

# Underground Storage Tanks and Underground Injection Control Inspection Targeting in Rochester, New York

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**U.S. EPA Region 2, New York, NY**





Rochester, New York

EJ Initiative - 2004

# Rochester Background

- FY'04 commitment to HQ to conduct an Environmental Justice project
- Integrate Children's Health Protection Initiative

*Combined objectives & broadened scope to include most environmental programs in Region 2*

# Rochester Selection

- Selection Criteria:
  - TRI Emission
  - Demographic
  - Environmental and Health indicators
  - Region 2's Interim EJ policy

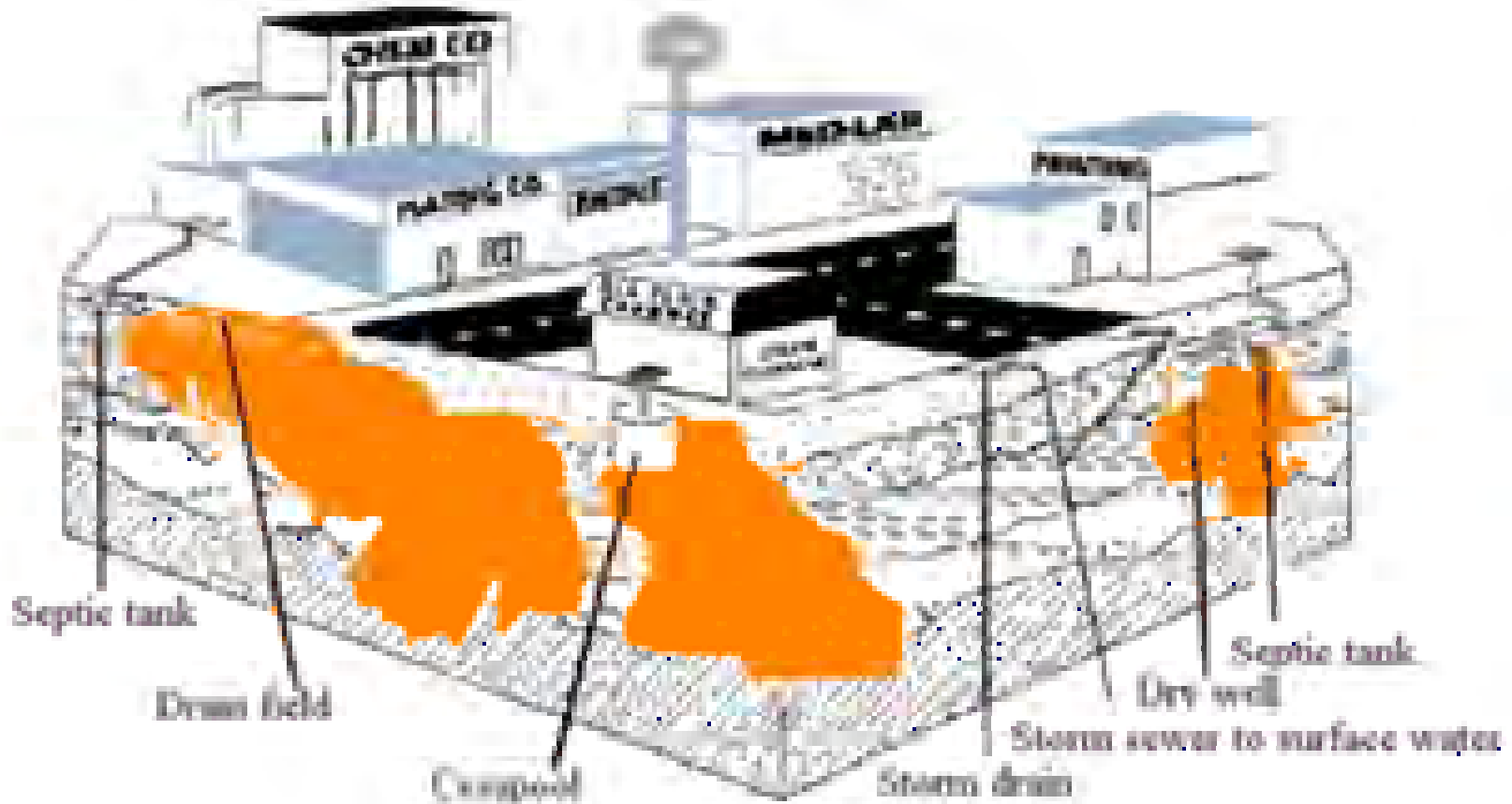
# Rochester Project Goals

- Reduce exposure to environmental pollutants
- Implement Smart Enforcement approach:
  - ✓ Use of an integrated strategy of **compliance assistance**,
  - ✓ **compliance monitoring**,
  - ✓ **compliance incentives**, and
  - ✓ **enforcement** to achieve results
- Establish one-stop shopping for environmental information

# Ground Water Compliance Section

- Underground Storage Tanks
- Underground Injection Control- Class V

# Injection Wells



# Selecting Inspection Targets

UST and UIC normally focus in areas where

1. Groundwater is the normal source for drinking water
2. Areas are unsewered (greater likelihood of UIC well)

*However*

- Rochester does not use groundwater for drinking water, and
- Rochester is sewerred

