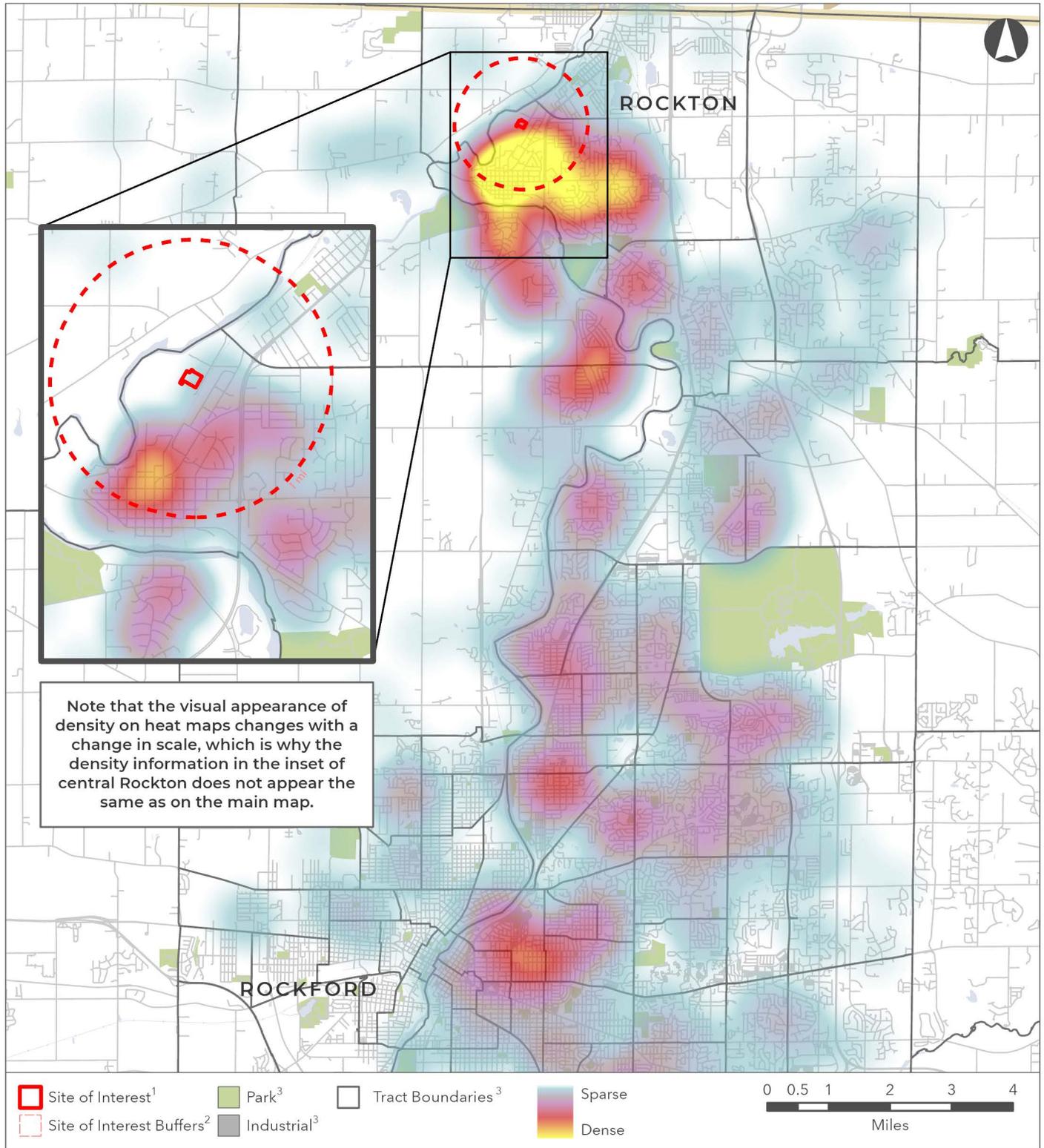


GRASP Figure Examples

ATSDR's GRASP analysts can work with health assessors to create GIS maps with multiple layers depicting information, such as locations of contamination sources, areas of different concentrations of environmental contamination (e.g., plumes), population densities and other relevant demographic characteristics, and exposure points. These data can be shown for large areas, such as counties or large cities, and smaller locations, such as census tracts or blocks. The examples in this file are included to show health assessors some of the types of images GRASP can create during the PHA process.



