

Karen Copeland  
Julia Ferguson  
Heather Furman  
Andrew Sheridan



*Chapter 6.0*

*FOREST  
HILL  
PARK*



Figure 1: Rockefeller Mansion

### History

Originally the summer retreat for John D. Rockefeller and his family, Forest Hill Park has had a noteworthy history. Famous for the Standard Trust, Rockefeller and his family bought the estate in 1873. It was originally intended to be a sanitarium, but the site was converted to a summer home after the endeavor failed. A commanding Victorian mansion was built on the site, with vistas of the lake and of Cleveland (see Figure 1: Rockefeller Mansion). The estate featured a swimming hole, bridle paths and a nine-hole golf course, but was mostly forested land. Here, Rockefeller's son, John Jr., developed a lifelong love of nature while playing.

In 1914, a tax dispute erupted when Rockefeller Sr.'s wife, Laura, fell ill and was unable to return to their winter home in New York. As the Rockefeller family was forced to stay on their property past the tax listing day, the Cuyahoga County tax commissioner tried to levy a tax on every Rockefeller property whether it was in Ohio or not. The Rockefellers won the tax dispute, and Laura recovered, but they rarely returned to the property after that. In 1917, the grand Victorian mansion burned down.

In 1923, Rockefeller Sr. transferred the

property to John Jr. for just under \$3 million, who then donated portions for local institutions such as Huron Hospital, the Masonic Temple and Kirk Junior High School. In 1938, he gifted 235 acres of the original estate to the two cities of East Cleveland and Cleveland Heights to be used as a park, and the rest became the Forest Hill subdivision, a small area of uniquely designed homes.

In the gift of the park, Rockefeller Jr. required that the plan for the park be completed by locally noted landscape architect Albert D. Taylor. Taylor designed the park in the principles of the pastoral style, with great meadows, forests, elegant stone bridges and a man-made lagoon with a boathouse. The park was opened to the public in 1942, and featured swimming areas, basketball courts, sports fields, tennis courts and picnic areas. The park was listed on the National Register of Historic Places on February 27, 1998.

### 6.1 PHYSICAL RESERVATION

Forest Hill Park is bounded by Mayfield Road to the south, Monticello Road to the southeast, Lee Road to the east, Terrace Road to the north and northwest and Superior Avenue to the west and southwest. Forest Hill Road runs Northwest through the middle of the park and physically di-

vides the park in two (see Figure 2: Park Facilities Map).

### Previous Plans

The Pressley Associates Updated Plan for Forest Hill Park is the first updated plan of the park since the A.D. Taylor Master Plan of 1938. It was completed in 1999 and further revised in 2001, more than 60 years after the original Taylor plan was completed. It respects and preserves the spirit of conservation and passive recreation present in the Taylor Plan. Yet, Taylor recognized that the passing of time would catalyze change in the function and use of the park. This is why his plan provides strict guidelines for the types of use—active, passive—their proportionality and their location within the park. He noted that “one seldom finds an area of such size possessing such diversity of topography, abundance, and variety of existing vegetation, and many other natural advantages, located within the metropolitan area of a large city.” Forest Hill successfully became a unified “country park” surrounded by East Cleveland and Cleveland Heights.

Because a limited amount of the Pressley Plan was actually implemented, Forest Hill Park continues to show signs of age and change away from its original condition. The changes occurring in the natural

environment include aging trees, erosion, rapidly growing invasive plant species and silted ponds. Some of these are tied to natural change, deferred maintenance, benign neglect and abuse. Infrastructure changes have also occurred. The visible aging and failure of drainage systems, trails, picnic areas, benches, bridges, the accumulation of trash and litter are the result of years of deferred maintenance and benign neglect. Limited city budgets prevent attentive care of the park.

Existing conditions were catalogued in 1997 and 1998 as part of the background research, inventory and analysis of the Pressley Plan. Their inventory and analysis acknowledges a great variety of conditions including new and old facilities as well as deteriorating trails, waterways, soils and vegetation. Because of the extensive needs, Pressley advocated prioritizing the “most serious conditions which make Forest Hill Park uninviting, inaccessible and suggestive of danger and neglect.”

The 1999, the Pressley Plan played an important role in categorizing and recommending needed infrastructure and landscape improvements to the park. Specifically, the needed replacement of the Dugway Valley outfall (old utility system), erosion control on the steep slopes surrounding the Dugway Valley and con-

trolling the invasive plant species population were high priorities. The outfall was rebuilt and modernized, invasive species were sprayed with herbicides and erosion control mechanisms were put in place as a result of Clean Ohio Conservation Funds granted to the city of Cleveland Heights in October of 2001.

## 6.2 BUILT ASSETS

### *Previous and Existing General Land Uses*

Tables 1, 2 and 3 quantify the types of land use in Forest Hill Park. The different types of land uses are protected passive, accessible passive, active, water and support. The tables are adapted from the Pressley Updated Plan and show land use ratios at three different times- Taylor Era, By 1950- As Built and 1998- Pressley Inventory. Protected passive and accessible passive use areas are clearly the largest areas. According to the 1998 Pressley Inventory, protected passive and accessible passive comprise 216.4 of the 259.9 acre park or 83 percent of the entire park. This is 2 percent lower than the originally planned proportion in the Taylor Plan.

The current structure and function of land uses in the park illustrates that active and passive uses can coexist well together. Active and passive users need to respect

each other and the park. Consistent users of the park are the first line of stewards and should act as such.

### *Accessibility and Parking*

Vehicular and pedestrian entries are important for accessing the park. Having an inventory is important in assessing current and future needs. Table 4 provides data on vehicular entry, pedestrian entry and parking lots according to the Taylor Plan, As-Built by 1950 and according to the Pressley data from 1998. The parking lots are mostly in good condition. However, the Terrace Road entrance and parking area are in need of repair (see Figure 3: Terrace Road Parking Lot).

The function of certain parking lots needs reassessment by studying the traffic flow in and out of parking lots at different times during different days of the week. It should be noted that there is an oversupply of parking. The noise and smell of vehicles automatically throws the passive nature of the park into flux. Vehicles should have accessibility to the park but a reemphasis on pedestrian accessibility and the passive nature of the park questions the purpose that overly-large and under-occupied parking lots serve.



Figure 3: Terrace Road Parking Lot



Figure 4: Boathouse

#### *Vehicular Access*

The 1938 Taylor Master Plan indicated that vehicular access should be limited to parking lots. The Pressley Plan agrees with this and sets forth a series of guidelines that should be followed. They include:

- Parking lots should not allow vehicular access to citizens beyond the limits of the parking lot.
- Vehicular access should be clearly signed with times of use and detailed restrictions.
- Access by vehicle into the park should be restricted to maintenance, emergency or police use.
- Off-trail or off-path vehicular movement, even by authorized police and maintenance vehicles, should be discouraged unless it is an emergency.
- Development of a system of gated vehicular entries and bollards at pedestrian entrances should control vehicular access in the future.

These are all valid points. Bollards and gates have been put in place at some of the pedestrian access points. Signage is dilapidated, not uniform and needs updating. The presence of safety and parks maintenance officials would curtail unauthorized vehicular access. Site visits indicate a potential oversupply of parking on both the

east and west sides of the park.

#### *Pedestrian Access*

Pedestrian access can and should improve. Increased accessibility and increasing the number of passive users should have a positive effect on the general upkeep and condition of the park. Increased signage and maps of trails and amenities are important, informative tools to users. A map of Forest Hill Park and the other nearby trails and parks (Cumberland Park, Cain Park, Lake View Cemetery, Rockefeller Park and Lake Front Trail) could attract a wide variety of users. Signage along the route from park to park would create important multiuse (run, walk, and bike) linkages. Increased connectivity between parks could increase the appeal and use of existing trails in Forest Hill Park. A requirement here includes peaceful coexistence between vehicles, bicycles and pedestrians.

#### *Buildings*

Table 5, adapted from the Pressley Plan, provides a list detailing condition, concerns, updates and current use of park structures. There are a total of thirteen buildings including comfort stations, utility houses, shelters, a boathouse, a concession stand, the community center and others. While only three are maintenance/utility

structures, five are open to the public and a total of nine are boarded up and closed to the public due to lack of maintenance, benign neglect or disuse over time. These structures attract vandalism and vagrants. Because many are architecturally significant, assessing their future should include potential reuses as well as demolition (see Figure 4: Boathouse).

#### *Bridges*

There are two bridges in the park. The Rockefeller Bridge is in a secluded area while the Forest Hill Boulevard Footbridge is a consistently used bridge spanning over Forest Hill Boulevard. Both are in need of regular maintenance.

#### *Active Recreation Structures*

There are four clustered baseball diamonds, a soccer field and tennis courts located on the Cleveland Heights side of the park. Three baseball diamonds and tennis courts are located on the East Cleveland side of the park. All of the baseball diamonds with the exception of the two unfenced diamonds on the East Cleveland side are in good condition. The Cleveland Heights tennis courts are in excellent condition. The East Cleveland tennis courts are unusable in their current state (see Figure 5: East Cleveland Tennis Courts).

### *Passive Recreation Structures*

A number of picnic sites border the Meadow Vista on the East Cleveland side of the park. They include park benches, tables and grills. Benign neglect has resulted in leaves and branches littered throughout these sites. Low cost maintenance of these sites will make them much more appealing.

### *Paths and Trails*

The paved park paths are wonderful amenities for walkers, joggers and runners. However, lack of consistent maintenance has resulted in gradual decay of the paved trail system. Certain sections are in need of repair. A little-used wilderness trail begins on the Cleveland Heights side of the park and travels parallel to the Dugway Brook (See Figure 6: Dugway Trail). Trail signs and maps are needed. The trail functions primarily as a walking trail but the opportunity of turning it into a pedestrian-friendly mountain bike trail is intriguing.

### *6.3 SERVICES*

A wide variety of organized sports teams and recreational groups use the baseball diamonds, soccer field and tennis courts throughout the year. They are a valuable asset for the active youth in Cleveland Heights and East Cleveland.