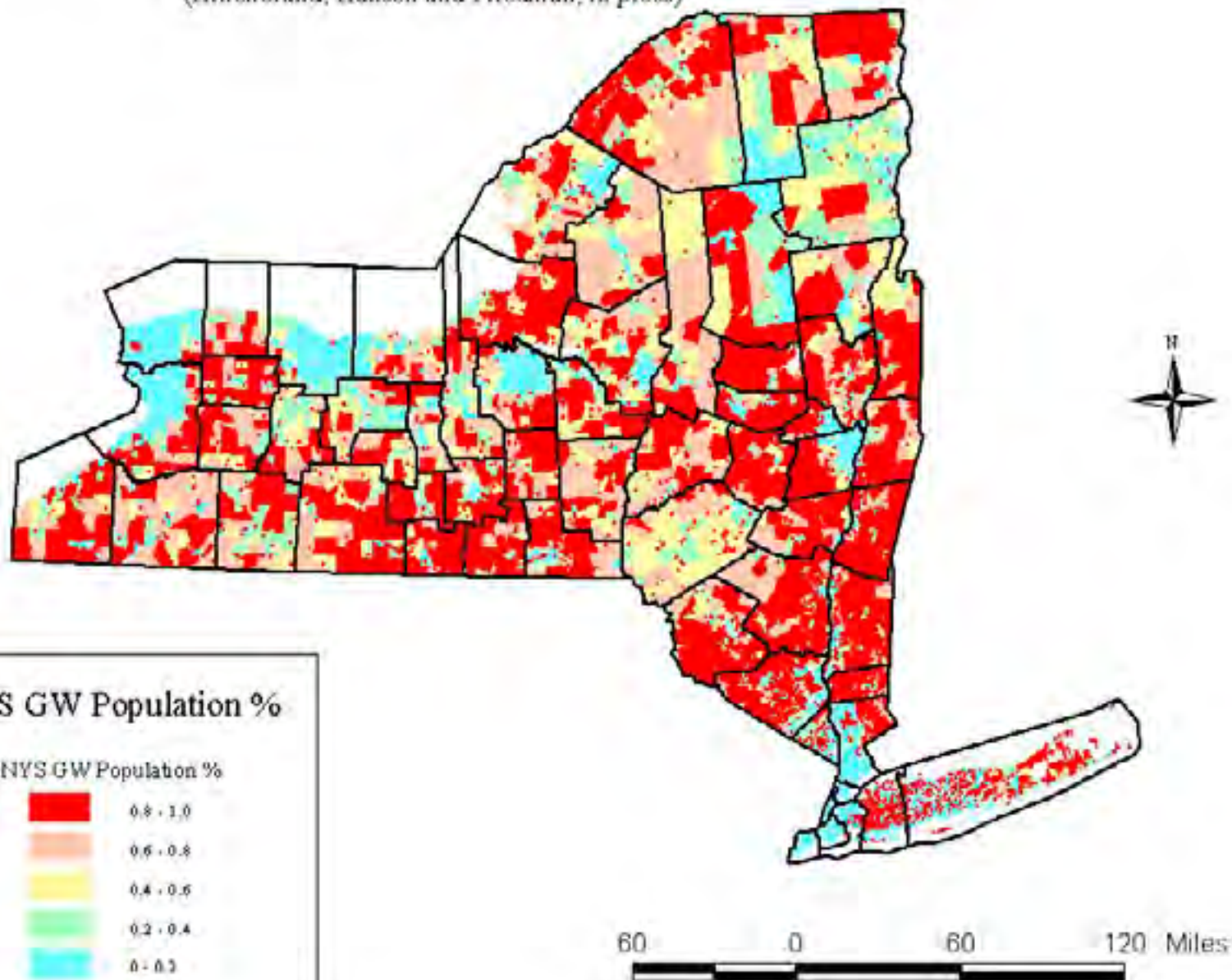
# EPA R2's UIC and UST Normal Targeting Process

Can be found at the following website

[http://r2quickplace1/QuickPlace/r2gis/Main.nsf/h\\_Library/74F6B1703F34E38585256F4F005E1618/?OpenDocument](http://r2quickplace1/QuickPlace/r2gis/Main.nsf/h_Library/74F6B1703F34E38585256F4F005E1618/?OpenDocument)

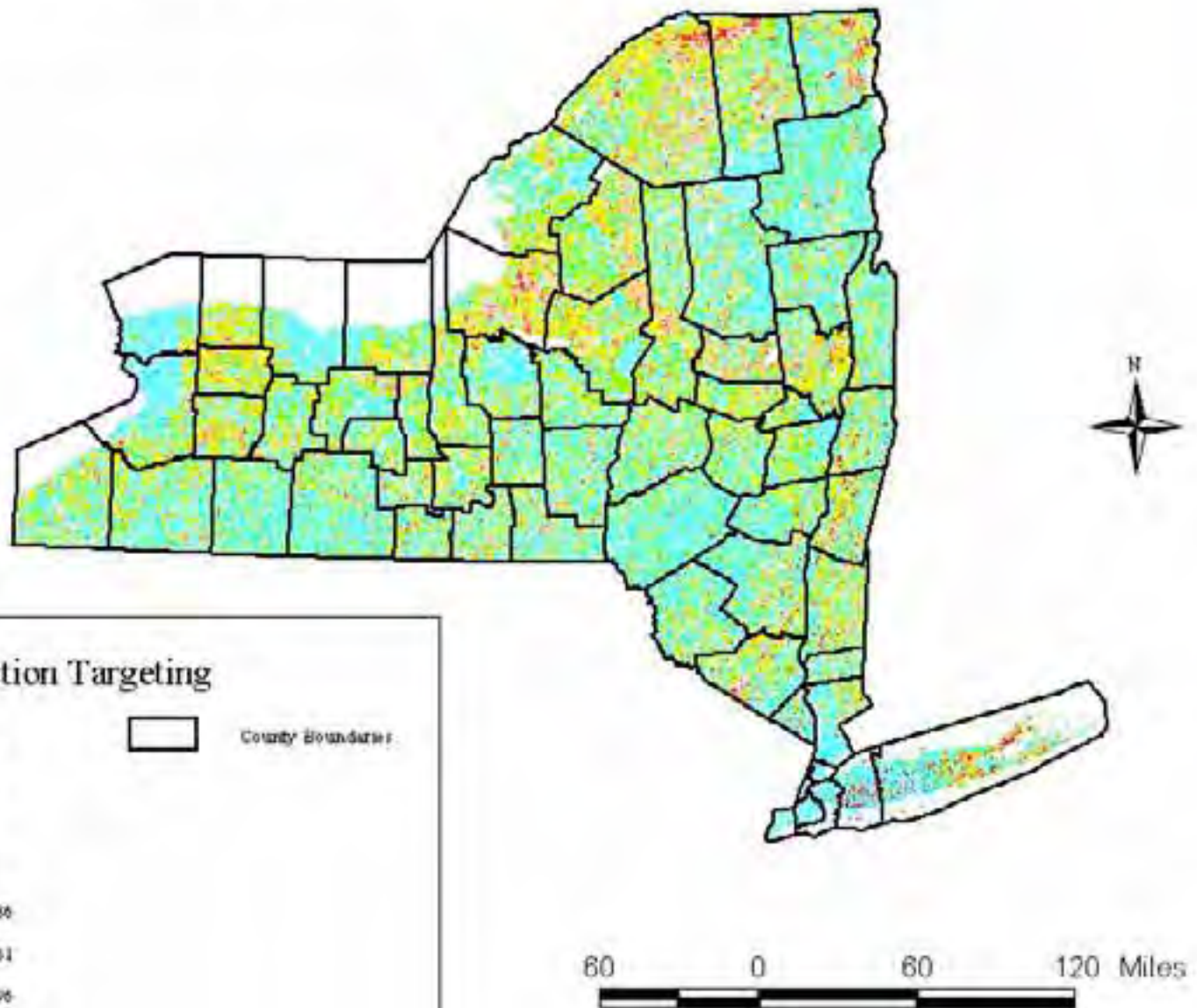
# Figure 5. Population Percent Using Groundwater as Source of Drinking Water