Data Sources: ¹ATSDR GRASP Hazardous Waste Site Boundary Database. ²ATSDR GRASP. ³Esri.
 Projection: NAD 1983 StatePlane Illinois East (US Feet)



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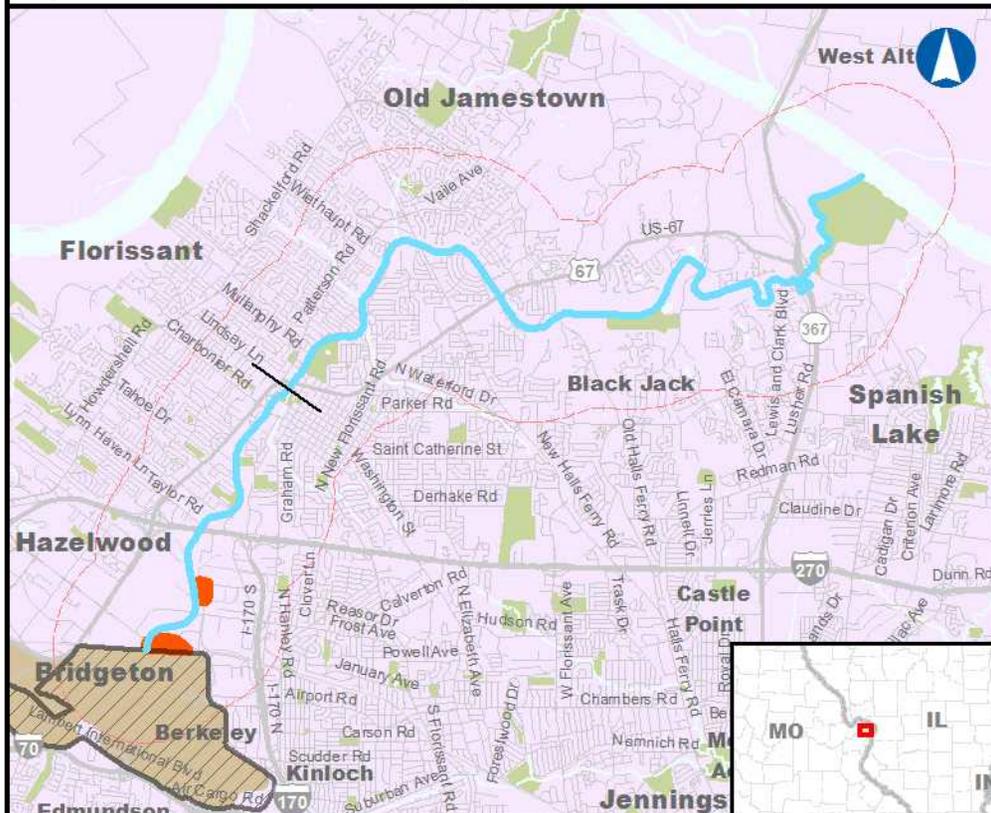