The open space and recreational amenities are available to community members and all visitors. Structured educational and recreational programs are available at the Cleveland Heights Community Center. The community center hosts a variety of educational and community oriented activities. These function independently of the park. Research indicates that community involvement centered on Forest Hill Park is inconsistent. The community center amenities include an Olympic-sized ice rink, athletic field house and fitness center, senior activity center, summer day camp and meeting and general recreation rooms.

### *6.4 EVALUATION OF ASSETS*

As illustrated above, Forest Hill Park is endowed with many distinctive qualities and natural assets. The history, terrain and ecology of the park offer a unique park experience. The historic buildings, trails and recreational facilities present significant potential to become valued community assets. However, budget constraints and the consequent benign neglect limit the quality of current conditions. Furthermore, actual and perceived safety problems are exacerbated when built assets fall into disrepair.

### *6.5 SERVICES VALUATION MODEL*

Facility rental data for athletic fields in the park and rooms at the community center were unavailable. Furthermore, despite best efforts, information regarding park usage for non-structured physical fitness (number of individuals using the park at least three times a week for physical fitness) was unavailable. Because of this, the social value of the park as calculated by the social valuation model is zero. However, site visits indicate that the park provides great social value to individuals and groups that use non-structured areas for recreation, clubs and teams that use baseball diamonds, soccer fields, and tennis courts for structured activities.

### *6.6 THREATS TO BUILT ASSETS*

There are several types of contemporary uses that, to a certain extent, have changed the character of the park and the surrounding neighborhood. They include:

- **Adjacent Land Use:** There are several commercial land uses on Mayfield, Monticello, Lee and Terrace Roads and residential in the remaining areas. Ninety-four percent of the land surrounding the Dugway Brook watershed, which flows through the Park, is developed.
- **Structures,** most notably the active

- recreation baseball fields, are character changing.
- Automobiles are more noticeable. Empty parking lots infringe on the natural systems.
  - Organized and institutionalized sports have changed passive areas into active areas. Decaying active recreation areas are glaring examples of benign neglect.
  - Benign neglect has effected much including the condition of parking benches, buildings, trail condition, erosion, tree condition, and runoff.
  - Trash dumping occurs in the park and can visually devalue an otherwise nice area.

Joggers, sports teams and other recreation users can use the park amenities as long as they do not compromise the physical condition of the trail system and the existing natural systems. The active and passive accessible use areas provide patrons with the ability to enjoy the natural beauty and relieve the park provides from the urbanized surroundings.

#### 6.7 RECOMMENDATIONS FOR BUILT ASSETS AND SERVICES

Further assessment of all physical assets is necessary. Benign neglect and “deferred maintenance” as a result of limited city resources in both East Cleveland and

Cleveland Heights is a problem. The overarching goal is to enhance safety and the user-friendly features of Forest Hill Park. These components include:

- Regular Park maintenance of physical infrastructure, which will enhance appearance and safety. Assessment, rehabilitation, replacement or removal of physically decayed structures including buildings, benches, paths, picnic areas and active recreation sites.
- Increased signage of park features and park maps at several points in the park.
- Increased signage between nearby parks which will enhance the connectivity and network of parks in the area, which could increase interest and usage.
- Parking lot analysis- Are they oversized and underused?
- Assessing pedestrian access points to determine their adequacy in relationship to population.
- Coordinated maintenance between East Cleveland and Cleveland Heights.

These goals are in line with the Taylor Plan preservation emphasis. They respect the historical heritage of the Park and the ecological systems vital to its survival.

The Cleveland Metroparks mission statement focuses on conservation, education

and recreation. All of the proposed goals respect these initiatives. Forest Hill Park is not a Cleveland Metroparks Reservation and does not have to adhere to their principles. However, with its limited maintenance budget, preservation and recreation are the main priorities. Given the current condition, respect for the history and natural assets of the park is quite evident.

#### 6.8 SOCIAL CONTEXT

##### *Boundary Definition*

The social boundary for Forest Hill Park includes a large residential area and a few institutional and other types of land uses. The study area boundary is Mayfield Road on the south, North Taylor on the east, and the Norfolk-Southern/CSX railroad tracks on the north and west. The boundary encompasses all or part of three census block groups in the City of Cleveland, 11 census block groups in the City of Cleveland Heights, and 19 census block groups in the City of East Cleveland.

This boundary takes into consideration the vehicular and pedestrian access points to the park, as well as the surrounding public transportation infrastructure made available via the Greater Cleveland Rapid Transit Authority. GCRTA bus numbers 7, 9, 28, 37, 40, and 41 provide service

near the park, as does the RTA Healthline and Rapid Redline. Multiple RTA stations are within walking distance of the physical park boundaries. However, the hostile pedestrian conditions and a lack of supporting infrastructure such as crosswalks and pedestrian bridges discourage a large amount of foot traffic in and out of the park.

The Cleveland Heights Community Center sits just beyond Forest Hill Park at the southern end on Mayfield Road. Again, barriers to access along this busy street may discourage a large amount of foot traffic accessing the park from beyond Mayfield Road. A small commercial area on this portion of Mayfield Road includes two large auto dealerships, a coffee shop, and other small retail and service businesses.

## 6.9 NEIGHBORHOOD INVENTORY

### *Surrounding Land Use*

Most of the land uses surrounding the park are residential or institutional. On the northwestern border of the park in East Cleveland is the recently completed Kirk School; Huron Hospital is located across Terrace Road from the park just beyond multiple high-rise apartment buildings. Park access is limited in these areas, and

pollution and safety also present issues. The McGregor Home, an adult rehabilitation center and assisted living community, is located at the northeast corner of the park in East Cleveland. Southwest of the park in Cleveland Heights is Lake View Cemetery. Beyond the park to the south, are the Cleveland Heights Recreation Center and a long standing commercial retail district along Mayfield and Lee Roads. The remainder of surrounding property is residential, with the bulk of the single family residential properties located in the Forest Hill subdivision (see Figure 7: Land Use Map).

## 6.10 POPULATION AND HOUSING CHARACTERISTICS

### *Current Demographic Data*

Two-thirds of Forest Hill Park sits within East Cleveland, a city with a total population in 2000 of 27,217; 94.16 percent of the population is black, 5.21 percent is white, and the remaining two thirds of a percent are American Indian, Asian/Pacific Islander, Hispanic, or classified as 'other.' There were 11,222 households in East Cleveland in 2000. 64.46 percent of occupied housing units in 2000 were renter-occupied. East Cleveland is an economically depressed city that suffers from a high poverty rate and low levels of educa-

tional attainment beyond high school. East Cleveland's 1999 poverty rate was 31.97 percent, with a child poverty rate of 45.74 percent. 4.79 percent of the city's population have attained an associate's degree, 5.02 percent have attained a bachelor's degree, and 3.52 percent have attained a graduate degree or higher. Average home value in 2009 was \$64,370.

The remaining one third of Forest Hill Park is within the City of Cleveland Heights, which had a 2000 population of 49,958 living in 20,932 households. Cleveland Heights is more racially diverse than East Cleveland: 42.29 percent of the 2000 population is black, 54.25 percent is white, 2.16 percent is Asian/Pacific Islander, 1.58 percent is Hispanic, 0.17 percent is American Indian, and 0.68 percent is classified as 'other.' Renters live in 37.89 percent of the occupied housing units. The poverty rate in 1999 was 10.64 percent, and the child poverty rate was 10.93 percent. 5.14 percent of Cleveland Heights residents have an associate's degree, 24.68 percent have a bachelor's degree, and 25.32 percent of residents have a graduate or professional degree. Average home value in Cleveland Heights in 2009 was \$147,505.

The demographic characteristics of the social boundary around Forest Hill Park are fairly consistent with the demograph-



Figure 5: East Cleveland Tennis Courts



Figure 6: Dugway Trail

ics of East Cleveland. The median age for the 24,817 individuals living in the social boundary is 36. Average household size is 2.29 peoples. 10.75 percent of the population 25 years old and over has a bachelor's degree, and 13.61 percent are unemployed. 70.11 percent of housing units are renter-occupied, and average household income is \$43,341.52.

#### *Projected Demographics*

Future projections of demographic data show the area increasing slightly in population to 25,279 in 2014, then declining again to 22,779 in 2019. The rate of attainment of a bachelor's degree is expected to increase slightly to 11.52 percent by 2014, but unemployment is also anticipated to rise to 14.31 percent. The percentage of housing units occupied by renters is anticipated to increase to 77.57 percent. Tables 6 and 7 give detailed information about these demographic variables by city. Figures 8, 9, and 10 provide maps detailing education, race and population within the study area.

#### *Housing Characteristics*

The housing stock that surrounds Forest Hill Park is older, on average, than that of the surrounding Metroparks Eastern Planning Zone. The average age of a house is

94 in East Cleveland and 81 in Cleveland Heights; the average for the Eastern Zone is 61 years. Forest Hill subdivision to the east of the park is maintained in general good condition, but none of the neighborhoods surrounding the park have escaped the sharp decline in investment and population that has occurred in this area since the creation of the A.D. Taylor Plan.

Of East Cleveland's 1,659 acres (6.33 percent), 105 currently sit vacant, as do 82.35 of Cleveland Heights' 4,242 acres (1.94 percent). Both cities have been affected by the recent mortgage crisis and the number of foreclosures has risen steadily from 2003 to 2008. East Cleveland had 2,151 foreclosures and Cleveland Heights had 1,897 foreclosures from 2000 to 2010. 600 of the East Cleveland foreclosures and 113 of the Cleveland Heights foreclosures were within the social study boundary area. The City of Cleveland had 27,801 foreclosures from 2000 to 2010, 21 of which were within the study area. Figures 11, 12, and 13 show a twenty-year foreclosure trend in the demographic study area and the surrounding neighborhoods.

#### *6.11 HOUSING VALUATION MODEL*

By utilizing the economic value model, we can determine the effect that the proximity of the park has on the single family home

property tax revenue for the two separate communities. Many of the surrounding residential properties are not single family, and the non-residential adjacent land uses around the park (such as the school and cemetery) also reduce the number of single family households towards which this model can be applied. In addition, the model does not take into account the effect of foreclosures and vacancies on the property tax revenue. With these limitations in mind, we can estimate that the assumed increase in property tax revenue in Cleveland Heights due to increased property value in proximity to the park is \$231,350. In East Cleveland, this effect is estimated to be valued at \$496,736. Values are based upon the number of single-family homes located within 200-foot wide buffer zones surrounding the park.

