MASTER PLAN
A.B. Sawyer Park
Louisville, KY
October 2012

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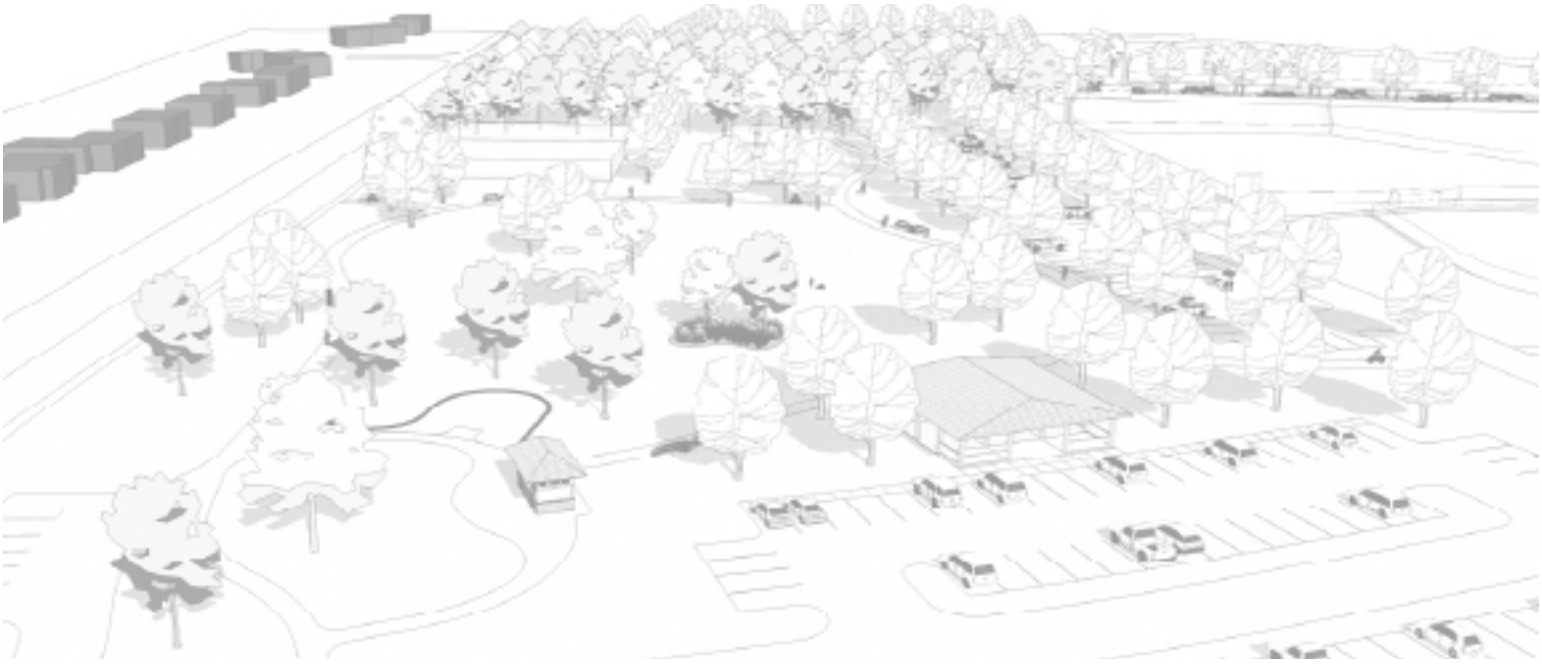


I. Introduction

A.B. Sawyer Park is Neighborhood Park located at 9300 Whipps Mill Road in Metro Louisville in eastern Jefferson County, Kentucky. The park was acquired by the Louisville Metro Parks Department in 1969. The park is just over 47 acres in land area, bounded on the west by Whipps Mill Road, on the east by Hurstbourne Parkway, on the south by the Middle Fork of Beargrass Creek and the University of Louisville's Shelby Campus, and on the north by office development and the northeast branch of the YMCA.

The park plays an important role from a regional context serving a number of neighborhoods in and around the Lyndon area. Vehicular access to the park is off of Whipps Mill road, but the area is well served by transit routes as well as pedestrian and bicycle facilities along both Whipps Mill Road and Hurstbourne Parkway. A planned greenway/multi-use path along Beargrass Creek will run under Hurstbourne Parkway, opening even greater bicycle and pedestrian access to the park from residential neighborhoods to the east.

