

**PRE-CERCLIS SCREENING ASSESSMENT
BLOOM'S NURSERY (FORMER)
AKA: MIDDLE RIVER TERRACE PARK
BROWARD COUNTY, FLORIDA
COMET SITE ID No. COM_325946**



Prepared By:

**Florida Department of Environmental Protection
Division of Waste Management
Waste Cleanup Program
CERCLA Site Screening Section
A. James McCarthy Jr., P.G
Professional Geologist II
July 14, 2014**

PRE-CERCLIS SCREENING ASSESSMENT CHECKLIST/DECISION FORM

This checklist can assist the site investigator during the Pre-CERCLIS screening. It will be used to determine whether further steps in the site investigation process are required under CERCLA. Use additional sheets, if necessary.

Checklist Preparer: Jim McCarthy 07/14/14
 (Name/Title) (Date)

Florida Department of Environmental Protection 850-245-8984
(Phone)

2600 Blair Stone Road

Tallahassee, FL 32399-2400

jim.mccarthy@dep.state.fl.us
 (E-Mail Address)

Site Name: Bloom's Nursery (Former)

Previous Names (if any): AKA: Middle River Terrace Park

Site Location: 1329 Northeast 7th Avenue
 (Street)

Fort Lauderdale, Broward FL 33304
 (City) County (ST) (Zip)

LATITUDE & LONGTIDUE INFORMATION

Data Element	Domain/Specific Name
Latitude	N: 26 8' 36.25" / N: 26.1434°
Longitude	W: -80 8' 13.86" / W: -80.1372°
Accuracy in Meters +/-	<0.02 meter (+/- 0.01 meter)
Source Map Scale	1:24000
Collection Method	DMAP- Digital Map Interpolation
Reference Datum	NAD83 - North American Datum of 1983
Reference Point	CENTR - Center of Site or Facility containing Object of Interest Location
Collection Date	YYYYMMDD 20140708

Complete the following checklist. If "yes" is marked, please explain below.	YES	NO
1. Does the site already appear in CERCLIS?		X
2. Is the release from products that are part of the structure of, and result in exposure within, residential buildings or businesses or community structures?		X
3. Does the site consist of a release of a naturally occurring substance in its unaltered form, or altered solely through naturally occurring processes or phenomena, from a location where it is naturally found?		X
4. Is the release into a public or private drinking water supply due to deterioration of the system through ordinary use?		X
5. Is some other program actively involved with the site (i.e., another Federal, State, or Tribal program)?		X
6. Are the hazardous substances potentially released at the site regulated under a statutory exclusion (i.e., petroleum natural gas, natural gas liquids, synthetic gas usable for fuel, normal application of fertilizer, release located in a workplace, naturally occurring, or regulated by the NRC, UMTRCA, or OSHA)?		X
7. Are the hazardous substances potentially released at the site excluded by policy considerations (e.g., deferral to RCRA Corrective Action)?		X

8. Is there sufficient documentation that clearly demonstrates that there is no potential for a release that could cause adverse environmental or human health impacts (e.g., comprehensive remedial investigation equivalent data showing no release above ARARs, completed removal action, documentation showing that no hazardous substance releases have occurred, EPA approved risk assessment completed)?		X
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Please explain all “yes” answer(s), attach additional sheets if necessary: _____

- Site Determination:**
- Enter the site into CERCLIS. Further assessment is recommended (explain below).
 - A Pre CERCLIS Site Screening Assessment with Sampling is recommended.
 - The site is not recommended for placement into CERCLIS (explain below).

DECISION/DISCUSSION/RATIONALE:

The Bloom’s Nursery (Former) AKA: Middle River Terrace Park site (“the site”) is located at 1329 Northeast (NE) 7th Ave. in Fort Lauderdale, Broward County, Florida. It is the former location of Bloom’s Nursery that operated at the site from approximately 1948 to 1980. The location and existence of the nursery was confirmed primarily through a review of the site file, historical aerial photographs and State of Florida Library past Fort Lauderdale City Directories (Figures 1-4).

1.0 Site Description/Site History

The site, Bloom’s Nursery, is now located on a 3.6 acre park called Middle River Terrace Park (MRTP) with open play grassy areas, a pavilion, picnic areas and walking/jogging trails. The historic Annie Beck house is also located on the Park property. The Park was constructed sometime between 2000 and 2001. It is bordered by residential properties (homes and apartments) to the east, south, southwest and west. Vacant land is located to the north (Figures 1-4). This site was brought to the attention of the Department and Broward County by a concerned citizen during the early part of 2014.