The greatest increase in property tax revenue attributable to the park is between 400-800 feet away in East Cleveland and at 1,500 feet away in Cleveland Heights. The positive effect on property tax revenue attributable to the location of the park is smaller than expected for a park of this size for multiple reasons, most prominently the low number of single-family residences in the boundary area, and perceived and real safety issues related to crime in the park (see Figure 14: Property Tax Revenue).



### 6.12 COMMUNITY GROUPS AND GOVERNMENT AGENCIES

Friends of Forest Hill Park and the East Cleveland Park Association are the two community groups most invested in the maintenance and improvement of Forest Hill Park. Neither of these groups has a substantial budget nor supporting staff to invest in continued improvements of educational and recreational services in the park. In the past, Friends of Forest Hill Park has collaborated with ParkWorks to provide educational and recreational opportunities such as Arts Week and Health Walk 2000, but in recent years programming at the park has become virtually nonexistent. East Cleveland Parks Association is a non-profit organization with the three-fold mission: to 1) restore and preserve Forest Hill Park; 2) facilitate appropriate programming in the park; and 3) use the park for community renewal.

East Cleveland Parks and Recreation Department and Cleveland Heights Parks and Recreation Department manage the park. Cleveland Heights also manages the nearby Cleveland Heights Community Center, which offers recreational and fitness opportunities to Cleveland Heights residents. Currently, Cleveland Heights and East Cleveland do not collaborate efficiently regarding maintenance and programming in

the parks.

Investigating possible collaborations with East Cleveland City School District and Cleveland Heights/University Heights City School Districts may yield exciting educational and service learning opportunities. Both school districts have volunteer requirements for their students to graduate; utilizing high school students to conduct general park maintenance is an effective way to procure low-cost maintenance services and provide the students an opportunity to learn about forestry and environmental sciences.

### 6.13 THREATS TO SOCIAL CONTEXT

The largest threat facing Forest Hill Park is a perceived and real safety issue, particularly during after-hours in the park. Safety issues related to the park span from concerns for pedestrian and cyclist safety when accessing the park to problems related to drugs and violence. The installation of safety measures such as better lighting around recreational facilities and the installation of “Blue Phones,” which call 911 when picked up, would improve safety in the park. In addition, increased police, especially after dusk, will improve safety for park visitors. Assessing the function of unused buildings that house vagrants and other structures that present safety issues

is also important. Improved maintenance that creates a more welcoming visiting environment will have the effect of providing more eyes on the park to watch for criminal behavior.

### 6.14 RECOMMENDATIONS FOR SOCIAL CONTEXT

The area surrounding Forest Hill Park will likely continue to be low-income in future years, and considerations of the current abilities of the East Cleveland and Cleveland Heights governments to maintain the parks will affect future planning. Cleveland Heights currently has a greater ability to fund park maintenance than the City of East Cleveland, but both governments should seek to collaborate with each other and outside groups. Goals for future planning processes in the park should include:

- Collaboration between East Cleveland and Cleveland Heights Parks and Recreation Departments to streamline maintenance and provide consistency in signage and way-finding (see Figures 15 and 16: Non-Uniform Signage)
- Improved safety in the park, including provisions for safe pedestrian and cyclist access
- Improved maintenance of park facilities such as picnic areas and Dugway Brook

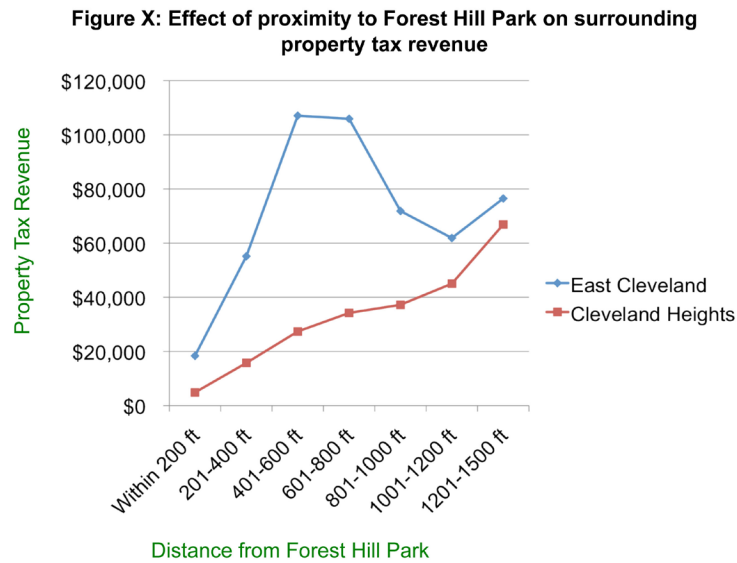


Figure 14

- Service-learning programs should be developed in collaboration with local school districts to provide educational opportunities to students and reduced costs of park maintenance

As Forest Hill Park is not part of the Cleveland Metroparks system, future planning goals need not adhere to the Metroparks three-fold mission of conservation, education, and recreation. However, improving access to and safety in the park will certainly improve recreational opportunities to area residents, and partnering with local school districts will allow for greater conservation and education to occur with the boundaries of Forest Hill Park.

### 6.15 ECOLOGICAL CONTEXT

#### *Boundary Definition*

The ecological boundary largely follows the physical boundary. Forest Hill Park is entirely surrounded by either residential or commercial properties. Cumberland Park is the closest natural space. It is directly south of Mayfield Road and the Cleveland Heights Community Center. Cain Park is a little further south and east of Forest Hill. Lake View and Mayfield Cemetery are to the southeast and Rockefeller Park is approximately three miles to the east. Invasive species are not subject to strict

boundaries. Varieties are known to grow throughout the park and the surrounding neighborhoods.

### 6.16 NATURAL RESOURCES INVENTORY

The Dugway Brook watershed extends beyond the park. It travels through several cities and enters Forest Hill from the south and travels northward to Lake Erie. Topologically diverse terrain effectively provides boundaries by type within the park. The Dugway Brook is located in a wooded, steep valley. Large open meadows exist as well as thickly forested areas. The park is approximately 40 percent forest and 45 percent meadow. The remainder is currently developed for recreational activities.”

The Davey Resource Group completed an Ecological Inventory Report in 2003 that yielded critical ecological data about the Dugway Valley on the Cleveland Heights side of the park. It not only provides detail regarding the physical condition of the land, but also the Dugway Brook and the aquatic and terrestrial animal communities around it and within the park.

#### *Forest*

A diverse variety of plant life exists. In the

forested sections, mature trees provide a healthy canopy. Sugar maple and beech trees line the edges of the Dugway ravines. Mature oak and chestnut trees also line the ravines, but are also plentiful in the plateau areas surrounding the meadows. Several rare and unique species exist in the park as well (see Figure 17: Trees in the Great Meadow).

Some of the rare species harmed by invasive species include Wavy Hair-grass (*Deschampsia flexuosa*), With-rod (*Viburnum cassinoides*), Dry Woods Sedge (*Carex artitecta*), Spikenard (*Aralia racemosa*), American Chestnut tree (*Castanea dentata*) and Matricary Grapefern (*Botrychium matricariaefolium*). Over 450 species of plants have been identified in the park. In addition, the Dugway Valley is within the range of the federally endangered Indiana bat (*Myotis sodalis*). The forest may be important to the migratory route of the bats. Figure 18 shows the total area of tree canopy cover in Forest Hill Park.

#### *Wetlands*

Technically, there are no wetlands in Forest Hill Park. However, several less than optimal drainage areas (specifically around the ball fields on the Cleveland Heights side) are challenges. However, they provide an opportunity to create wetland-centered so-

lutions.

### Hydrology

The Dugway Brook is the main hydrologic feature. The Dugway Brook watershed consists of an East Branch and West Branch. The watershed starts at the eastern edge of University Heights and travels northwest through the city of Cleveland Heights, into the city of Cleveland and enters Lake Erie in Bratenahl. The watershed exists in and collects water drainage from seven municipalities covering an 8.7 mile area. The municipalities are: Bratenahl, Cleveland, Cleveland Heights, East Cleveland, Shaker Heights, South Euclid and University Heights. Forty-five percent of the watershed is in Cleveland Heights (see Figure 19: Dugway Brook Watershed).

In 2006, an estimated 94 percent of the land within the Dugway Brook Watershed is completely developed. The undeveloped land consists of Forest Hill Park and other undeveloped areas (may include forested, open green space and wetlands). Eighty-two percent of the developed land is medium density residential and the remaining twelve percent is devoted to commercial, industrial or institutional purposes.

Forest Hill Park is one of the few locations where Dugway Brook flows above

ground. The other locations include Lake View Cemetery in Cleveland Heights and Bratenahl. The majority of it, however, runs through storm sewers that are the result of a highly urbanized area. Although the Dugway Brook watershed is divided into an east and west branch, only the eastern branch runs through Forest Hill Park and consists of the main ancillary branch and a tributary culvert that travels from the lagoon area down a spillway and into a stream that connects to the Dugway Brook (see Figure 20: Dugway Brook).

### Aquatic and Animal Life

The Davey Report catalogues a wide range of animal life present in the Dugway Valley and other areas of the park. Benthic Macroinvertebrates were studied along two study sites of the Dugway Brook in 2003. They are often studied to measure the health of a watershed ecosystem. No fish were seen or observed in the Dugway Brook. The lagoon; however, contains fish, ducks and geese.

Terrestrial vertebrates were also part of the report. Within the amphibian and reptile classification, two kinds of salamanders were observed: northern two-lined and northern dusky. They are commonly found in wooded areas adjacent to rocky streams. American toads and green frogs

were also observed. They are known to tolerate urban environments well.

Of the winged mammals, the bat population within Forest Hill Park is perhaps the most intriguing. Eastern red and big brown bats were caught and recorded. Big brown bats are known for their ability to tolerate urban conditions. Meanwhile, red bats prefer a solitary existence in wooded areas not normally close to urban areas. Rounding out the list of observed vertebrates are opossum, groundhogs, skunks, white-tailed deer, raccoon, eastern grey squirrel and chipmunk.