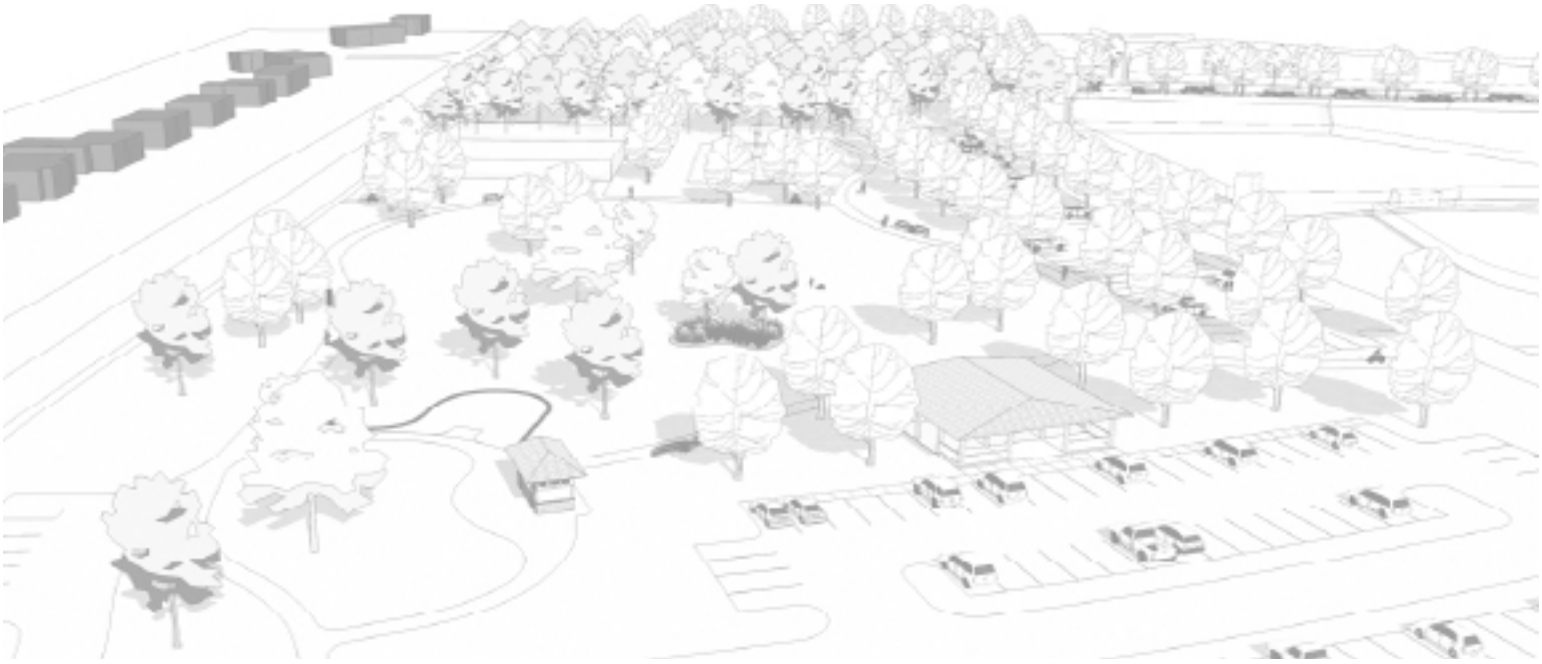
A.B. Sawyer Park contains an array of recreational facilities, primarily geared towards active recreational pursuits. Over time, much of the park has been improved to accommodate a variety of playing fields, convenience facilities (concessions, restrooms, etc.), operational facilities, and associated parking for each. Only to the south along Beargrass Creek, and to the northwest, adjacent to segments of Whipps Mill Road are there areas of relatively undisturbed natural areas.

The park is home to the Lyndon Recreation Association, which manages and maintains the park's baseball and football facilities under an annual agreement with the Louisville Metro Parks Department. The Association oversees league play for more than 3,000 Lyndon area youth.

A.B. Sawyer Park is also home to the landscape division of Louisville Metro Parks as well as one of three maintenance facilities for the Metro park system. The two operations combined employee over 20 staff members including seasonal employees. The park is also the site of one of 5 staffed, Metro Solid Waste recycling drop off centers and only one of four accepting used cooking oil. The center is open from Tuesday thru Saturday from 10 AM to 5 PM.