(Hillenbrand, Hansen and Friedman, in press)

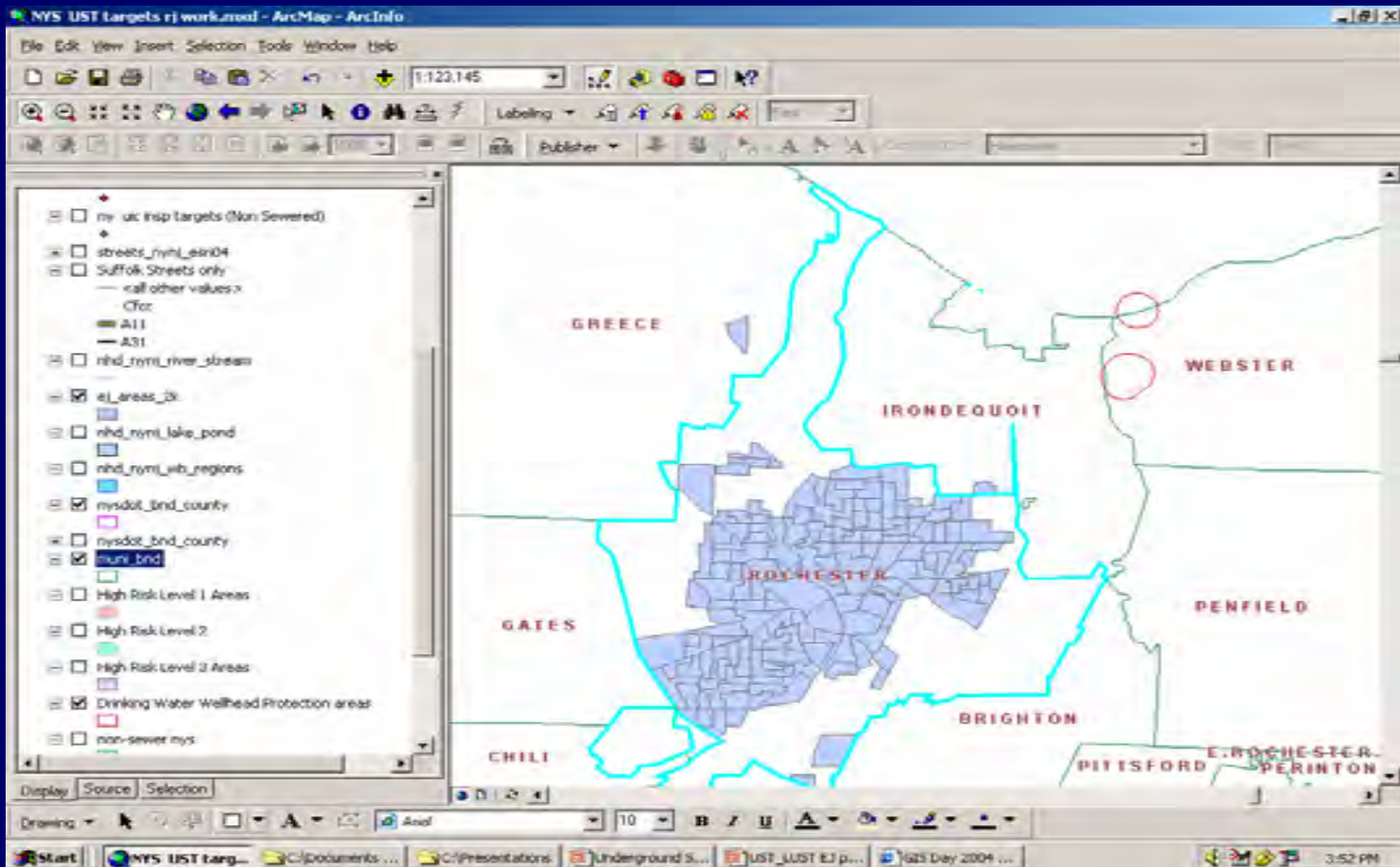


# Figure 6. Groundwater Endangerment-Risk

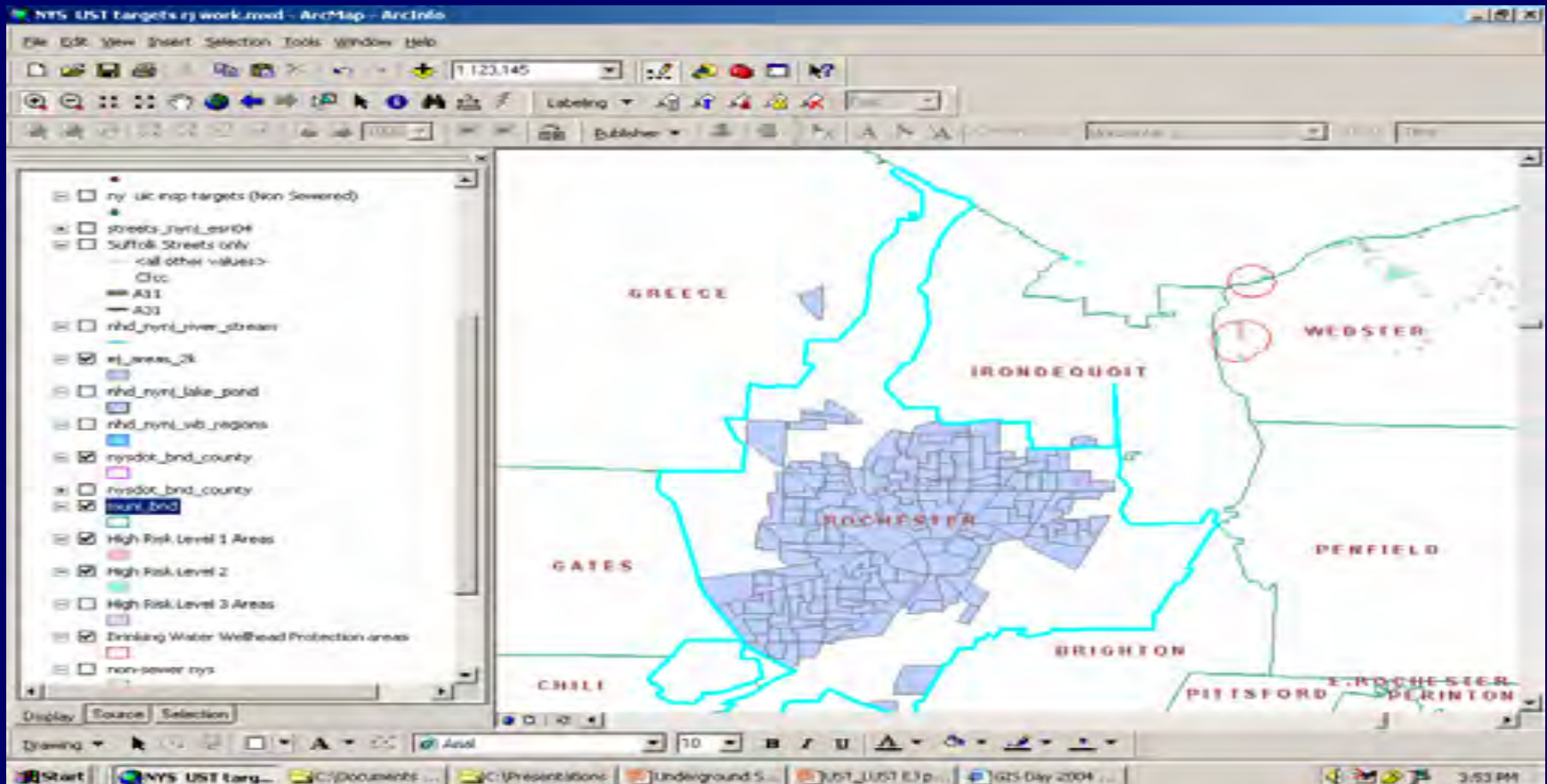
(Hillenbrand, Hansen and Friedman, in press)



