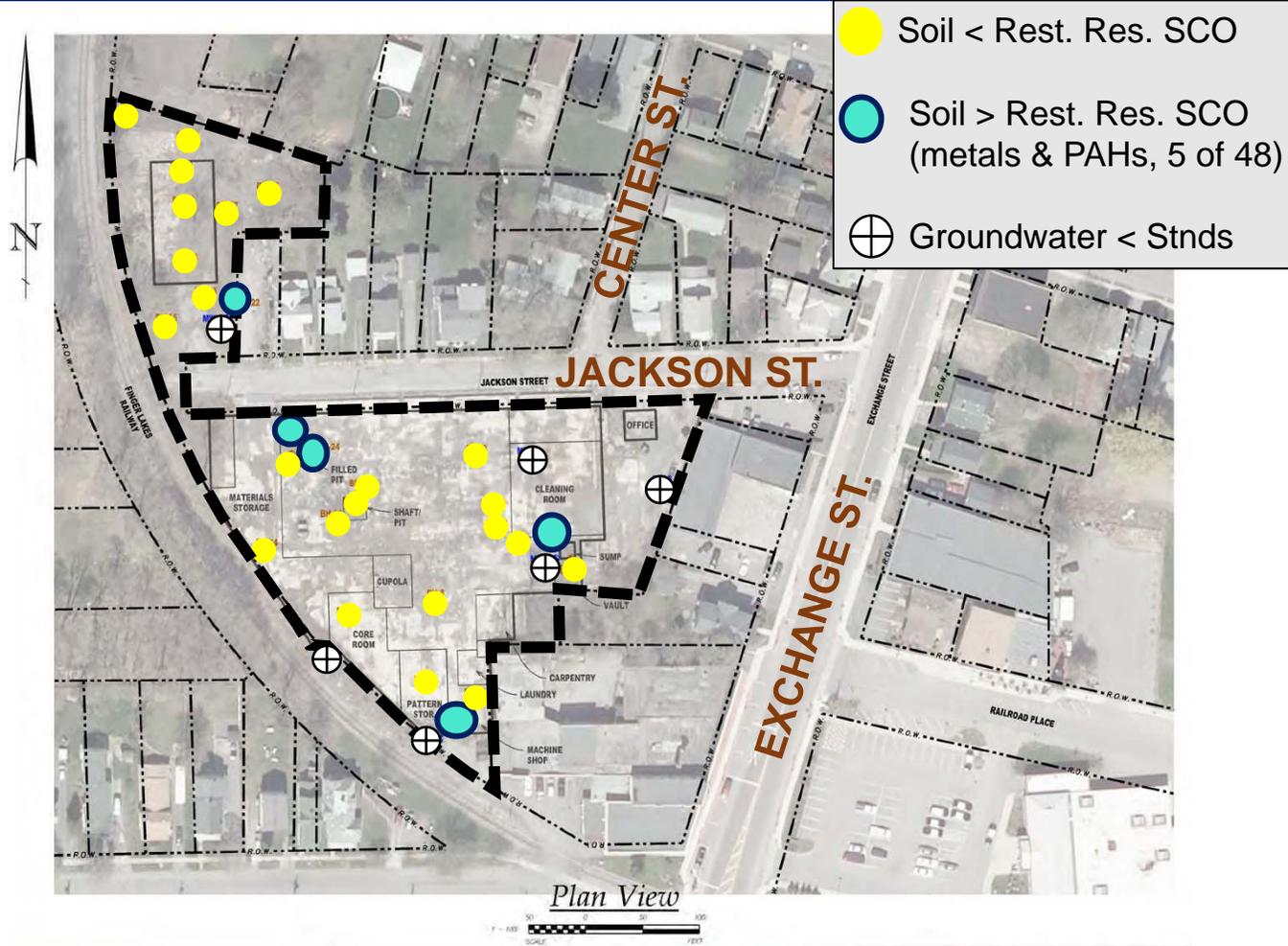


## Environmental Investigation

- **1988 – Foundry closes.**
- **1998 – City of Geneva acquires site & enters ERP.**
  - **Start of environmental investigation.**
  - **On-site work hindered by buildings.**
- **1999 – Abandoned drums/other materials removed.**
- **2005-06 – Foundry buildings demolished.**
  - **On-site sampling completed.**
  - **Preliminary off-site sampling.**
- **2008 – Off-site soil sampling in ROWs.**
- **2015 – Off-site soil sampling of properties and ROWs.**