### 6.17 ECOLOGICAL VALUATION MODEL

The forested portion of the park offers environmental services that are often overlooked when assessing the value of a natural system. The ecological valuation model, based upon research conducted by the New Jersey Department of Environmental Protection, provides a method for determining the monetary value of these ecosystem services. Of the parks 259.9 acres, 109.2 are protected forests that provide \$832,038 annually in ecosystem services including air quality maintenance, stormwater control, biodiversity and habitat creation, and soil formation. Additionally, over their entire lives, these forested



Figure 15: Non-uniform Signage



Figure 16: Non-uniform Signage

acres will provide \$1,726,822 in carbon storage services and \$8,272 in hydrological services (see Table 8: Ecological Valuation).

### 6.18 THREATS TO ECOLOGY

#### *Invasive Species*

A variety of ecological stressors diminish the health of the entire park. Vegetation contends with a wide variety of fast spreading invasive species. Garlic mustard is a significant offender (see Figure 21: Garlic Mustard). Japanese knotweed, tree-of-heaven and knotweed threaten the unique and endangered plant species.

#### *Deferred Maintenance*

This includes the inability to take proper care of dead sticks and debris created from pruning shrubs and trees. One example of this is the large pile of cut down trees and branches placed in the middle of the Meadow Vista on the East Cleveland side (see Figure 22: Woodpile). The lagoon area has deteriorated as well.

#### *Pollution*

The negative externality of pollution is a constant threat. This applies to the entire park. Garbage dumping has occurred for

several years. There is a well-known dump site east of the picnic groves on the East Cleveland side of the park. Littering is noticeable in several areas of the park. The large and underutilized parking lots in the park increase the amount of impervious surface cover. This in turn may influence the levels of pollutants in and around the park because of surface runoff and stormwater issues (see Figure 23: Impervious Surfaces).

A Dugway Brook water quality analysis performed in 2003, yielded high fecal coliform results. The safety limit of fecal coliform levels appropriate for “primary contact recreation” (full body water recreation activities) is 1,000 bacteria/100mL. The sample sites measured at the southern (5,000 bacteria/100mL) and northern (3,000 bacteria/100mL) sections of the east branch are well above the safety limit. Potential for pathogenic bacteria, viruses and protozoa present in digestive tracts to contaminate the brook is high. In addition, this high level of sewage contamination reduces the levels of dissolved oxygen, which can have a toxic effect on organisms. Additional analyses evaluating the effect of this organic pollution on invertebrate organisms yielded a heavily disturbed invertebrate population. The absence of specific environmentally sensitive invertebrates (mayflies, stoneflies

and caddisflies) also indicates negative environmental influences. The lagoon also endures pollution.

#### *Storm water management*

Storm water runoff has created erosion problems in the past and continues to be a concern. Pollution affects the water quality of storm water, which affects the health of the aquatic habitat. Storm water runoff from parking lots and other paved areas in the park continues to cause erosion-related concerns.

A low benthic macroinvertebrate population and a lack of diversity within that population (as mentioned above) further indicate an unhealthy watershed.

### 6.19 RECOMMENDATIONS FOR NATURAL RESOURCES

Several steps can be taken to insure a healthier ecology in Forest Hill Park:

- Curb pollution, litter and garbage dumping is essential. It is important to address these concerns in a social context.
- Invasive species control and removal. The Clean Ohio Fund Cleveland Heights summary sheet describes the spraying of herbicides as an effective

way of controlling invasive species. The summary sheet states that this control program should last for seven years (no mention of daily, weekly or monthly frequency).

- If necessary, due to loss of habitat by the encroachment of invasive species, plant vegetation that is native and important to the plant and animal diversity in Forest Hill Park.
- Confront the various storm water management challenges and their effect on park habitat. The analysis should include assessing the condition and potential removal of underused parking lots and active and passive recreation structures.

Proper ecological control promotes the conservation and recreation mission important for the Cleveland Metroparks. Coordinated management and a commitment to conserving the unique physical and ecological qualities is a high priority for any natural park system.

### 6.20 POLICY RECOMMENDATIONS

Careful study of the park, its history and its context has resulted in policy recommendations for the future of Forest Hill Park. These are divided into three primary categories, although many accomplish more than one goal. The three categories are

physical/built environment, human/social context and ecological context. Each proposal strives to improve Forest Hill Park under one or more categories.

#### *Physical Context Recommendations*

Forest Hill Park has an assortment of physical and built amenities in varying conditions. Some are worth saving; others need to be removed. Duplicity between the two sections of the park under each municipality, combined with neglect in maintenance and obsolescence of use provide strong arguments to assess each building, structure and use. For example, the tennis court in the East Cleveland is a likely candidate for removal.

Other structures in the park are dilapidated and unsafe. A professional should assess each to determine their health and cost of repair. The Pressley Plan provides improvement costs for several buildings. Some are historic from the days of John Rockefeller and deserve preservation.

The park features many parking lots. Conducting a parking lot study would determine if there is too much parking provided or if parking should be redistributed.

#### Social Context Recommendations

Soccer is a popular sport among children.

A high quality soccer facility could be a regional draw. The U.S. Soccer Foundation provides \$10,000 grants to design a facility, and up to \$200,000 for construction of an artificial turf field.

Mountain biking is a growing sport in Northeast Ohio with few opportunities for trail riding. A single track trail loop built around Dugway Brook on the Cleveland Heights side of the park is an exciting opportunity to meet the demand of mountain bikers in the area. Cleveland Area Mountain Bike Association could construct the trail and provide stewardship/maintenance of the trail.

The two street level crossings along Forest Hill Boulevard are inadequately marked. Highly visible crosswalks (stamped concrete in a color such as a green) and crosswalk signs to alert motorists will increase safety for pedestrians.

Forest Hill Park is located very close to other prominent green spaces and parks such as the Lakeview Cemetery, Rockefeller Park, Cumberland Park and Cain Park. Signage and way finding to direct travelers will help connect them to provide a network of open spaces.

For the human and social context, safety is one of the biggest issues facing Forest Hill



Figure 17: Trees in the Great Meadow



Figure 20: Dugway Brook

Park. Installation of blue light emergency phones throughout the entire park will provide users with a way to contact safety forces quickly. More police presence is also needed at the park.

Maintenance and upkeep of the park needs dramatic improvement. Community service projects for local high school students or with groups such as the Boy Scouts could help increase maintenance at a low cost.

#### *Ecological Context Recommendations*

The park is ecologically challenged. The stream needs clean up. Follow up testing from the 2003 ecological study would assess its current condition. The forest is overgrown in parts, and would need study by an arborist to determine the health of the forests. Parts of the forest could become research sites for scientists from the Cleveland Museum of Natural History or Case Western Reserve University. As the park is on a hill, erosion control is another area of concern. Controlling invasive species is important as well. Lastly, there are opportunities for stormwater management through installation of rain gardens and bioswales, especially around the baseball fields on the Cleveland Heights side.

#### *Funding*

Sufficient, dedicated sources of funding and management are essential to restore Forest Hill Park to its original glory. In its current form of management and funding under the two municipalities, the park struggles, and the neglect is visibly evident. As a result, it is imperative to explore new ways of providing stewardship.

One possibility is to create an official forum for coordination between East Cleveland and Cleveland Heights in the form of a council to govern the park. This group, titled the Council for the Historical Restoration of Forest Hill Park, would include representation from each city. Members would consist of City Council representatives, city staff from Parks & Recreation and Health, business community members, academics, families, community organizers and youth. The objectives of such a council would center on assisting with restoration efforts; promoting collaboration; promoting knowledge and understanding of conservation, education and recreation; and to emphasize the importance of the natural environment.

The council would manage the park and restore it in a way that recognizes its important historical and ecological significance to the region. To address safety concerns, East Cleveland and Cleveland Heights could partner with each other.

Another joint partnership would address maintenance. The collaboration would continue with regard to marketing, community activism and educational and recreational programming. To assist with funding through grant-writing and to provide staffing for the council, a part time project manager position would be created.

Local park advocates and organizations like Friends of Forest Hill Park and the East Cleveland Parks Association could unite under this organization and continue their advocacy work with more intellectual and political capital.

A second option for stewardship of Forest Hill Park would be in the form a non-profit conservancy organization. Formed as a 501(c)(3), the Forest Hill Park Conservancy would operate the park on behalf of the two municipalities using thirty-year leases. Based on the model of the Pittsburgh Parks Conservancy, the non-profit would realize capital and ecological restoration projects, as well as manage day-to-day activities and programming. The Pittsburgh Parks Conservancy was successful in raising \$28 million for the four parks under its jurisdiction in its first ten years of operation, and organized nearly 10,000 volunteer hours during that time.

Funding for the Forest Hill Park Con-

servancy would come from a variety of sources including state and local governments, corporations, foundations and individual donations. Staff for the Conservancy would include a grant-writer and development associate to coordinate fundraising activities, as well as a volunteer coordinator and a program coordinator. Other examples of park foundations that have been very successful with fundraising efforts are the Rocky River Parks Foundation, Friends of Boulder County Parks and Open Space and the Geauga Park District Foundation. Arts, sports and other recreational and educational programming can be provided to build excitement for the park. Trained experts in historic preservation and ecological restoration would also be retained to assist with refurbishing, and security forces could be hired to patrol the park. Public engagement would be a large part of the Conservancy's objective to ensure the park is currently serving and will serve its users, and to engage potential funders early on.

A third option for the future management of Forest Hill Park would be for it to come under the jurisdiction of the Cleveland Metroparks System: Forest Hill Reservation. This would entail selling the land at fair market value or gifting it to the Metroparks, who would then run it like any of their other parks. Table 9 in the appen-

dix details a variety of potential funding sources.