To date, no soil or groundwater contamination assessment activities have taken place at the actual site. However, arsenic soil and groundwater contamination has been documented on an adjacent off-site property (1325 NE 7th Ave-Alabaster Real Estate) located along the southern border of the site. Contamination assessment activities at the 1325 NE 7th Avenue property were initiated in 2007. The initial assessment activities were begin as part of a pre-acquisition of the property by the City of Fort Lauderdale as part of expansion of the MRTP. The assessment activities included a number of soil and groundwater contamination assessments and have continued into a Groundwater Monitoring plan. Elevated levels of arsenic have been detected in soil and groundwater above the State Soil Cleanup Target Level (SCTL) and Groundwater Cleanup Target Level (GCTL) criteria, respectively. It is important to note that only limited testing for pesticides and herbicides has been performed on the off-site 1325 NE 7th Ave. property.

Arsenic was found in a number of the boring soil samples above the SCTLs. The highest levels of arsenic at the off-site 1325 NE 7th Ave. soils ranged from 12.1 to 34.6 milligrams per kilogram [mg/kg]. These arsenic concentrations exceeded the State SCTL under a commercial or industrial scenario of 12 mg/kg. Elevated levels of arsenic have been detected in groundwater from monitor wells located on the 1325 NE 7th Ave. off-site property. The highest levels of arsenic ranged from 198 to 1,370 micrograms per liter [ug/l]. These and other arsenic detections were above the State GCTL of 10 ug/l.

2.0 Ownership Information

According to the site file, a site walkover and the Broward County Property Appraiser, the site property (Parcel ID No. 4942 35 46 0010) is owned and maintained by the City of Fort Lauderdale.

3.0 Waste Characteristics

As part of nursery and greenhouse operations, pesticides were and are used to control diseases, insects, weeds and vertebrate pests. Pesticides can be in liquid, granule, powders or gas forms. Insecticides, weed killers and fungicides are also used to keep the plants damage free and attractive. Prior to their banning, some of organo-chlorine pesticides that were used at nurseries included DDT, Dieldrin and Toxaphene. This is documented at two other south Florida nurseries. Historical use of arsenical herbicides and pesticides is also documented. Other pesticides used in the past at nurseries included Chlordane, Endrin, α -Hexachlorocyclohexane (α -HCH) and beta (β) HCH. Soil and groundwater contamination by arsenic and pesticide has been documented at those two nurseries. Many of the pesticides are known or suspected carcinogens and are bioaccumulative.

4.0 Groundwater Migration Pathway

There are three hydro-stratigraphic units in Broward County. They include the surficial aquifer system/Biscayne aquifer, intermediate aquifer system/confining unit and the Floridan aquifer system. However, in Broward County the surficial aquifer system/Biscayne aquifer is the aquifer of concern. The surficial aquifer system, also known as the Biscayne aquifer, is composed of limestone, sandstone, shell, lime mud, silt, clay and an admixture of these materials. These sediments were deposited during the Pliocene to Pleistocene ages. These units include, in ascending order, the Tamiami Fm, Caloosahatchee Fm, Fort Thompson Fm, Key Largo Limestone, Anastasia Fm, Miami Limestone and/or the Pamlico Sand. The surficial aquifer system is the principal source of freshwater in Broward County. The Biscayne aquifer is the most productive unit of this system. Under Section 1424(e) of the Safe Drinking Water Act of 1974, the Biscayne aquifer was designated as a sole-source aquifer. This was based on the fact that it supplies at least 50% of the drinking water in the area and that there are no alternative drinking water sources. It is important to note, that the Biscayne aquifer exhibits secondary permeability as a result of solution-enlarged carbonate, grains, depositional textures, bedding planes, cracks, root molds, and paleo-karst surfaces. This includes numerous voids or vugs. As such, it is considered a Karst aquifer.

The site area is provided drinking water from the City of Fort Lauderdale and Broward County Utilities water well systems. The City of Fort Lauderdale obtains its water from 37 supply wells located within the Prospect and Peele-Dixie well fields. These wells are open to the Biscayne aquifer. Water from the City supply wells is routed to the Peele-Dixie and Fiveash Water Treatment Plants (WTPs) for treatment and distribution. The City of Fort Lauderdale water system currently serves 172,680 people. Four of the City supply wells (Wells 50, 51, 52 & 54) are located between 3.7 and 3.9 miles northwest of the site. The next closest water well systems are the Broward County 1A well field and the City of Lauderhill well field. However, these two well fields are located approximately five miles northwest of the site and beyond the 4-mile Target Distance Limit (TDL). No other community/non-community or private drinking water well systems were identified within the 4-mile TDL (Table 1). Given the typical contaminants associated with old nurseries the groundwater migration pathway may be a concern. This concern is amplified by the presence of the karstic Biscayne aquifer and a relatively large population served by wells open to the Biscayne aquifer.