# Results: On-Site

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## Results: Off-Site

| Properties |       | ROWs    |       | Total Samples |       |
|------------|-------|---------|-------|---------------|-------|
| Sampled    | > SCO | Samples | > SCO | Samples       | > SCO |
| 107        | 98    | 40      | 23    | 383           | 259   |

- Impacts limited to top 6” to 8”
- Not all lead & arsenic from foundry

## Results: Off-Site (ppm)

| Range         |               | Average |         | Background    |         |
|---------------|---------------|---------|---------|---------------|---------|
| Lead          | Arsenic       | Lead    | Arsenic | Lead          | Arsenic |
| 12 –<br>6,380 | 0.09 -<br>228 | 506     | 25      | 200 -<br>500* | 3-12**  |

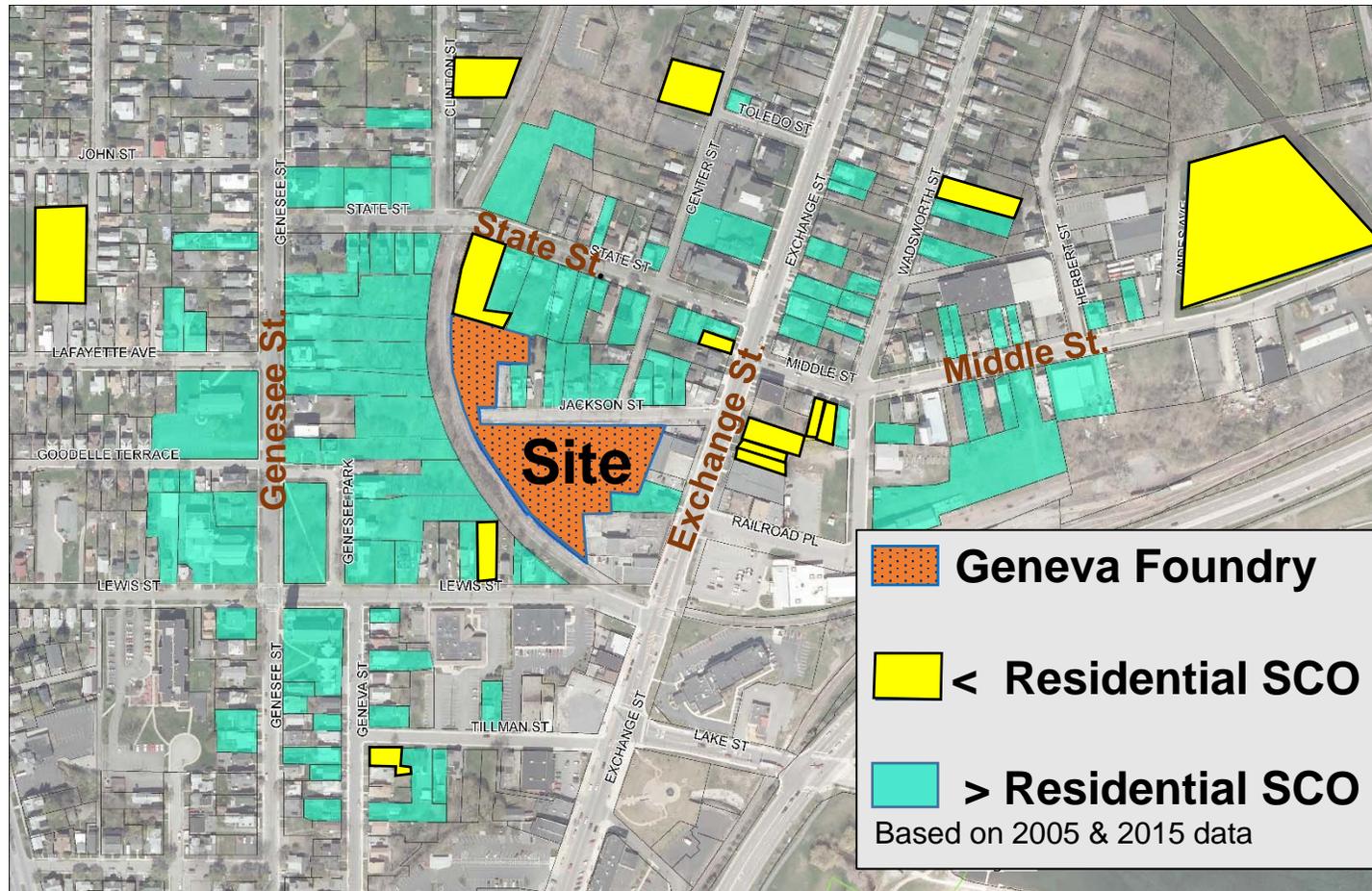
### Residential SCOs

- Lead – 400 ppm
- Arsenic – 16 ppm

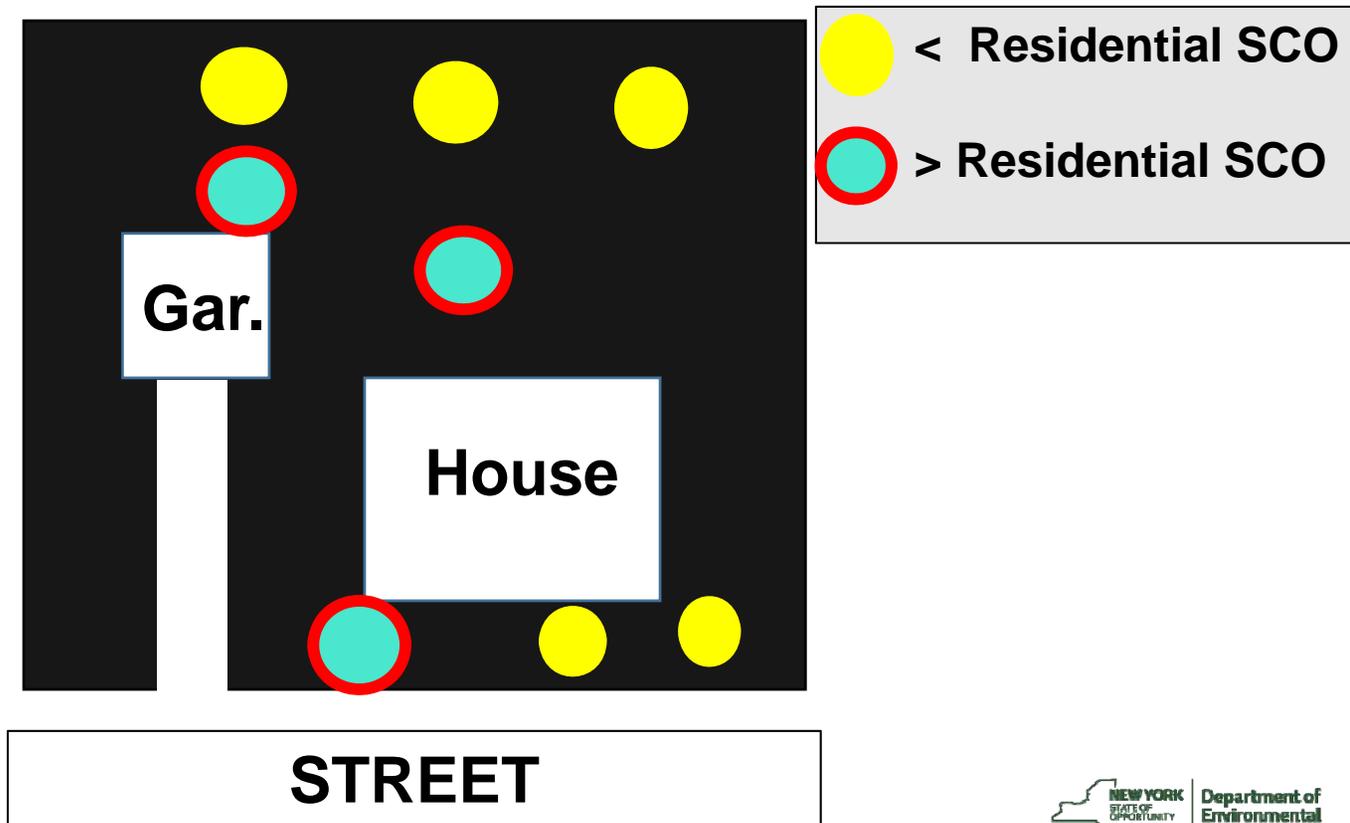
\*TAGM 4046 (urban areas)