Figure 21: Garlic Mustard



Figure 22: Woodpile

Figure 7

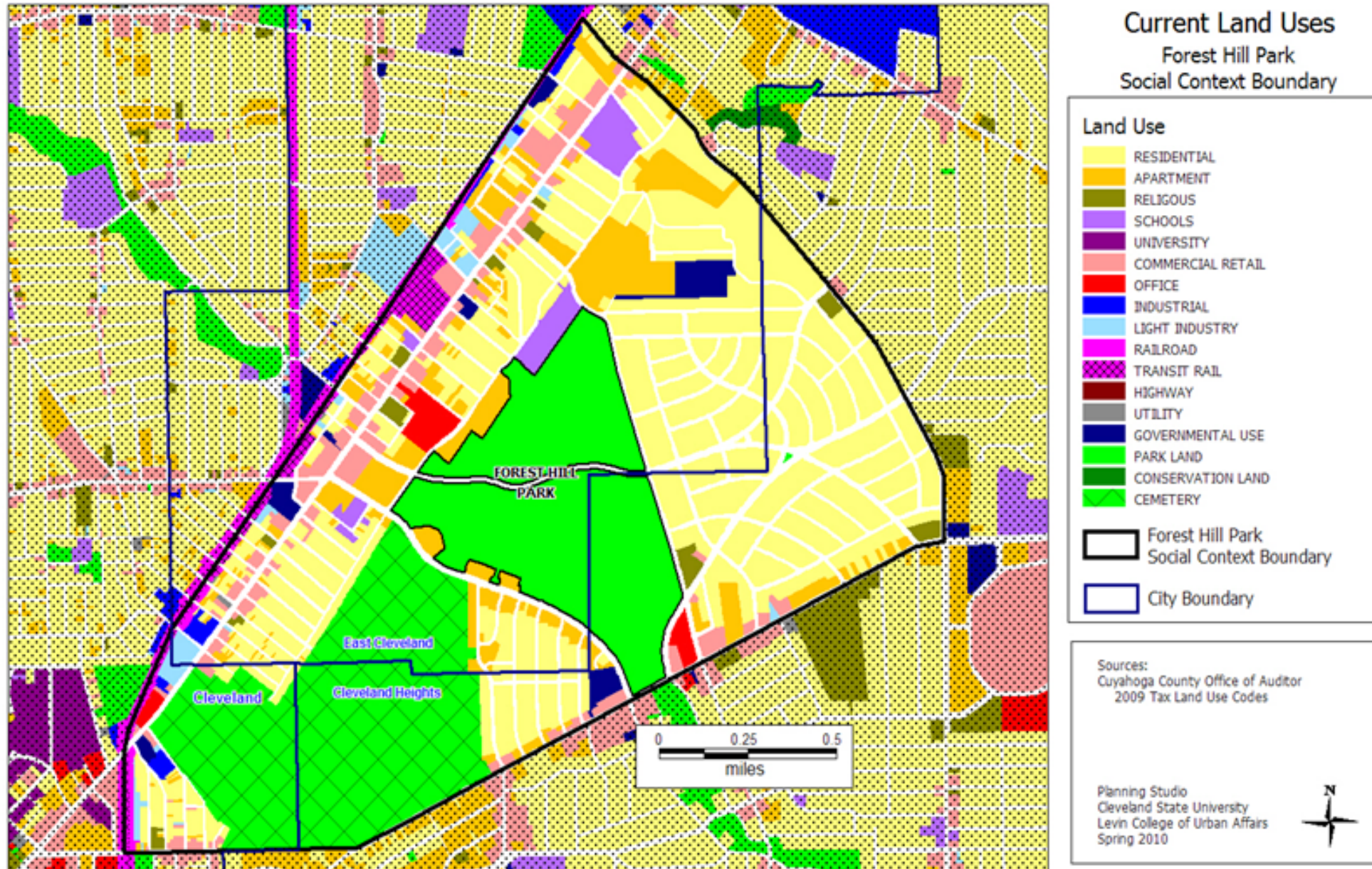




Figure 8

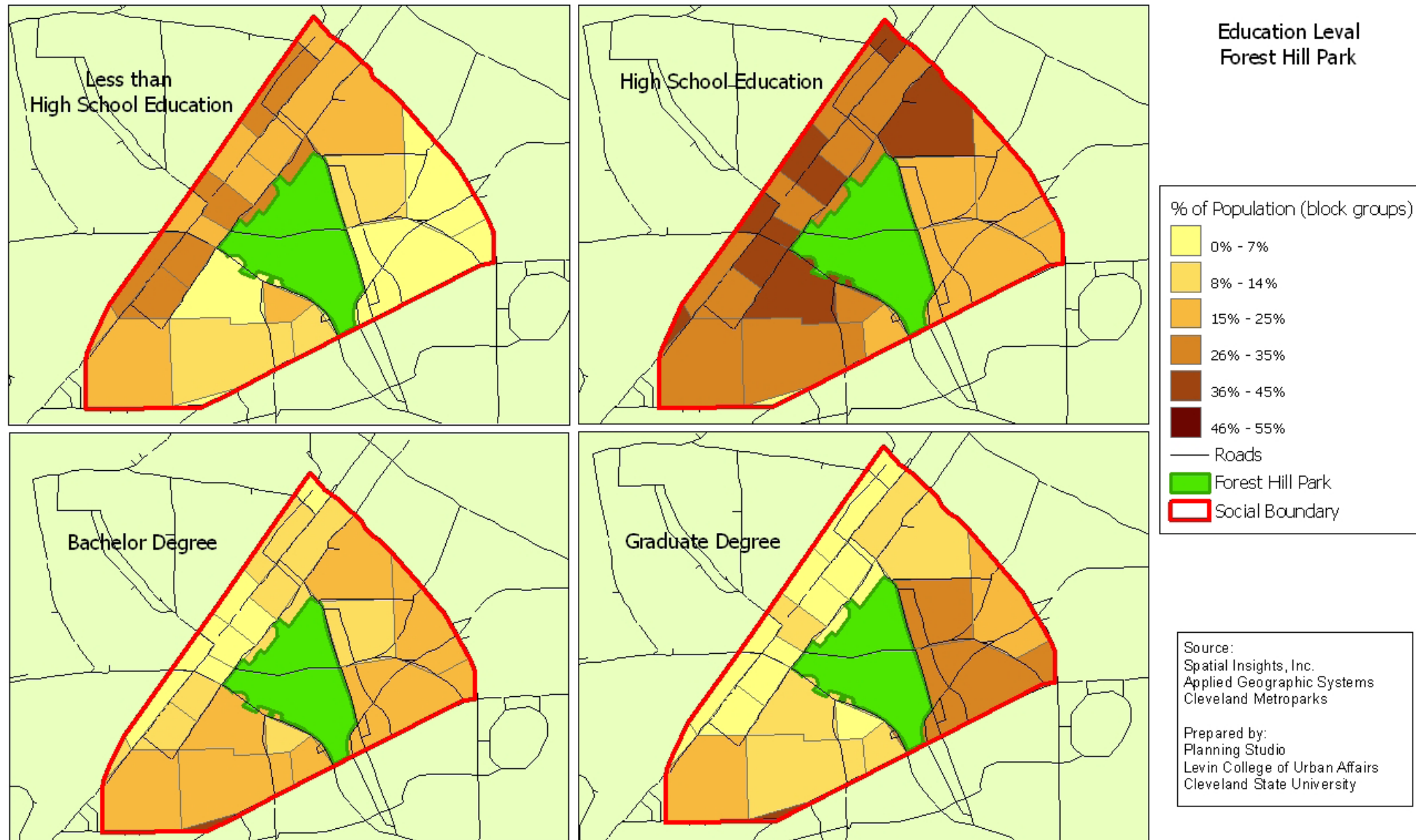


Figure 9