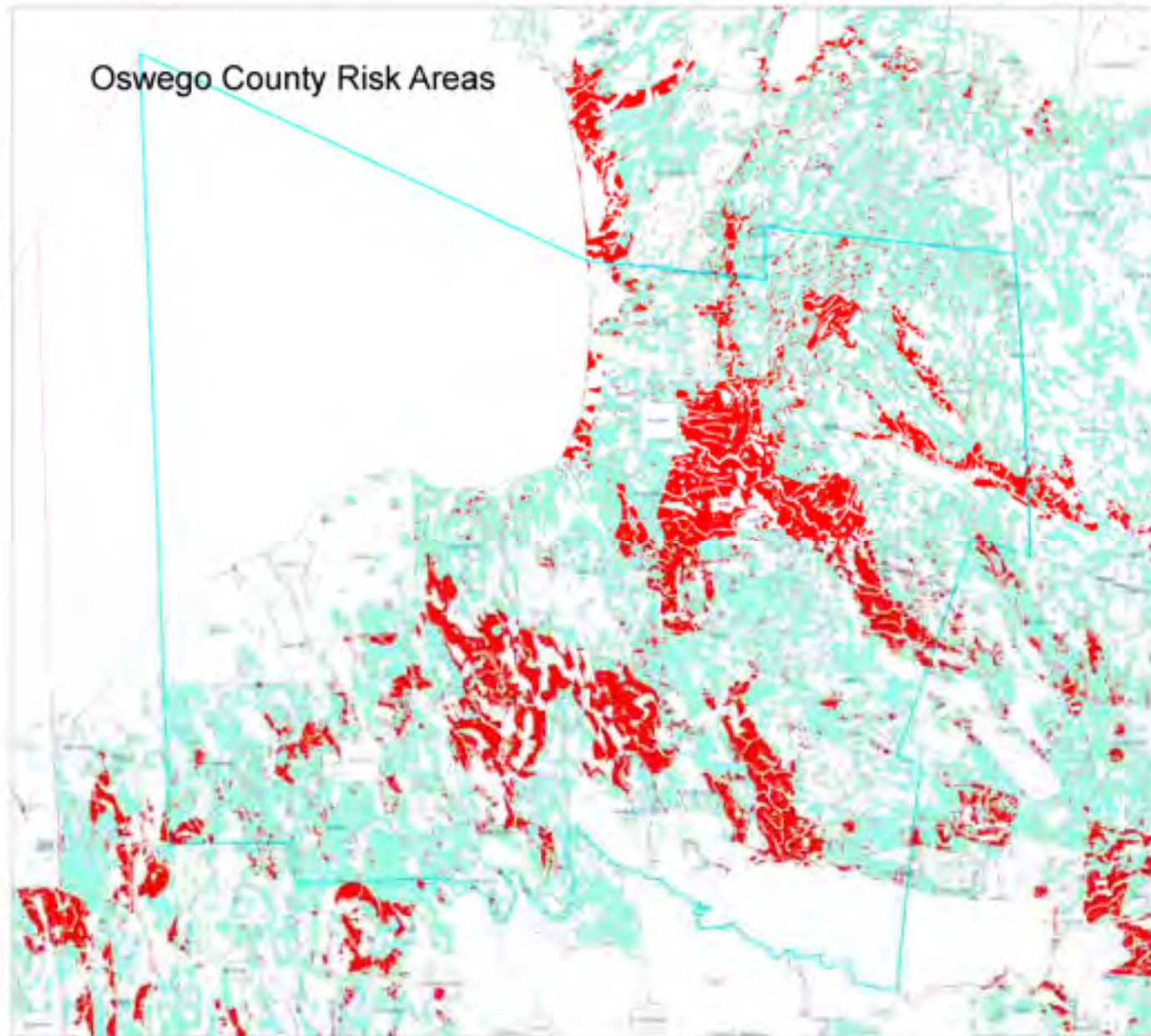
# Rochester



# Rochester



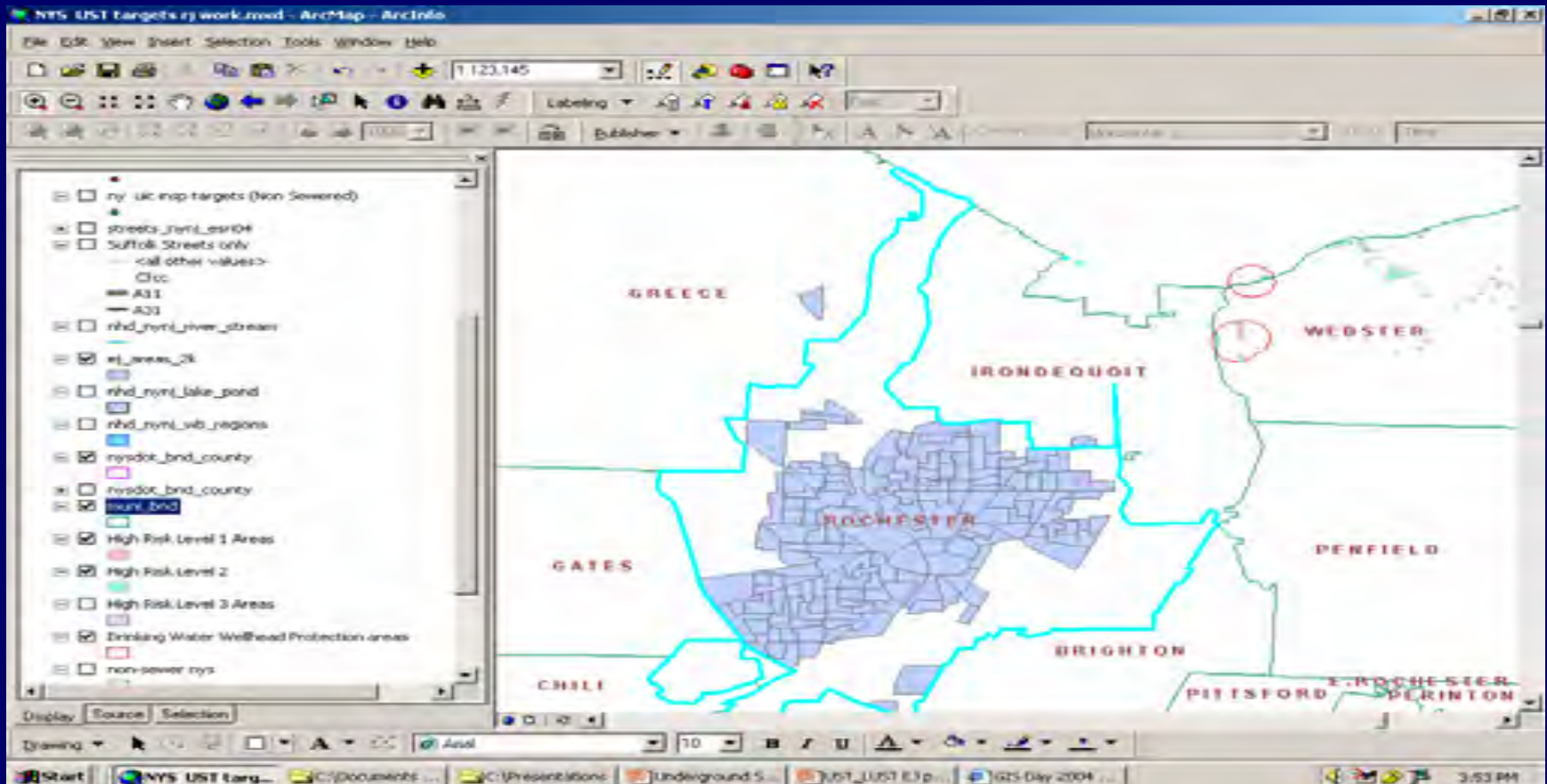
# Oswego County Risk Areas



## UST Targets

- High Risk Level 1 Areas