\*\*TAGM 4046

## Lead & Arsenic in Surface Soils



## Variable Contaminant Distribution



# NYS Department of Health

## Role of the DOH

DOH assists DEC during the investigation to:

- Evaluate the ways in which an individual could be exposed to site-related contaminants
- Ensure appropriate samples are collected: reviewed work plan
- Where are people likely to contact contamination?
- Are there enough samples collected to evaluate whether people are coming into contact?
- Will the samples be analyzed so the results provide meaningful information
- Recommend measures to prevent or minimize any exposures that could or may occur.

## Role of DOH

DOH assists DEC during the remedial activity process to:

- Ensure that the remedial actions proposed are protective of public health = eliminate current exposure pathways and prevent potential exposure pathways in the future.

## *Routes of Exposure*

The physical contact with a chemical or substance

- **direct contact** (touching)
- **ingestion** (eating/drinking)
- **inhalation** (breathing)

One or more of these physical contacts **must** occur before a chemical has the potential to cause a health problem.

## Practical Measures to Reduce Potential Exposure

**In the interim, there are things people can do if they are concerned that site-related contaminants may be present on their property.**

- Minimize direct and repeated contact with soils. Avoid unnecessary digging.
- Wear gloves when working in the garden and avoid bringing soil inside the house by brushing off your clothes and remove shoes and gloves.
- Wash hands with soap and water after outdoor activities/gardening.
- Doormats and periodic damp mopping of floors for soil that might be tracked indoors.
- Consider growing vegetables in raised beds – use untreated wood to make the beds.
- Maintenance of a grass or mulch cover.