5.0 Surface Water Pathway

Based on the site topographic map, the topography across the site appears relatively flat, approximately 7 to 8 feet above NGVD. However, it does appear to crown in the center of the

park. Based on the FEMA Floodplain map, this site is located outside the 500 year floodplain zone. Based on recent aerial photographs and a site walkover, the site is covered with St Augustine Grass with few impervious surfaces (pavilion, Annie Beck House and entrance road/parking areas). It is likely that most of the precipitation that reaches the surface either evaporates or infiltrates into the ground. Any excess storm water runoff is likely directed to a storm drain located near the park entrance road and NE 7th Street. It appears the City storm water conveyance system, in this area, routes storm water runoff to the Middle River watershed located approximately 0.6 mile north (South Fork Middle River) or 1.2 miles east (Middle River) of the site. However, further inquiry is needed. The South Fork Middle River connects with the North Fork Middle River to form the Middle River approximately 1.5 miles northeast of the site. The Middle River then flows south and connects to the Intracoastal Waterway (ICW) near Nurmi Isles, approximately 2.2 miles southeast of the MRTP site. The ICW at this location is also referred to as New River Sound. The ICW trends both north and south behind the barrier island. Eastern portions of the South Fork Middle River, the Middle River and the ICW are estuarine water bodies. The ICW, via the Stranahan River, connects to the Atlantic Ocean near Port Everglades approximately 4 miles southeast of the site.

No surface water drinking water intakes are located along the surface water migration pathway. The South Fork Middle River, the Middle River and the ICW are used for recreational fishing and boating. Some of the fisheries include grouper, snapper, amberjack, smallmouth bass, spotted bass and blue catfish. Eastern stretches of the South Fork Middle River are a habitat for the State designated Species of Special Concern Little blue heron (*Egretta caerulea*) as well as a habitat for songbirds and raccoons. The ICW is a habitat for the federally designated endangered West Indian manatee (*Trichechus manatus latirostris*). The manatee has also been sighted in the Middle River and the eastern portion of the South Fork Middle River. Manatee protection and speed zones exist in these water bodies. The Hugh Taylor Birch State Park is situated on the ICW north of the confluence of the Middle River and the ICW. Given the typical contaminants associated with old plant nurseries, the surface water pathway may be a pathway of concern. However, this concern is somewhat mitigated by the large dilution rates of the water bodies in the lower portion of the 15 mile TDL.

6.0 Soil Exposure and Air Migration Pathways

The site is now a 3.6 acre park called MRTP with open play grassy areas, a pavilion, picnic areas and walking and fitness trail. A soccer goal was spotted in the western end of the park. The historic Annie Beck house is also on the Park property. The park site is covered with St Augustine Grass with few impervious surfaces (pavilion, Annie Beck House and entrance road/parking areas). The park is closed from 9:00 PM to 8:00 AM. A swinging gate is located at the entrance road into the park. However, walking access to the park is unrestricted. The park is located in a mixed residential/commercial area of Fort Lauderdale. An abandoned house (1325 NE 7th Avenue) is located immediately south of the site (Figures 2, 4).

The Annie Beck House is not used for residential use. However, the house is used sometimes for community meetings. The MRTP site is used by local residents for picnicking, soccer games, walking and jogging. No summer or after school activities reportedly take place at the MRTP site. A number of residential homes or apartment complexes are located in close proximity east, south and west of the MRTP site. To date, no soil samples have been collected at the MRTP site. Although, no residential population, day-care centers, schools or terrestrial sensitive environments are documented as being on-site, this is a park used by local residents. In addition, a number of residential homes and apartment buildings are located in close proximity of the site. As a result, the soil exposure pathway may be a concern (Figure 2).

7.0 Conclusions and Recommendations

It is recommended that this site be placed on the EPA Superfund Enterprise Management System (SEMS) database and have a Preliminary Assessment (PA) completed. This recommendation is based on the following concerns and conditions.