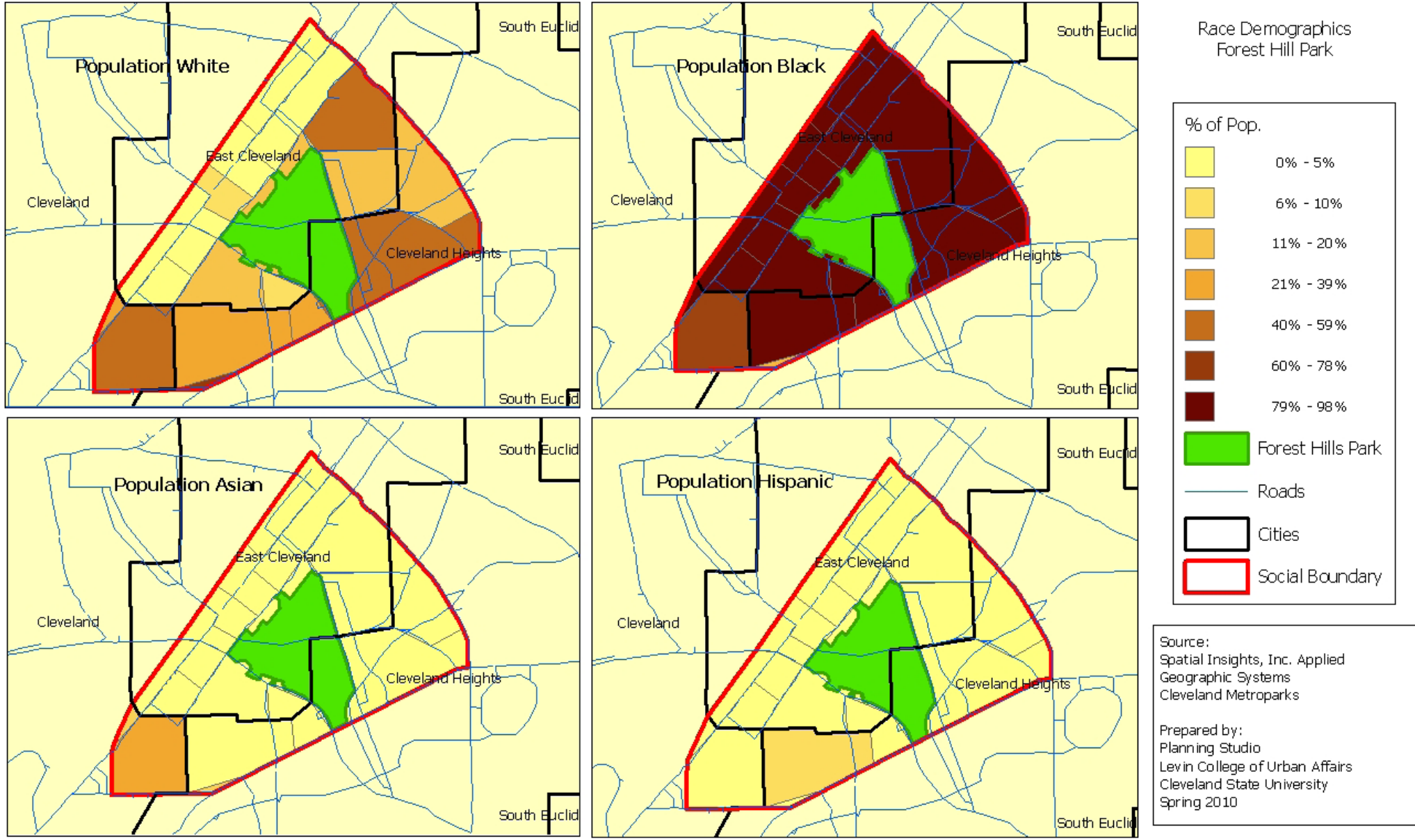


Figure 10

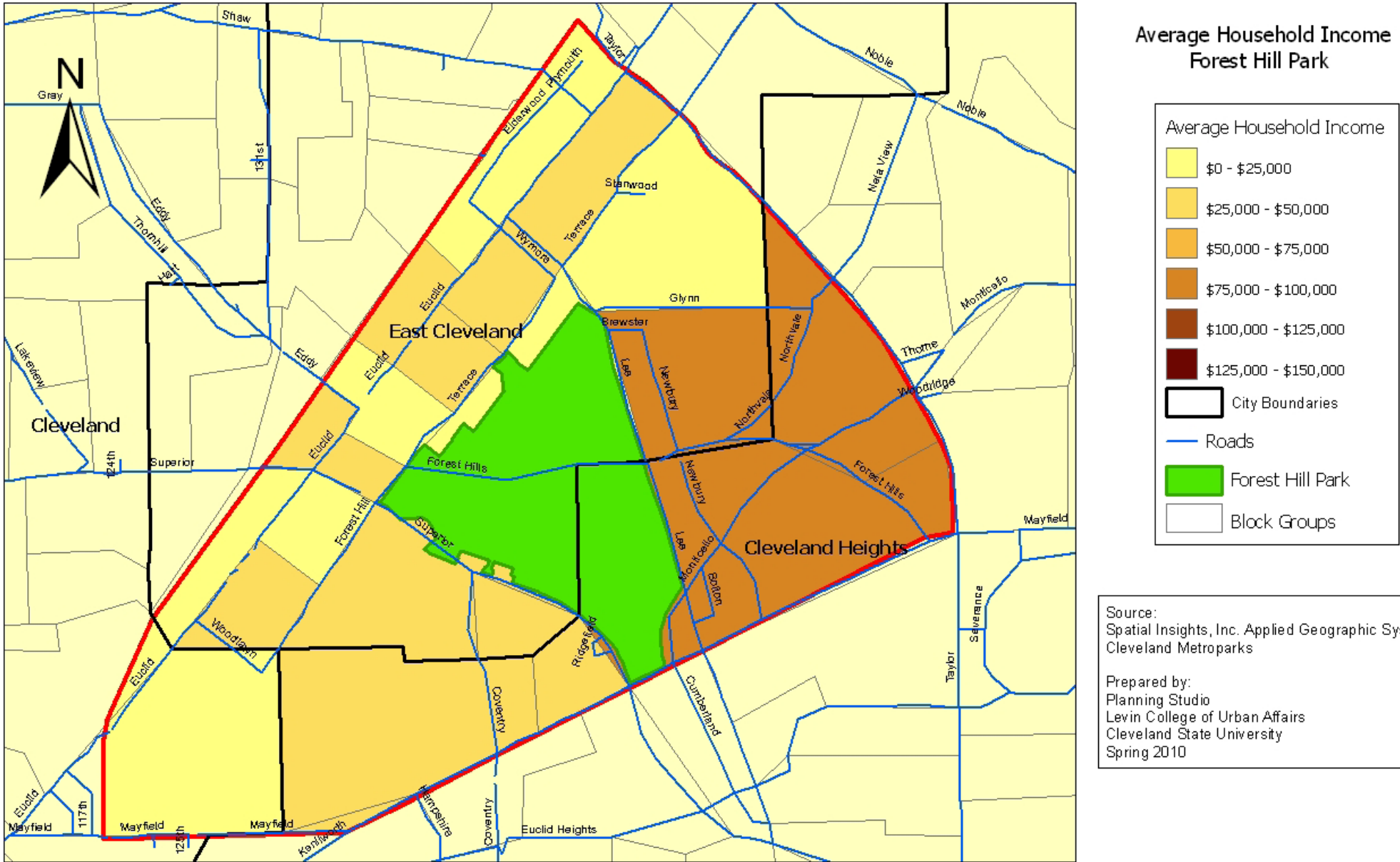
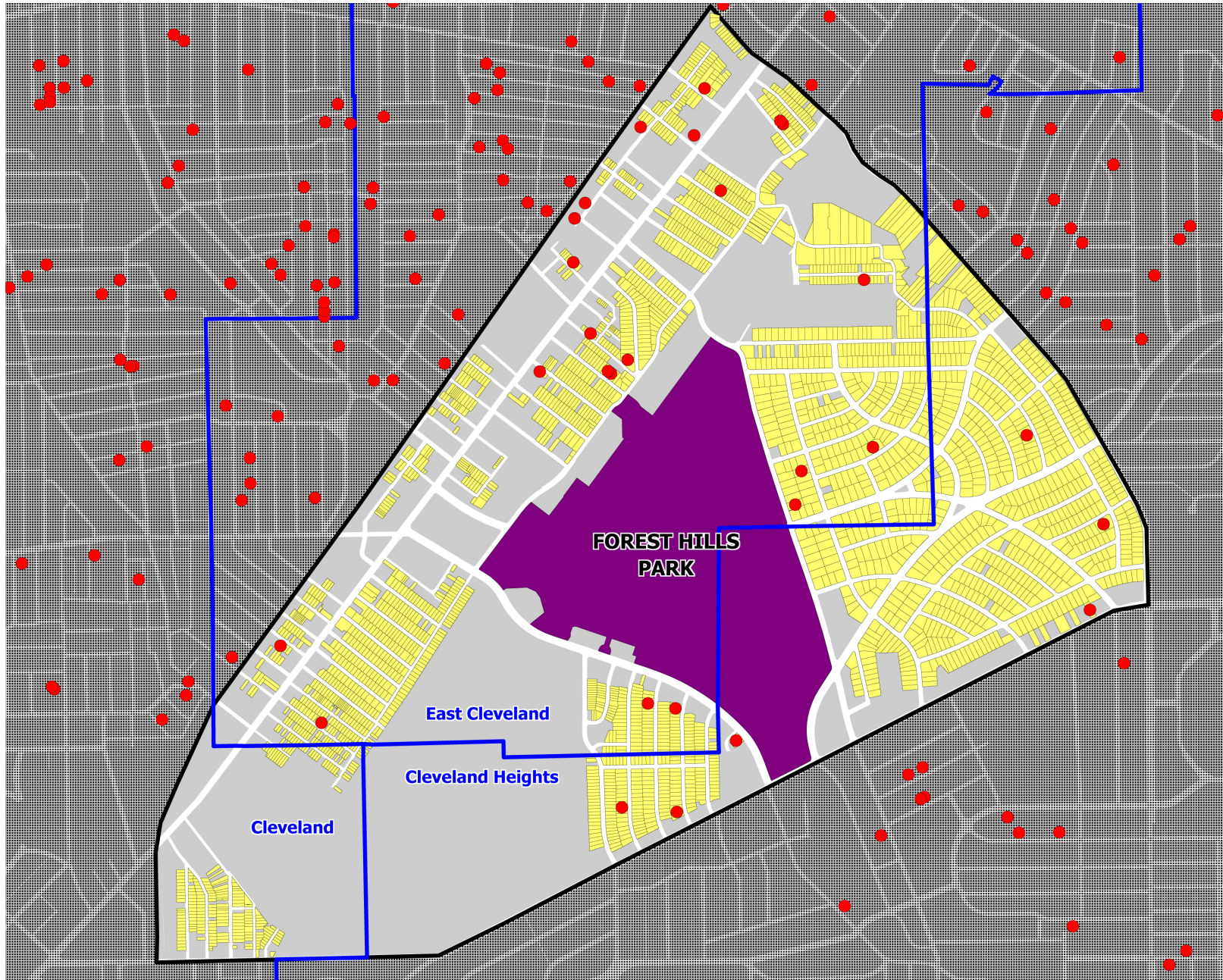
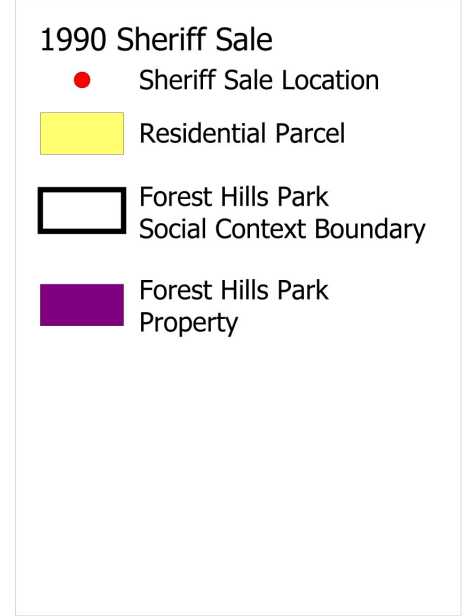