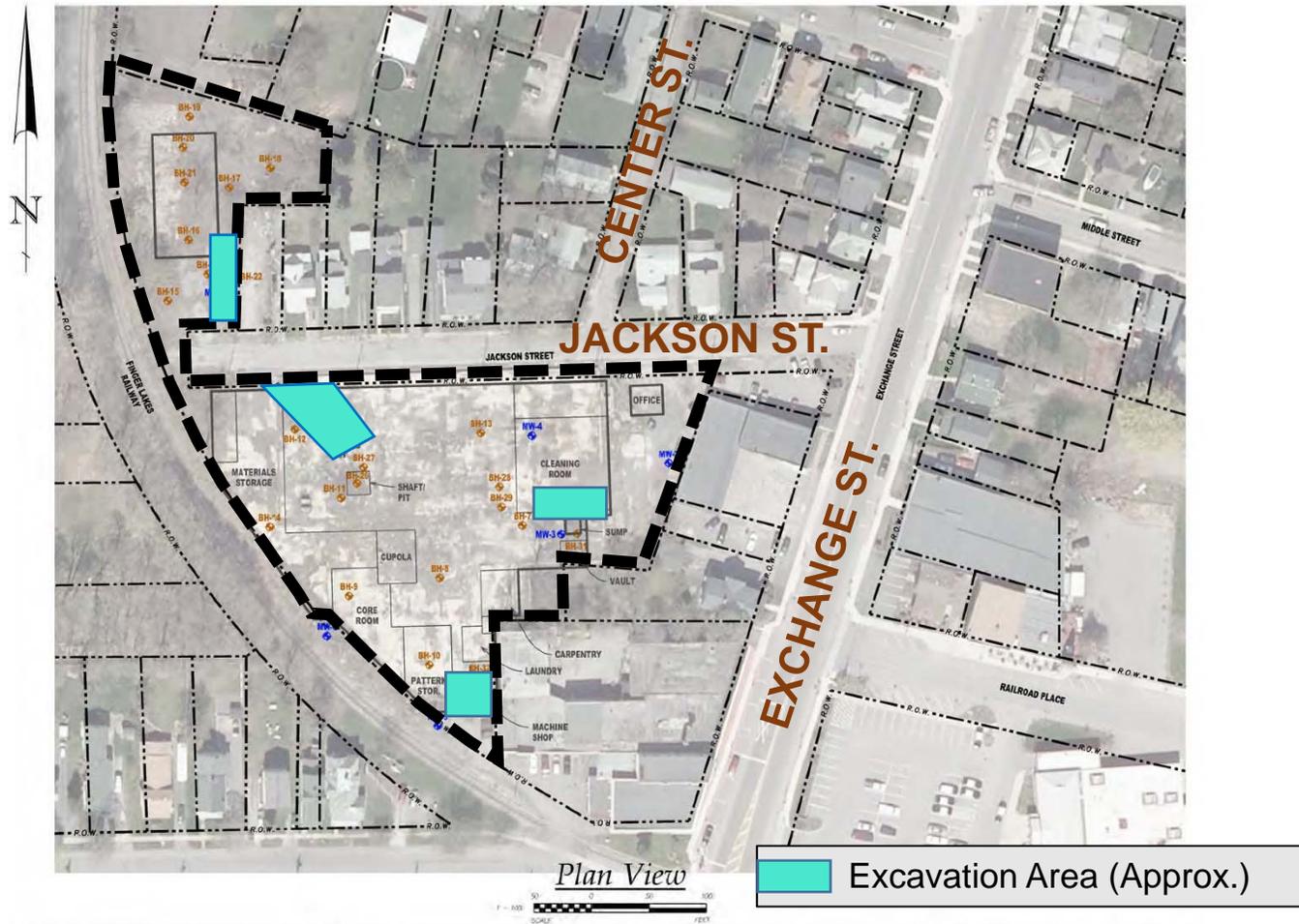
# Proposed Cleanup Plan

## On-Site:

- Dig out impacted soil to Restricted Residential standards.
- Restrictions on site use.
- Soil must be covered by buildings, pavement, or 2-ft of clean soil.
- Compliance with Site Management Plan.