- High Risk Level 2

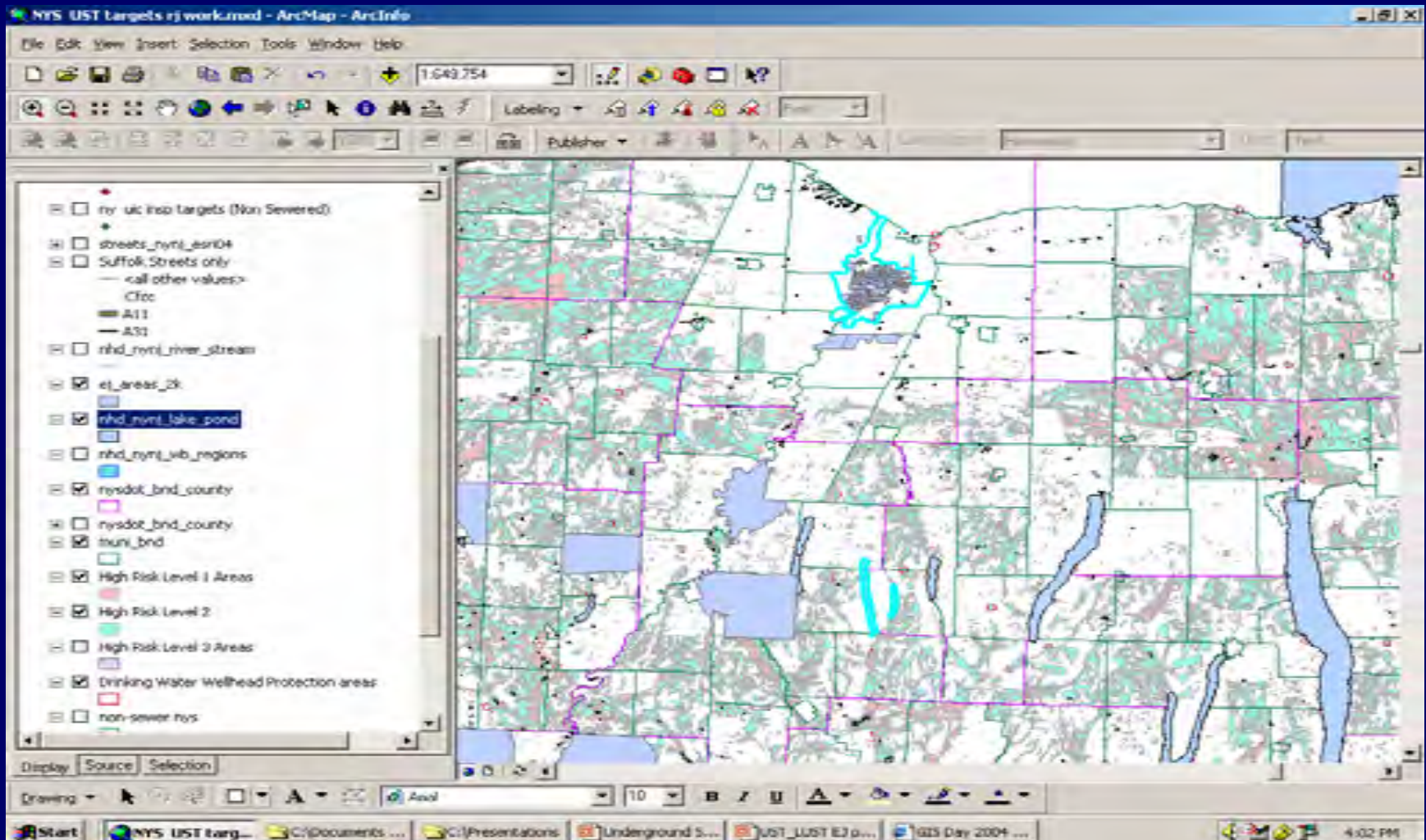
# Rochester



# How to protect the Rochester EJ Community?

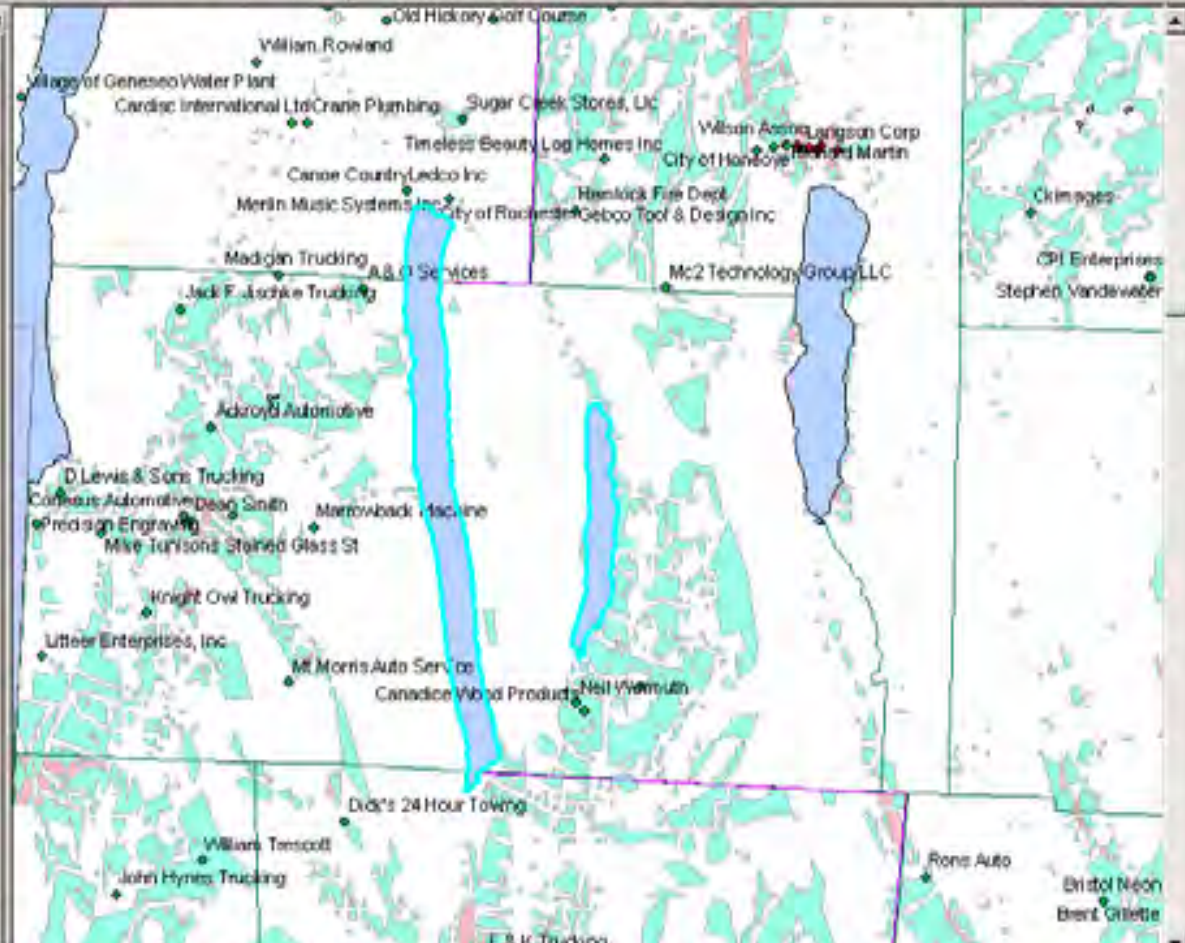
- EPA R2's UIC and UST program looked at the following
  - Where does Rochester's drinking water come from?
  - What are the risks presented to that source?