- The presence of the vulnerable, karstic Biscayne aquifer. The Biscayne aquifer has been designated as a sole source aquifer.
- A relatively large population is provided drinking water from wells open to the Biscayne aquifer within the 4-mile TDL.
- The site is now a park used by local residents, including children, for picnicking, walking, jogging and playing soccer games.
- A number of residential homes and apartments are in close proximity to the park.

Regional EPA Reviewer:

State Agency/Tribe:

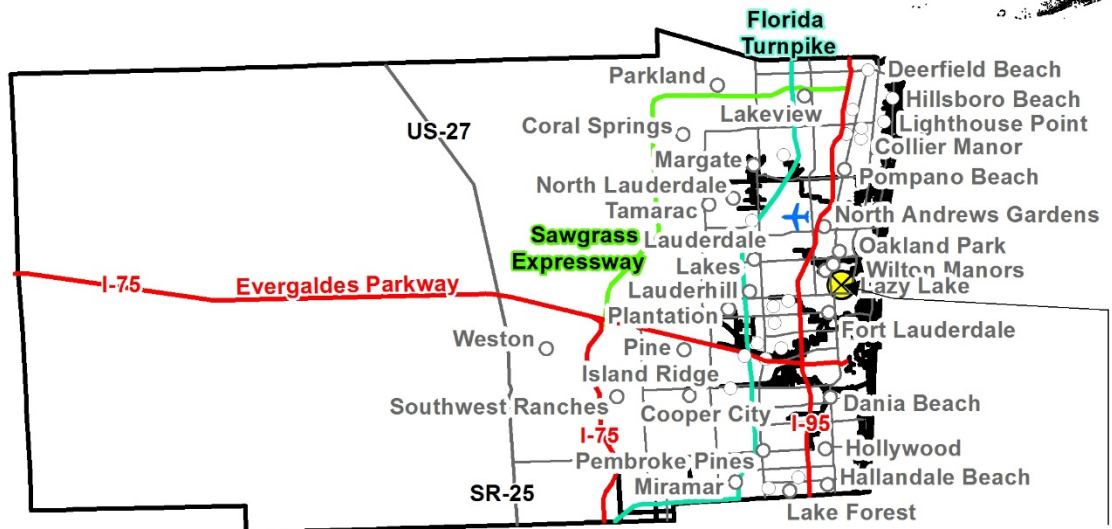
Table 1

Bloom's Nursery (Former) AKA: Middle River Terrace Park Fort Lauderdale, Broward County, Florida Estimated Number of Potable Wells/ Population Served AOC: Surficial Aquifer System/Biscayne aquifer						
Wells	0-1/4 mile	1/4- 1/2 mile	1/2-1 mile	1-2 miles	2-3 miles	3-4 miles
City of Fort Lauderdale ¹	0/0	0/0	0/0	0/0	0/0	4/18,668
Community/non-community	0/0	0/0	0/0	0/0	0/0	0/0
Private wells ²	0/0	0/0	0/0	0/0	0/0	0/0
Totals	0/0	0/0	0/0	0/0	0/0	0/0

Estimated population served by wells within 4-miles =18,668.

Note: The public well information was provided by FDEP's PWS/GIS-OTTIS Potable well search database. These locations were subsequently plotted on the 4-Mile radius database map. NE=Not Evaluated