# Proposed Cleanup: On-Site



# Proposed Cleanup Plan

## Off-Site:

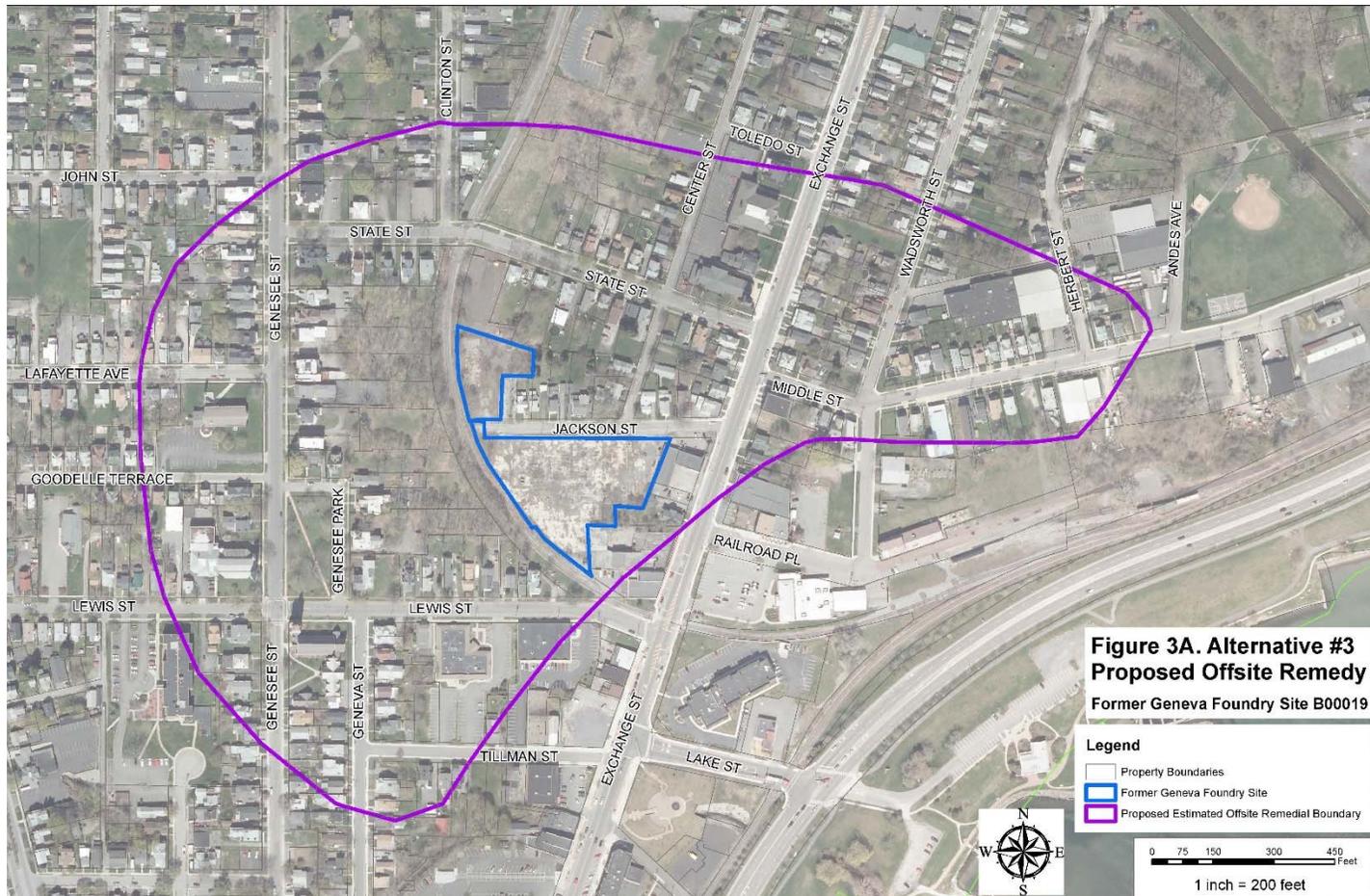
- Dig out foundry impacted soil to Residential standards.
- Replace with clean soil.
- Typical excavation expected to be less than 1-ft.
- Roughly 220 properties; subject to change.



## Flexibility To Work With Owners

- **Some flexibility to preserve features significant to the owner (trees, sheds, decorative plantings, etc.)**
- **In all cases, sufficient remediation will be achieved to assure a protective cleanup for which no further action is needed.**

# Proposed Cleanup: Off-Site



## Cost & Schedule

- **How Much Will This Cost and Who Pays?**
  - On-site - \$250 Thousand / City of Geneva
  - Off-site - ~\$16 Million / New York State (probably)
  
- **How Long Will This Take?**
  - On-Site – 1-2 years
  - Off-Site – Multi-year project