Figure 11



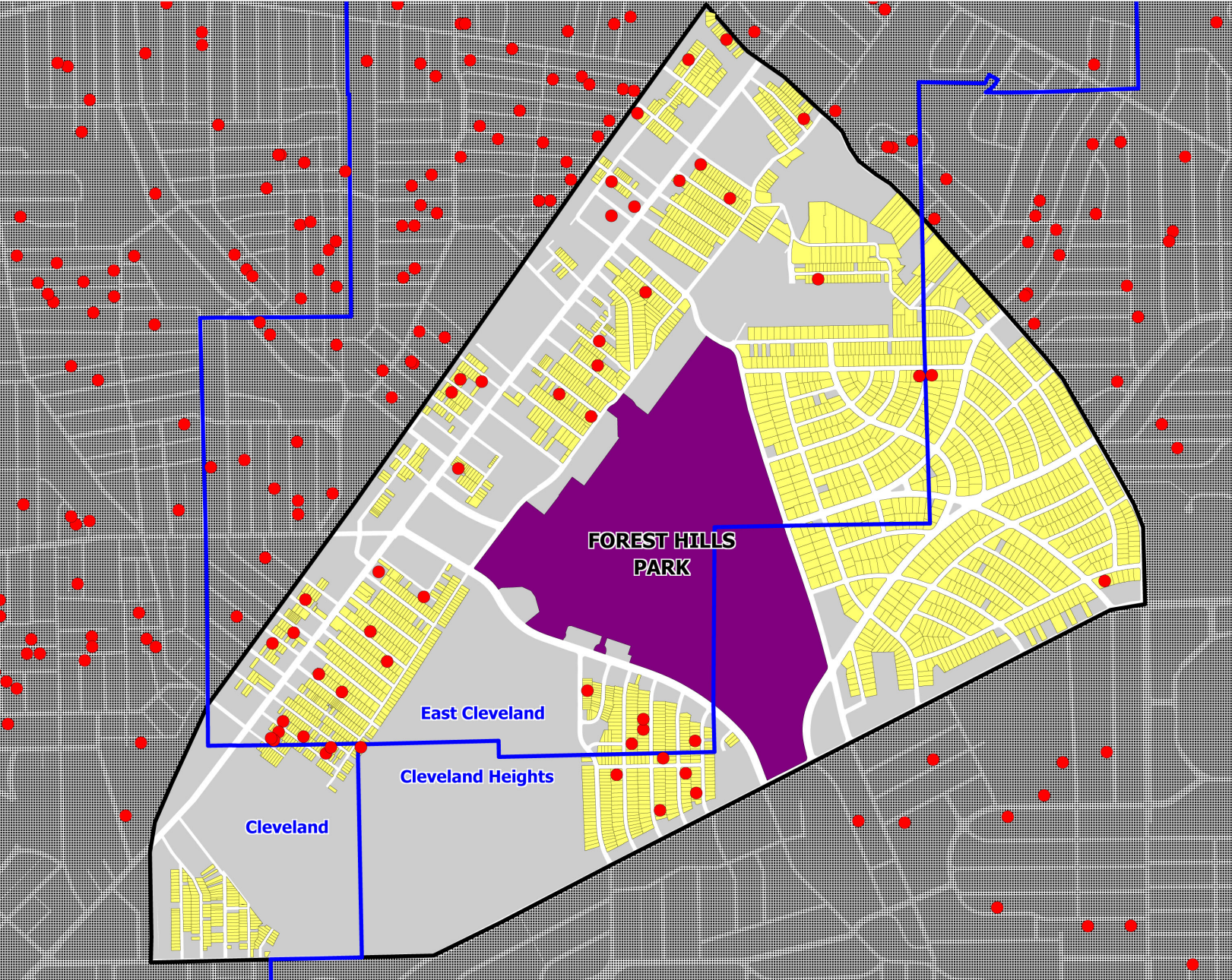
### 1990 Sheriff Sales Forest Hills Park Social Context



Source: Cuyahoga County Office of Auditor Transfer Records

Sheriff Sales result from both bank and property tax foreclosures.

Figure 12



**2000 Sheriff Sales**  
 Forest Hills Park Social Context

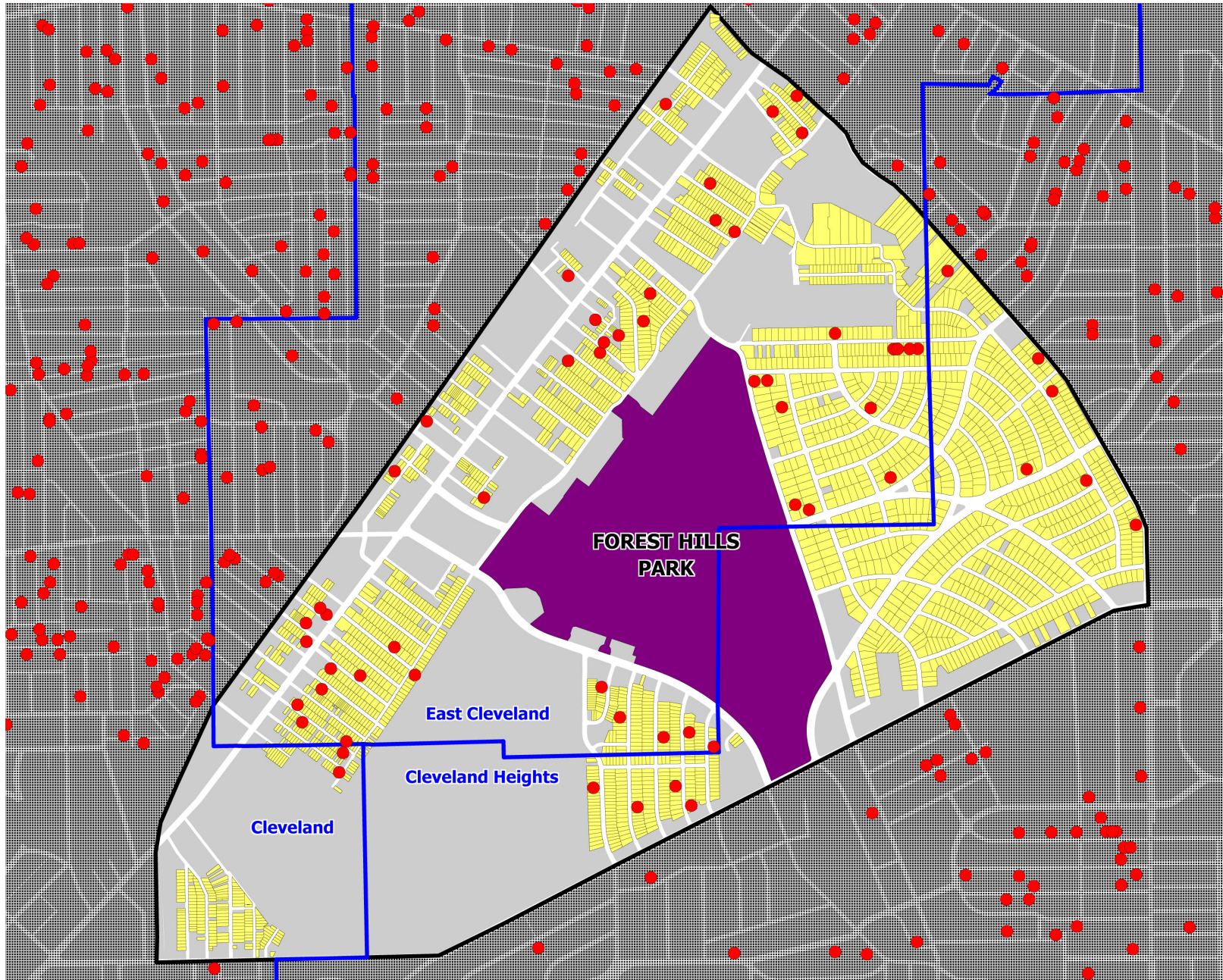
**2000 Sheriff Sale**

- Sheriff Sale Location
- Residential Parcel
- Forest Hills Park Social Context Boundary
- Forest Hills Park Property

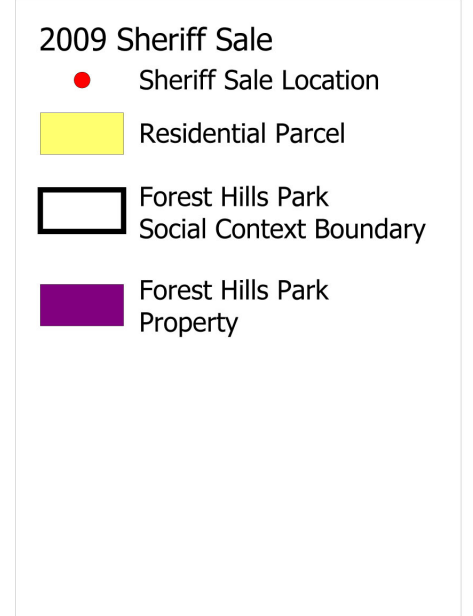
Source: Cuyahoga County Office of Auditor Transfer Records

Sherrif Sales result from both bank and property tax foreclosures.

Figure 13



### 2009 Sheriff Sales Forest Hills Park Social Context



Source: Cuyahoga County Office of Auditor Transfer Records

Sherrif Sales result from both bank and property tax foreclosures.