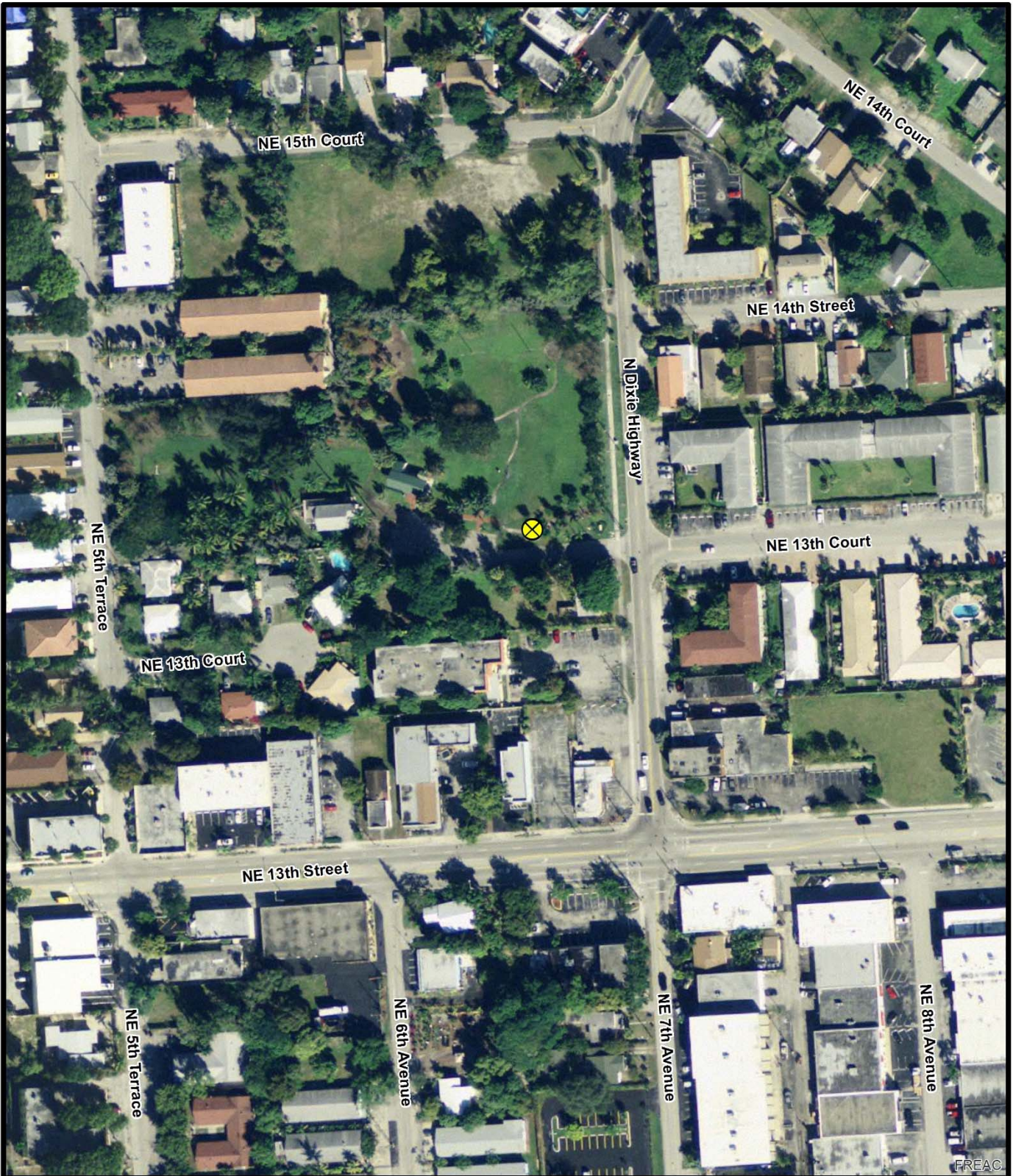
- 1 The City of Ft. Lauderdale system consists of 37 wells from the prospect and Peele Dixie wellfield serving 172,680 people. Apportionment= 172,680 people/37 wells = 4,667 people per well.
- 2 The average persons per household in Broward County is 2.62.



Bloom's Nursery (Former) aka Middle River Terrace Park Site Location

Bloom's Nursery (Former) aka Middle River Terrace Park Site
 Figure 1: Site Location Map
 1329 NE 7th Ave
 Ft. Lauderdale, Broward County, Florida 33304
 Prepared by: B.K. McClain Date: 4/24/2014