## Next Steps: PRAP

**November 25:  
Comment Period on PRAP Ends**



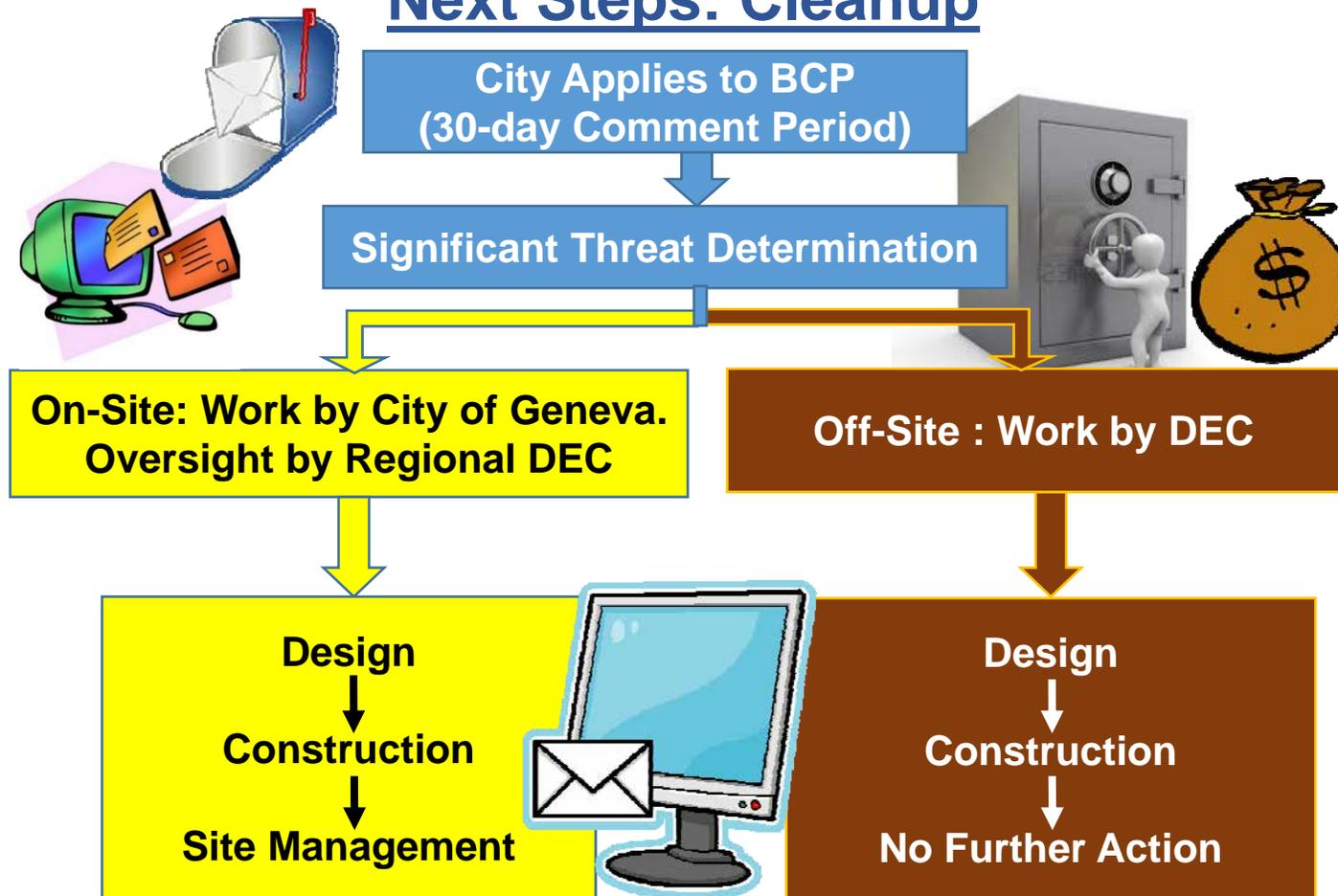
**State Reviews Comments &  
Modifies Cleanup Plan**



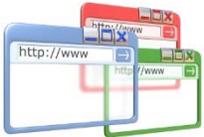
**State Issues “RECORD OF  
DECISION”**



## Next Steps: Cleanup



# STAY INFORMED

- Receive Fact Sheets by Email: Sign up for Ontario County Listserv:  
  
<http://www.dec.ny.gov/chemical/61092.html>
- Request Paper Fact Sheets 
- Visit DEC's Geneva Foundry Website:  
<http://www.dec.ny.gov/chemical/107812.html>
- Read Reports at Geneva Free Library 

# CONTACTS

## PRAP Comments

**(By November 25)**

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## Site-Related Health

Questions

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# QUESTIONS