# Candice & Hemlock Lakes



**Layers**

- Meford
- Suffolk County UIC insp targets (Non Sewered)
- Gutierrez\_Suffolk\_FY05\_UST
- Sng\_FY05\_LIST
- HRL1 db\_Suffolk\_GeocodeAddresses selection
- db\_Suffolk\_GeocodeAddresses
- pbs\_bank\_final PBS in WHPA 500 m
- ny\_uic insp targets (Non Sewered)
- streets\_nynj\_esri04
- Suffolk Streets only
  - <all other values>
  - Cfcc
  - A11
  - A31
- nhd\_nynj\_river\_stream
- ej\_areas\_2k
- nhd\_nynj\_lake\_pond
- nhd\_nynj\_vb\_regions



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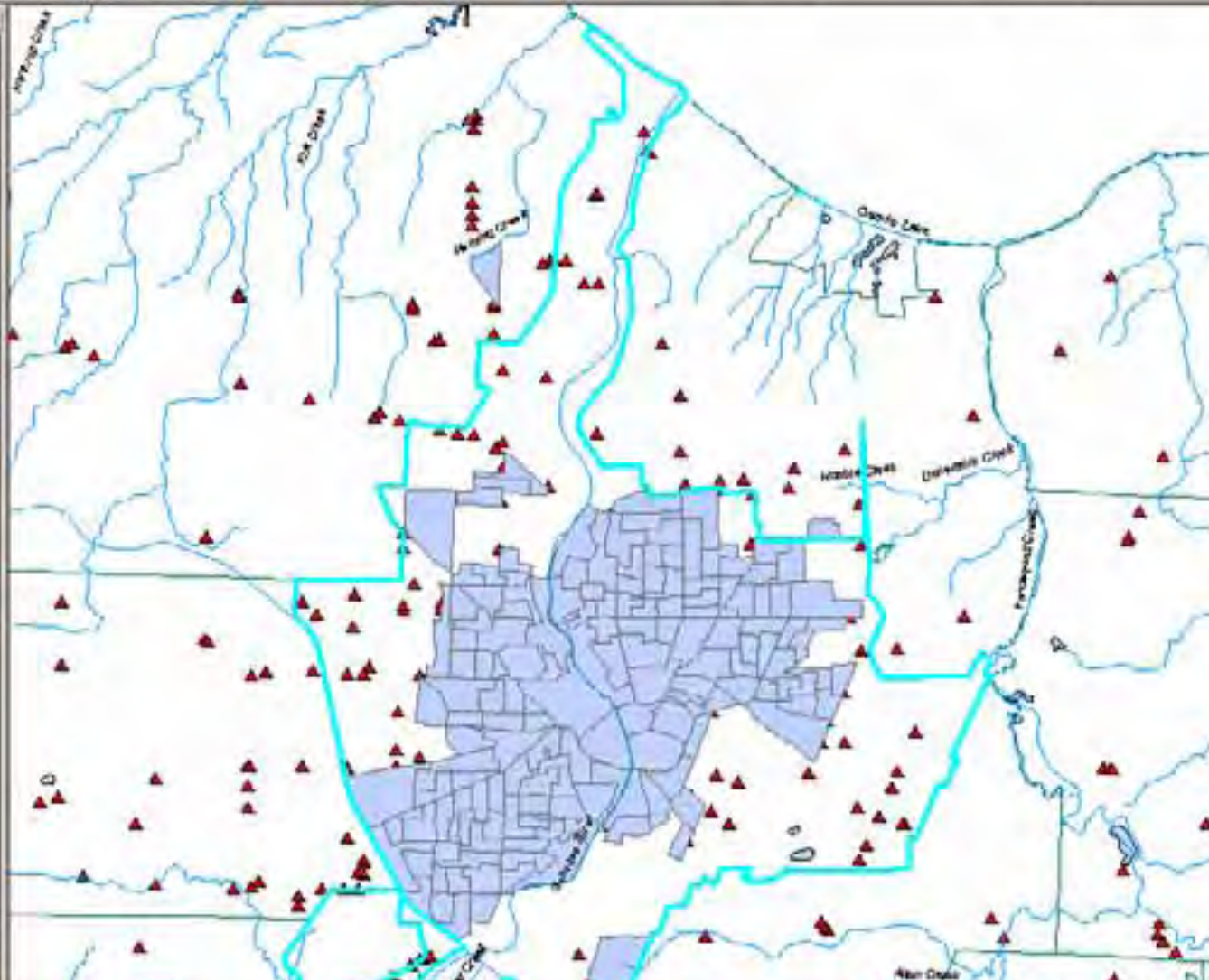
Labeling