Figure 18

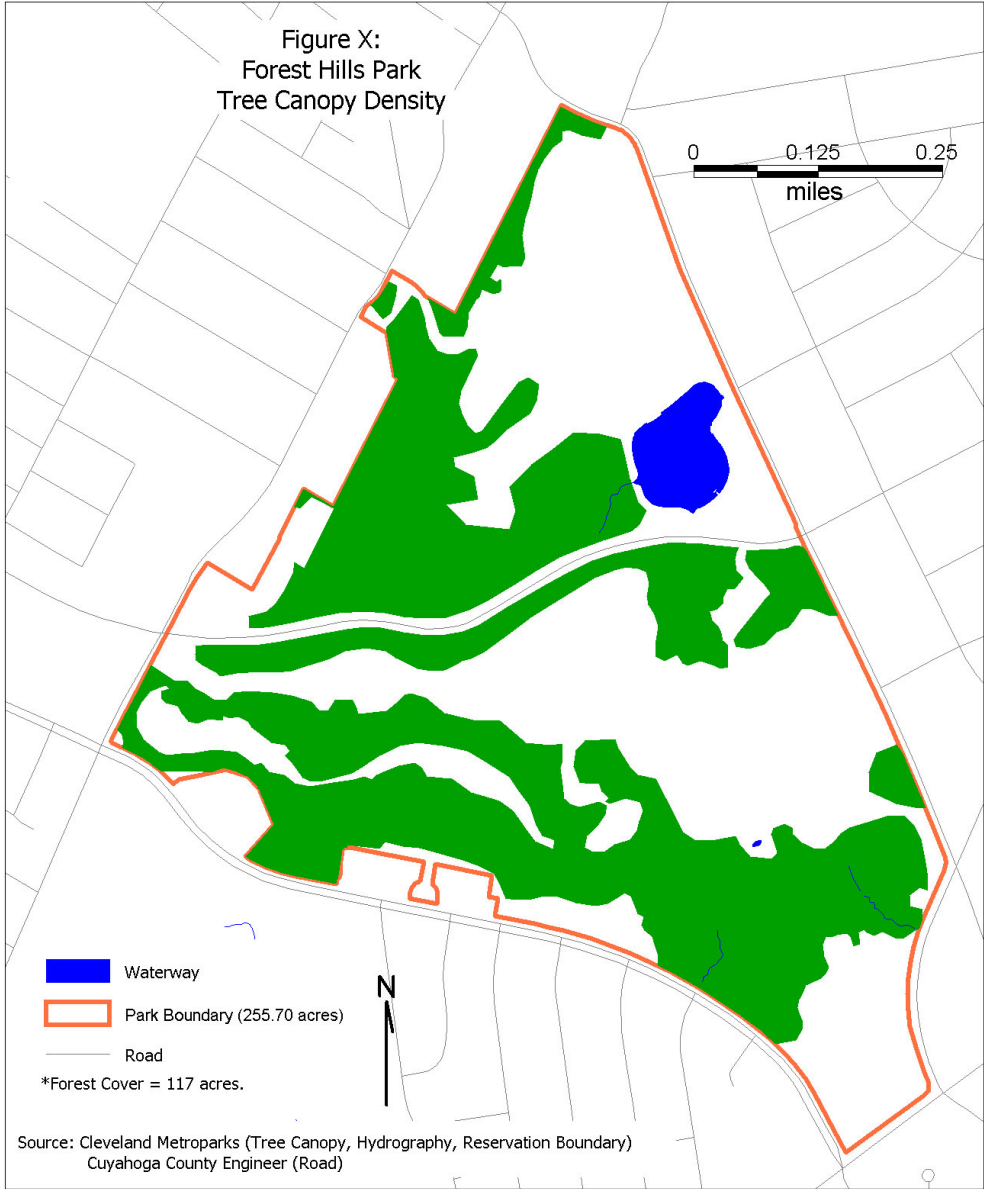


Figure 19





## REFERENCES

1. Forest Hill Homeowners. (n.d.). Retrieved from: <http://www.fhho.org/history.htm>.
2. Cleveland Heights Historical Society. Forest hill park. Retrieved from: <http://www.chhistory.org/Places.php>.
3. Encyclopedia of Cleveland History. (1997, July 16). Forest hill park. Retrieved from: <http://ech.case.edu/ech-cgi/article.pl?id=FHP1>
4. National park service. (2008). National register information system. Retrieved from: <http://www.nr.nps.gov/>
5. Pressley Associates. (2001). Forest hill park updated plan. Boston, MA: Pressley Associates, 23.
6. Pressley Associates, 23.
7. Pressley Associates, 23.
8. Cuyahoga County GIS. (2010). Cuyahoga county geographic information systems. Retrieved from: <http://gis.cuyahogacounty.us/>
9. GCTRA 2009 System Map. (2009). 2009 RTA system map. Retrieved from: [http://www.riderta.com/pdf/maps/System\\_Map\\_Main.pdf](http://www.riderta.com/pdf/maps/System_Map_Main.pdf)
10. Cuyahoga County GIS.
11. NEOCANDO. (2009). Social and economic indicators report. Retrieved from: <http://neocando.case.edu/cando/ControllerServlet>
12. Cuyahoga County Auditor.
13. NEOCANDO.
14. Cuyahoga County Auditor.
15. Cuyahoga County GIS.
16. Cuyahoga County Auditor. (2010). Real property information. Retrieved from: <http://auditor.cuyahogacounty.us/rep/rep/default.asp>
17. Cuyahoga County GIS.
18. Cuyahoga County GIS.
19. ParkWorks. (2002). Parks programming. Retrieved from: <http://www.parkworks.org/programming-copy.html>
20. East Cleveland Parks Association. (2008). Natures treasures hidden in our own backyard. Retrieved from: <http://www.ecpaohio.org/about/>
21. Cleveland Heights Historical Society. (2006) Forest hill park. Retrieved from: <http://www.chhistory.org/Places.php>.
22. Cleveland Heights Historical Society. (2006) Forest hill park.
23. Clean Ohio Conservation Fund. (2001, October). City of cleveland heights application for conservation fund summary sheet, 5.
24. Cleveland Heights Historical Society. (2006) Forest hill park.
25. Clean Ohio Conservation Fund, 6.
26. Northeast Ohio Regional Sewer District. (2006, December). Dugway brook- getting to know the dugway brook. Retrieved from <http://www.universityheights.com/downloads/Dugway-BrookWatershed.pdf>.
27. Northeast Ohio Regional Sewer District. (2006, December). Dugway brook- getting to know the dugway brook.
28. Cuyahoga County Board of Health. (2010, February 18). Dugway brook watershed. Retrieved from [http://www.ccbh.net/ccbh/opencms/CCBH/services/environmental\\_health/Watersheds/Dugway.html](http://www.ccbh.net/ccbh/opencms/CCBH/services/environmental_health/Watersheds/Dugway.html).
29. Davey Resource Group. (2003). Ecological inventory report- aquatic and terrestrial animal communities, upper dugway valley forest hill park cleveland heights, oh. Kent, OH: Davey Resource Group, 5.
30. Cleveland Heights Historical Society. (2006) Forest hill park.
31. Davey Resource Group. (2003). Ecological inventory report- aquatic and terrestrial animal communities, upper dugway valley forest hill park cleveland heights, oh, 11.
32. Davey Resource Group, 15.
33. Davey Resource Group, 17.
34. Cleveland Heights Historical Society. (2006) Forest hill park.
35. Davey Resource Group, 10.
36. Davey Resource Group, 7 and 8.
37. Davey Resource Group, 5.
38. Clean Ohio Conservation Fund, 6.
39. Parks Practice. (2006, November 28). Pittsburgh parks conservancy. Retrieved from <http://www.parkspractices.org/ht/display/ArticleDetails/i/681>
40. Rocky river parks foundation. (n.d.). Retrieved from [http://www.rrcity.com/rec/rocky\\_river\\_parksfound.htm](http://www.rrcity.com/rec/rocky_river_parksfound.htm)
41. Friends of boulder open space. (n.d.). Retrieved from [http://www.friendsofopenspace.org/boulder\\_open\\_space.php](http://www.friendsofopenspace.org/boulder_open_space.php)
42. The Geauga park district foundation. (n.d.). Retrieved from <http://www.geaugaparkdistrict.org/foundation.shtml>

*Works Cited*

Clean Ohio Conservation Fund. (2001, October). City of cleveland heights application for conservation fund summary sheet, 1-10.

Cleveland Heights Historical Society. (2006). Forest hill park. Retrieved from: <http://www.chhistory.org/Places.php>

Cuyahoga County Board of Health. (2010, February 18). Dugway brook watershed. Retrieved from [http://www.ccbh.net/ccbh/opencms/CCBH/services/environmental\\_health/Watersheds/Dugway.html](http://www.ccbh.net/ccbh/opencms/CCBH/services/environmental_health/Watersheds/Dugway.html)

Cuyahoga County Auditor. (2010). Real property information. Retrieved from: <http://auditor.cuyahogacounty.us/rep/default.asp>

Cuyahoga County GIS. (2010). Cuyahoga county geographic information systems. Retrieved from: <http://gis.cuyahogacounty.us/>

Davey Resource Group. (2003). Ecological inventory report- aquatic and terrestrial animal communities, upper Dugway valley forest hill Park cleveland heights, oh. Kent, OH: Davey Resource Group.

East Cleveland Parks Association. (2008). Natures treasures hidden in our own backyard. Retrieved from: <http://www.ecpaohio.org/about/>

Encyclopedia of Cleveland History. (1997, July 16). Forest hill park. Retrieved from: <http://ech.case.edu/ech-cgi/article.pl?id=FHP1>

Forest Hill Home Owners. (n.d.). Retrieved from: <http://www.fhho.org/history.htm>

Friends of boulder open space. (n.d.). Retrieved from: [http://www.friendsofopenspace.org/boulder\\_open\\_space.php](http://www.friendsofopenspace.org/boulder_open_space.php)

Greater Cleveland Rapid Transit Authority. (2009). 2009 RTA system map. Retrieved from: [http://](http://www.riderta.com/pdf/maps/System_Map_Main.pdf)

[www.riderta.com/pdf/maps/System\\_Map\\_Main.pdf](http://www.riderta.com/pdf/maps/System_Map_Main.pdf)

National park service. (2008). National register information system. Retrieved from: <http://www.nr.nps.gov/>

NEOCANDO. (2009). Social and economic indicators report. Retrieved from: <http://neocando.case.edu/cando/ControllerServlet>

Northeast Ohio Regional Sewer District. (2006, December). Dugway brook- getting to know the Dugway Brook. Retrieved from: <http://www.universityheights.com/downloads/DugwayBrookWatershed.pdf>

Parks Practice. (2006, November 28). Pittsburgh parks conservancy. Retrieved from: <http://www.parkspractices.org/ht/display/ArticleDetails/i/681>

ParkWorks. (2002). Parks programming. Retrieved from: <http://www.parkworks.org/programming-copy.html>

Pressley Associates. (2001). Forest hill park updated plan. Boston, MA: Pressley Associates.

Rocky river parks foundation. (n.d.). Retrieved from [http://www.rrcity.com/rec/rocky\\_riverparks-found.htm](http://www.rrcity.com/rec/rocky_riverparks-found.htm)

The Geauga park district foundation. (n.d.). Retrieved from: <http://www.geaugaparkdistrict.org/foundation.shtml>