Geospatial Research, Analysis
 and Services Program

Coldwater Creek Site Demographic Snapshot

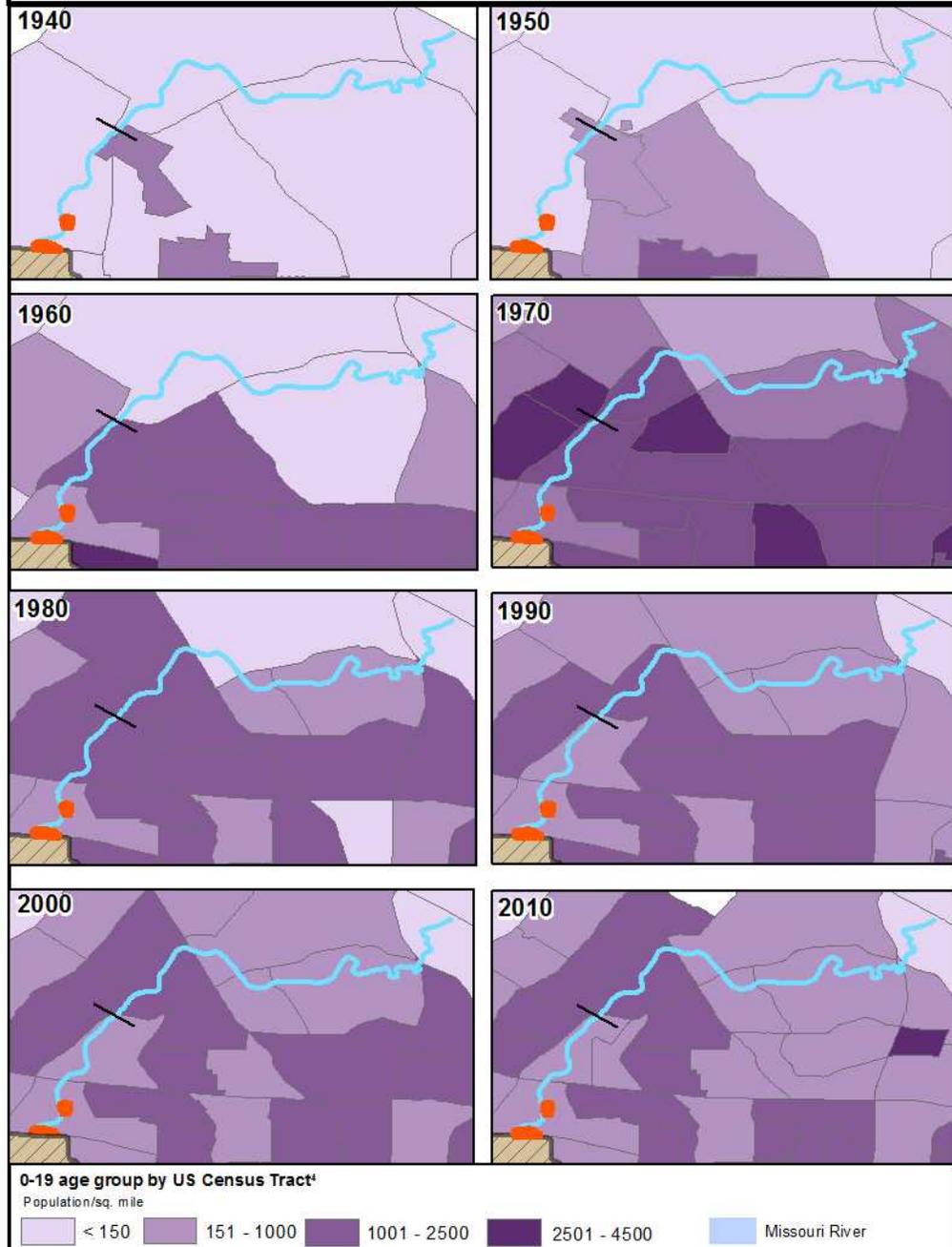
Site Vicinity Map

Snapshot within 1 mile buffer of site boundary



0-19 Age Group Population

by US Census Tract



Demographic Statistics^{4,5}

Within 1 mile buffer of site boundary

| | Total Population | White | Non White ⁶ | Children Aged 6 and Younger ⁷ | Adults Aged 65 and Older | Females Aged 15 to 44 | Total Housing Units |
|------|------------------|--------|------------------------|--|--------------------------|-----------------------|---------------------|
| 1940 | 3,498 | 3,344 | 152 | 273 | 242 | 762 | 880 |
| 1950 | 7,550 | 7,288 | 263 | 1,069 | 388 | 1,816 | 1,874 |
| 1960 | 26,574 | 26,401 | 186 | 4,638 | 852 | 5,870 | 7,092 |
| 1970 | 67,115 | 65,636 | 1,478 | 10,128 | 2,269 | 15,854 | 18,381 |
| 1980 | 65,688 | 59,319 | 6,365 | 6,081 | 4,276 | 15,864 | 20,961 |
| 1990 | 63,103 | 53,316 | 9,792 | 6,130 | 7,461 | 14,586 | 24,123 |
| 2000 | 66,962 | 48,030 | 18,935 | 6,181 | 9,430 | 14,747 | 27,140 |
| 2010 | 66,387 | 34,763 | 31,622 | 5,507 | 9,597 | 13,682 | 28,249 |