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Text: Text

- A11
- A31
- nhd\_nynj\_river\_stream
- nj\_areas\_2k
- nhd\_nynj\_lake\_pond
- nhd\_nynj\_wb\_regions
- nysdot\_hnd\_county
- nysdot\_hnd\_county
- muni\_hnd
- High Risk Level 1 Areas
- High Risk Level 2
- High Risk Level 3 Areas
- Drinking Water Wellhead Protection areas
- non-sewer nys
- zip\_codes
- NYS IRS Geocoded (52%)
- ny\_uc insp targets dnb 2004shp (all)



Source Selection

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B I U



- Layers**
- nhd\_nyrj\_river\_stream selection
  - Genesee**
    - Meford
  - Suffolk County UIC insp targets (Non Sewered)
  - Gutierrez\_Suffolk\_FY05\_LIST
  - Sing\_FY05\_LIST
  - HRL1 db\_Suffolk\_GeocodeAddresses selection
  - db\_Suffolk\_GeocodeAddresses
  - pbs\_tank\_final PBS in WHPA 500 m
  - ny uic insp targets (Non Sewered)
  - streets\_nyrj\_esri01
  - Suffolk Streets only
    - <all other values>
    - Cfcc
    - A11
    - A31
  - nhd\_nyrj\_river\_stream
  - e1\_areas\_2k



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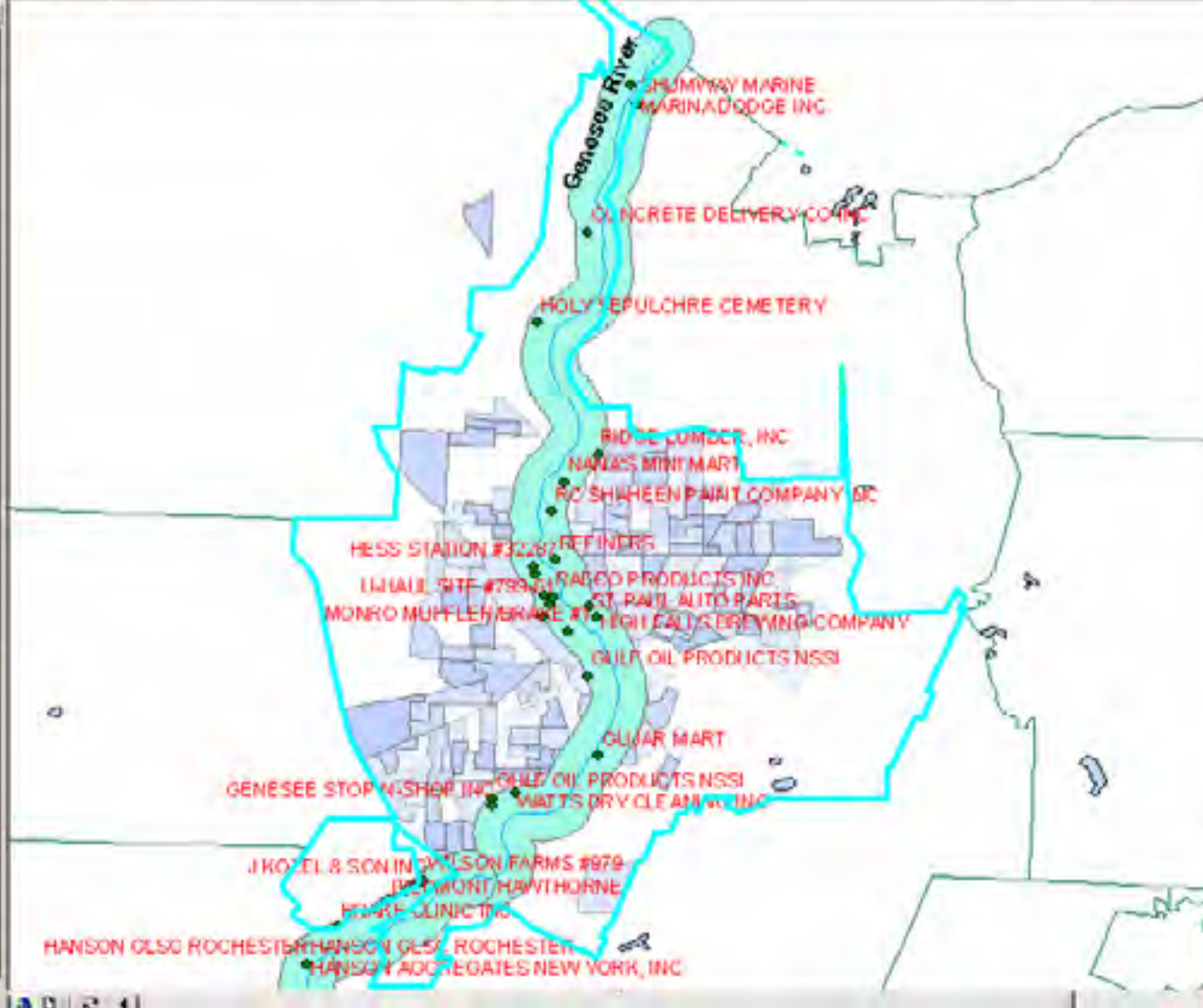
Labeling

Publisher

Construction: Horizontal

Text: Text

- Gutierrez\_Suffolk\_FY05\_LIST
- Sing\_FY05\_LIST
- HRL1 db\_Suffolk\_GeocodeAddresses selection
- db\_Suffolk\_GeocodeAddresses
- pbs\_bank\_final PBS in WHPA 500 m
- ny\_uc insp targets (Non Sewered)
- streets\_nynj\_esri04
- Suffolk Streets only
  - < call other values >
  - Cfcc
  - A11
  - A31
- nhd\_nynj\_river\_stream
- e1\_areas\_3k
- nhd\_nynj\_lake\_pond
- nhd\_nynj\_wb\_regions
- nysdot\_bnd\_county
- nysdot\_bnd\_county
- muni\_bnd



# Conclusions

- EPA R2's UST program has increased accuracy & efficiencies using GIS
- The UST/UIC's GIS program is adaptable & flexible when addressing other regional & national priorities
- GIS can assist in ensuring sensitive areas are protected