Louisville Metro Parks initiated a master plan process for A.B. Sawyer Park in the fall of 2010 at the request of and with funding provided by Councilman Jon Ackerson, Council District 18. The goal of the master plan was to "develop a comprehensive vision for A.B. Sawyer Park in context with its location, natural resources, and community needs." The Louisville office of Gresham, Smith and Partners, a national, multi-disciplinary planning and design firm, was retained in the spring of 2011 to serve as the consultant for the master planning effort.

This plan contains long and short-term recommendations for physical improvements to help meet current and future recreational needs of the community. The plan provides a framework for the use and development of the park over time and will serve as a "litmus test" for future programs, services, and improvements. The master plan contains specific actions for meeting future needs and establishes priorities for implementation. The plan should be seen as a dynamic, living document that should be used as a springboard for budgeting including opportunities for fund-raising and grant applications that can assist with implementation.



II. Inventory and Analysis

The land area of A.B. Sawyer Park can be broken down into five general sub-areas based on current land use—The area of the park managed and maintained by the Lyndon Recreation Association, the area occupied by Metro Parks' Landscape Division, the area occupied by one of Metro Parks' Maintenance facilities, the tennis/playground area, and the natural area along Beargrass Creek.

A. Existing Facilities

Lyndon Recreation Association

The largest of these areas is the portion of the Park managed and maintained by the Lyndon Recreation Association (LRA) under an annual agreement with Louisville Metro Parks. This agreement assigns to the LRA responsibility for recreational programming and maintenance of select park facilities.

The Lyndon Recreation Association represents approximately 3,000 youth enrolled in the league play t-ball, baseball, softball, and football. The baseball season generally runs from late April or early May through mid-July with football season beginning in the fall. According to LRA, attendance over these two seasons may reach 275,000 visits. In addition to these youth leagues, the LRA also supports participation in the Lyndon Lightning teams, which is affiliated with the Amateur Athletic Union and involves a higher level of regional competition, including five neighboring states.

Lyndon Recreation banner

The land area managed by LRA contains 12 ball fields, three of which, located near the Whips Mill Road parking area, devoted to T-ball. The nine other fields are used to accommodate various ages of baseball and softball players. These nine have home/visitor dugouts, bleachers and announcer stands. All of the fields are

fenced and lit for evening use. LRA football facilities include a regulation size field (Brooks Field) and smaller adjacent practice field. Several other areas of the park are used as temporary practice facilities for football. Other facilities within the park exist to support the LRA sports fields including roadways, paved pathways, multipurpose buildings, 3 concession stand/restroom buildings. LRA also maintains two playground areas, one located immediately in front of the park's largest concession building and a smaller playground located near Brooks Field.

Metro Parks Landscape Division (back parking lot)

Metro Parks Landscape Division

Metro Parks' Forestry and Landscape are a joint division, with Forestry staff located at Joe Creason Park and the and Landscape staff housed at A.B. Sawyer Park in the former Police Substation fronting Whipps Mill Road. The Landscape staff are responsible for tree installation, trimming and maintenance throughout Louisville's park system.

The A.B. Sawyer facility houses the management, field and administrative staff for Landscape. In addition, several pieces of equipment from skid loaders and mini dump trucks to weed eaters and chain saws are stored on-site. Bulk storage, including wood chips for playgrounds, and surplus picnic tables are also stored at this location. A small parking lot in front of the building accommodates visitors and office staff. A much larger parking lot is located behind the building for additional staff parking and equipment storage. Louisville Metro Solid Waste also maintains a regional recycling center at the rear of this parking area. A large part of the parking is unused.

Generally speaking, staff felt that the physical facilities adequately met current needs. Because the building was originally designed for another use, the interior layout of offices is somewhat awkward. The building has one men's and one women's restroom. The women's restroom however, lacks locker space that could be used by female field staff. The facility could also benefit from some covered exterior storage space to protect and secure larger equipment.

The facilities that house the landscape division, as an adaptive reuse, were never truly integrated into the overall fabric of the park. Vehicular access to the building and storage areas are only accessible directly from Whipps Mill Road and there are no walkways/paths linking this facility to the rest of the park. Given that the facilities in this area have no public function other than as access for the recycling center, this part of the park is physically and programmatically segregated from the remainder of A.B. Sawyer.