Data Sources: ¹ATSDR GRASP Hazardous Waste Site Boundary Database. ²ATSDR GRASP. ³TomTom International BV (2012). ⁴US Census 2000 and 2010. IPUMS NHGIS 1940-2010. Steven Manson, Jonathan Schroeder, David Van Riper, and Steven Ruggles. IPUMS National Historical Geographic Information System: Version 12.0 [Database]. Minneapolis: University of Minnesota. 2017 <http://doi.org/10.18128/D050.V12.0>

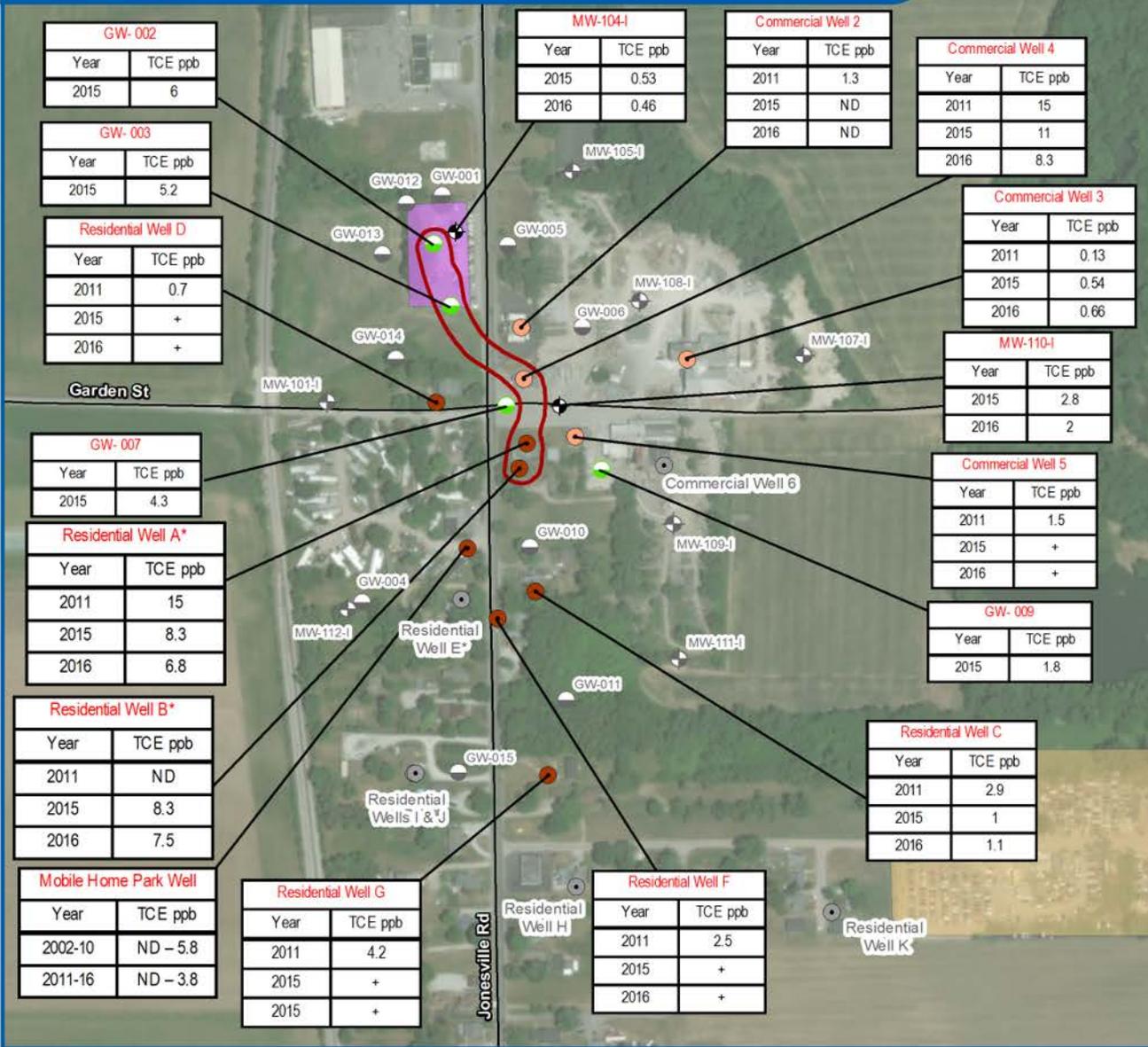
Notes: ⁵Calculated using area-proportion population estimation spatial analysis method. ⁶Non White may include: Black, American Indian and Alaska Native, Asian, Native Hawaiian and Other Pacific Islander, Some Other Race, and/or Two or More Races. ⁷Early censuses 1940-1960 children 5 and under.