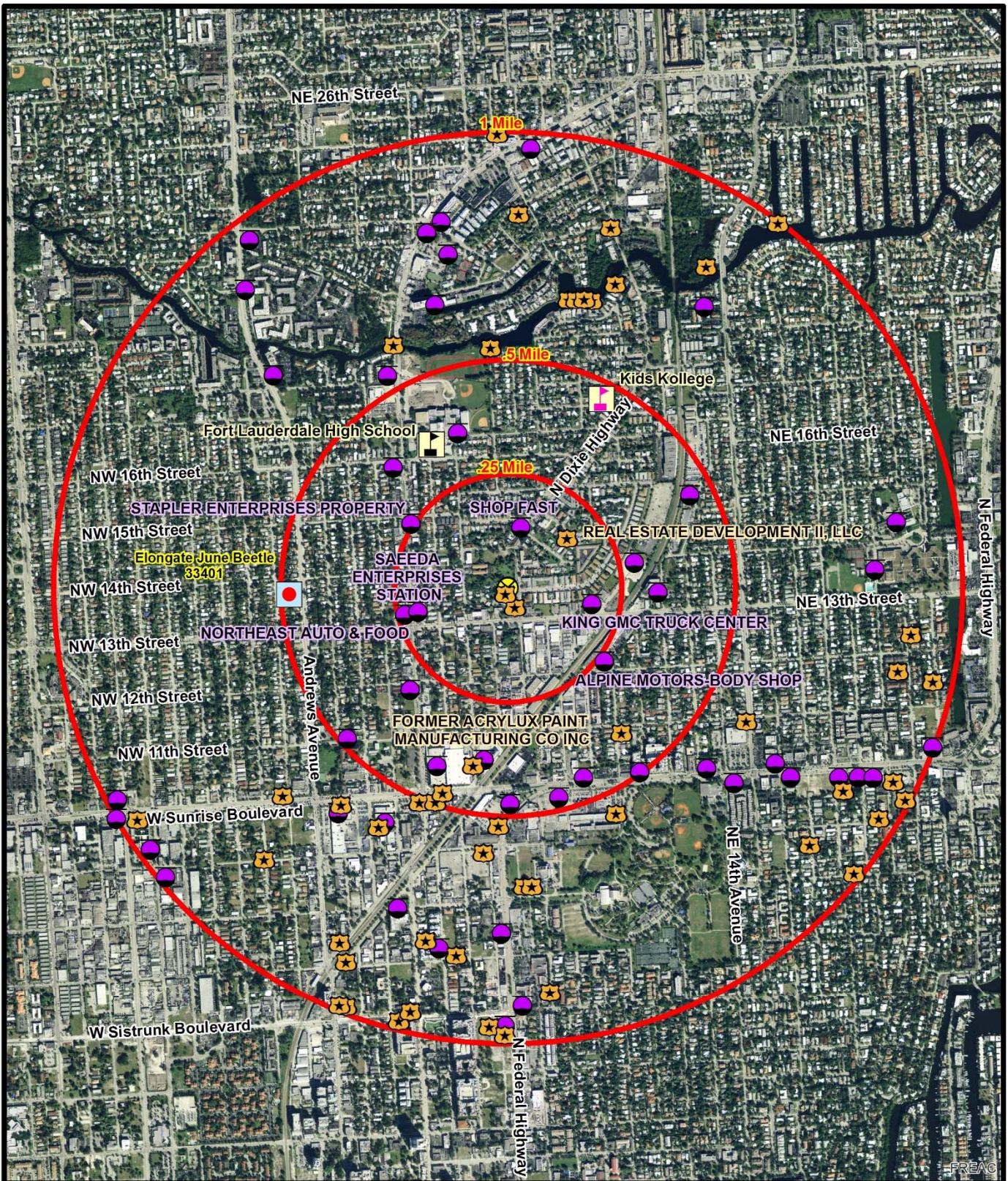
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Bloom's Nursery (Former) aka Middle River Terrace Park Site
Figure 2: Site Map
 1329 NE 7th Avenue
 Ft. Lauderdale, Broward County, Florida 33304
 (Aerial Imagery 2011-2013)
 Prepared by: B.K. McClain Date: 4/24/2014

 Bloom's Nursery (Former)
 aka Middle River Terrace Park
 Site Location

0 50 100 200 Feet





Blooms's Nursery (Former) aka Middle River Terrace Park Site
Figure 3: One Mile Buffer Aerial Map
 1329 NE 7th Avenue
 Ft. Lauderdale, Broward County, Florida 33304
 (Aerial Imagery 2011-2013)
 Prepared by: B.K. McClain Date: 4/24/2014

	Blooms Nursery (Former) aka Middle River Terrace Park Site Location
	Petroleum Contamination Monitoring (PCTS) from STCM
	COMET (Compliance and Enforcement Tracking Facilities)
	Element Occurrence
	Schools Private K-12
	Schools Public K-12
	.25, .5, 1 Mile Buffers

0 0.125 0.25 0.5
 Miles





Blooms's Nursery (Former) aka Middle River Terrace Park Site
Figure 4: 1958-1976 Historical Building Layout Map
 1329 NE 7th Avenue
 Ft. Lauderdale, Broward County, Florida 33304
 (Aerial Imagery 2011-2013)
 Prepared by: B.K. McClain Date: 5/8/2014

	Northeast 14th Court Property
	1329 Northeast 7th Avenue Property
	1325 Northeast 7th Avenue Property
	1958 Historical Buildings
	1959-1976 Historical Buildings

0 50 100 200 Feet