Metro Parks Maintenance Facility

Metro Parks staffs three locations across the county for maintenance operations—A.B. Sawyer Park, Vettiner Park, and Joe Creason Park. Each is assigned geographic areas of responsibility. The A.B. Sawyer Park location houses 9 full time staff and anywhere from 1-5 seasonal staffers.

The A.B. Sawyer facility is a concrete block and metal frame structure that includes minimal office space, a unisex restroom, combination break room/locker room, a maintenance shop, outdoor storage, and above ground gasoline and diesel refueling tanks. Equipment stored at this facility includes mowers, trucks, and trailers of various sizes along with a range of small power equipment and hand tools. Some bulk materials, including straw and salt are stored on site on a seasonal basis.

Metro Parks Maintenance facility near secondary park entrance

Like the facilities for the Landscape operations, this facility would benefit from covered outdoor storage space. Outdoor storage is also at or near capacity though this could be resolved through a more efficient layout. The restroom should be upgraded to ADA standards, with consideration given to separate men's/women's facilities that combine restroom and locker room needs.

While the maintenance facility serves an important function for Louisville's park system, its location near the southern entrance to the park, combined with its industrial appearance, provides a poor "first impression" for park visitors.

Tennis/Playground Area

The tennis and playground area is located between the Landscape Division and the Maintenance facility. Access is generally from the southern most entrance to the park. This area consists of a small parking lot, 2 tennis courts, a play structure, and a freestanding restroom structure. A small, shaded lawn between the parking lot and the play structure includes a picnic table and is a popular spot for families and occasional exercise classes. Just east of the tennis courts is a green space nearly one acre in size surrounding one of the park's sink holes.

Existing tennis court location along Whipps Mill Road

Situated between the maintenance building and the landscape division building, this area of the park is visually and physically detached from the park's other recreational facilities. The park's interior roadway and the lack of connecting walkways add to the sense of separation.

B. Historic / Cultural Assessment

A cultural resources assessment was prepared by Corn Island Archaeology, LLC (CIA) between March and July 2011 as part of the master planning process for A.B. Sawyer Park. CIA was tasked with researching existing conditions relative to cultural resources, including historic structures, archaeological sites, and cemeteries. A full copy of the CIA report is contained in the appendix of this master plan. The following excepts from the CIA report demonstrate the cultural and historic context that helped to influence the development of the master plan for A.B. Sawyer Park.

In the 1820's, gentlemen farmers such as those in the Whips, Dorsey, and Ormsby families held much of the area currently encompassed by A.B. Sawyer Park and the community of Lyndon.

As the namesake of the road extending past the park, the Whip family was thought to have an important influence on the development of the area surrounding the park. The Whips name is also given to the cemetery within the park, with one marker being documented for Sarah Leland Whips, who died in 1826.

In 1912, the 360-acre estate of Hamilton Ormsby was sold to Jefferson County Fiscal Court to operate a newly created Parental Home and School Commission for dependent and delinquent youth, which became known as Ormsby Village.

This large amount of county-owned land was identified as a prime location for additional parkland during the late 1960s. County Parks Director Charlie Vettiner and Lyndon Recreation Chairman Percy Bramlett were scouting the Lyndon area for additional space for recreational activities. Vettiner and Bramlett had targeted a 35-acre parcel fronting Whipps Mill Road that surrounded a new police station and was being used as an educational agricultural enterprise.

In 1967, Charlie Vettiner presented a proposal to Fiscal Court for development of a park, to be named Lyndon Park. The original proposal was for 70 acres with plans to offer golf, a pool, tennis courts, a football field, picnic area, and tot lot. Ultimately, a 47 acre park was completed in 1969 and named for Albert Butler Sawyer who served on the board of Ormsby Village for 30 years.

The continued development of A.B. Sawyer Park has been closely tied to the development of the recreational baseball leagues of the Lyndon area and the development of the Lyndon Recreation Association (LRA). The Lyndon Recreation Association began during the 1950s and met at Lyndon Elementary—now Mary Grace Middle School. During that time, the playing fields consisted of only one field at Lyndon Elementary, and teams of various ages were tightly scheduled.