Projection: Projection used for all map panels is NAD 1983 StatePlane Missouri East FIPS 2401 feet

Figure 1 - Site Layout and TCE Plume Map

Garden City Groundwater Plume

Garden City, Bartholomew County



EPA FACILITY ID: INN000508642



Sampling Locations

- Residential Well
- Commercial Well
- ⊕ Monitoring Well
- Groundwater Grab Sample Location
- Line for Trichloroethylene (TCE) Iso-concentration Greater than 5.0 ppb
- Roads
- Keil Brothers Property
- Miller Salvage Property

Notes:

1. All TCE concentrations are from 2011, 2015, and 2016 groundwater samples collected from the intermediate groundwater zone approximately 45 feet below the ground surface.
2. Grey-backed locations represent wells where TCE was not detected in groundwater.

TCE = trichloroethylene
 ppb = parts per billion [micrograms per liter (ug/L)]

'+' = Well not sampled.

ND = Not detected at or above detection limit.

** = Wells with granular activated carbon filter system



EtO concentration over time at EPA Air Monitoring Stations

Air monitoring stations west northwest of Sterigenics

Willowbrook Village Hall
(0.02 miles from site)



West Neighborhood
(0.20 miles from site)



Hinsdale South High
(0.45 miles from site)



Gower Elementary
(0.74 miles from site)



Air monitoring stations southeast of Sterigenics

Willowbrook Warehouse
(0.02 miles from site)

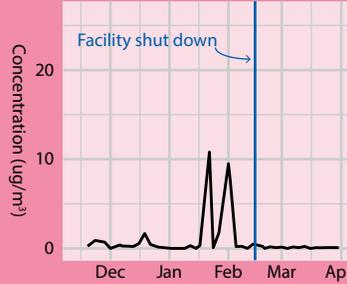


Gower Middle
(0.39 miles from site)



Air monitoring stations north of Sterigenics

Water Tower
(0.42 miles from site)



Willow Pond Park
(1.01 miles from site)

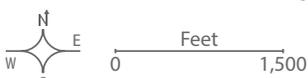


The line graphs here indicate ethylene oxide (EtO) concentration at the eight primary EPA air monitoring stations around the Sterigenics location. These eight air monitoring stations collected 24-hour air samples starting at 10:00 a.m. on the days listed in the chart at the lower left of this page. The map shows the location of these air monitoring stations, as well as two duplicate stations at the Willowbrook Village Hall and the EPA's Willowbrook Warehouse. These two duplicate stations collected samples on roughly half the days that the primary stations did. The Sterigenics facility was shut down on February 15th by the State of Illinois.

Sampling Start Dates

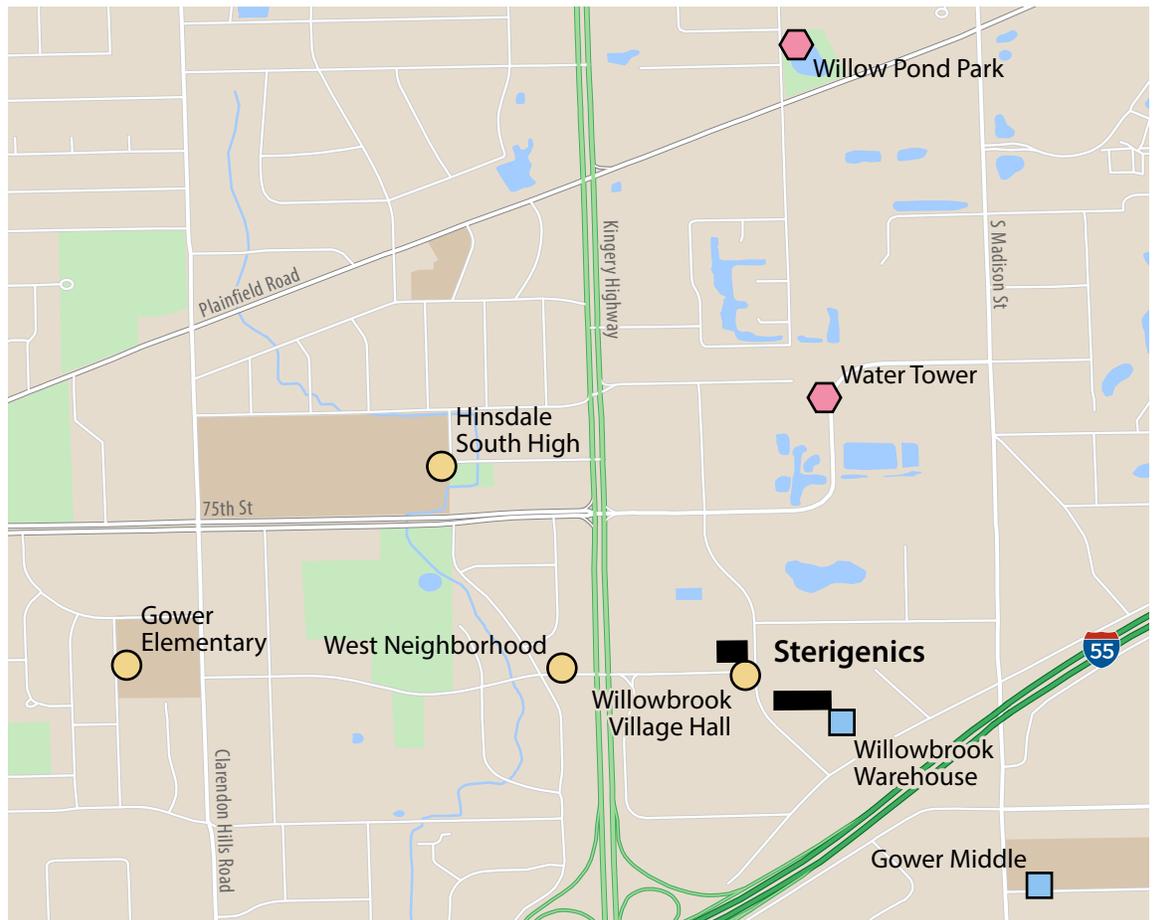
| Nov | Dec | Jan | Feb | Mar |
|-----|-----|-----|-----|-----|
| 13 | 16 | 1 | 6 | 2 |
| 19 | 23 | 7 | 10 | 6 |
| 25 | 28 | 13 | 16 | 12 |
| | | 19 | 22 | 15 |
| | | 26 | 28 | 11 |
| | | | | 14 |
| | | | | 19 |
| | | | | 20 |
| | | | | 22 |
| | | | | 23* |
| | | | | 26 |
| | | | | 31 |

*Willowbrook Warehouse and Willowbrook Village Hall only



GRASP

Geospatial Research, Analysis, and Services Program



PROJ ID 05459

Agency for Toxic Substances and Disease Registry

Division of Community Health Investigations