A significant amount of the recreational facilities at A.B. Sawyer Park were completed with volunteer labor. Today, the park is viewed by many a "handmade park". The leagues moved from Lyndon Elementary to the new park during the 1969 season.

Cultural-Historic

Cultural-historic sites, such as buildings, structures, objects, designed landscapes, or potential districts, 50 years of age or older (the NRHP recommended limit) no longer exist in the project area. Buildings and structures currently within the park include a maintenance shed, concession stands and restroom facilities, and office building. Infrastructure includes announcer stands, dugouts, lighting, fencing, and paved pathways.

Wesley Whipps

Cemeteries

One historic cemetery, identified on mapping as the Whips Cemetery, was located within the present park property. The cemetery is surrounded by a paved parking lot, is enclosed by a chain link fence, and is accessed through a gate in the west corner. Only one broken headstone was observable. A number of interments are expected within the fenced boundaries. In addition, the presence of interments outside this fenced location is a possibility as well, whether they are associated with enslaved African Americans, a Native American occupation, or antebellum family. Enslaved African American interments, for example, often occur in land surrounding identified cemetery boundaries.

Archaeological

Three locations within the park were documented during a walkover survey that contained foundation remnants. Additional archaeological

deposits are expected surrounding these locations. The current survey did not involve any subsurface investigations to identify potential buried archaeological deposits associated with European or Native American cultural activities or settlements. However, high probability areas within the park can be predicted based on previous archaeological research of the region.

Sarah Leland Whipps

Much of A. B. Sawyer Park has undergone extensive landform modification and development. Portions of the park are paved, recreation facilities have been constructed, and ball fields have been constructed that has resulted in leveling and earth moving activities. The potential for intact cultural deposits in the areas where significant earth moving has occurred and areas where buildings have been constructed is low.

Some areas with high potential for intact cultural deposits include the higher areas of the park that have been undisturbed and particularly the area surrounding the wooded lot and sinkhole. The floodplain and slope along the Middle Fork of Beargrass Creek also has a high potential for archaeological deposits, as soils in this area appear to be mapped as natural Crider silt loam deposits. Any planned construction activities in the northwest and southern portions of the park should take into consideration the possibility of disturbing potentially important cultural resources.

Recommendations

Archaeological Resources

Areas of the park that have not been previously surveyed should be subjected to subsurface testing. In particular, areas surrounding the sinkholes and the drainages should be of high priority. In addition, public education regarding the importance of intact archaeological resources should target the Lyndon Recreation Association. Significant ground-moving activities should occur only after an archaeological survey. Monitoring should be encouraged. Coordination and cooperation with the LRA should be encouraged. The heavily wooded buffer surrounding the sites should be retained. They not only provide a buffer to security of the locations but also to environmental hazards.

Cultural- Historic Resources

With regard to the historic context of the area, additional studies could illuminate many of the trends touched on here. Further study could better document genealogical information of the Dorsey, Ormsby, Lawrence, and Whips families involved. Continued communication with local informants could add depth and details to much of the context. The collection of family histories, identification of the locations of demolished structures, and documentation of photographs and records are all possible avenues of further research. In addition, such methods of investigation are the only way to discover or confirm traditional cultural properties that might exist in the area. A survey of the park could assess the facilities and land use as a historic designed landscape.

In addition to the tangible resources, the intangible resources should be documented and shared. The Louisville Recreation Association could be appreciated as a cultural group with its own associated organizational history, stories, and cultural practices. Their capital campaign should be encouraged. Development of an internal operations and management plan, if this has not already been completed should be encouraged. Documentation of policies, number of participants, fees, contracts, chemical storage, and fuel storage are some factors that could be included. LRA should also coordinate any design

development phase to implement this master plan with Metro Parks.

Historic cemetery (located in main parking field)

Cemeteries

Further documentation of the Whips Cemetery should be conducted. Avenues of research might include genealogical researchers. Searches of crime and newspaper reports regarding vandalism of the cemetery could be completed. While a marker for the cemetery might honor the families interred, it would also draw public attention to the plot. A small sign at the gate would be appropriate.

Public interpretation projects could highlight a variety of these themes and could take various forms. The following are suggestions, but the possibilities are by no means limited to these. Additional vision could come from partnerships with community groups from school groups completing class projects; to church and community groups looking for service projects; to 4-H, Boy Scout, and Girl Scout groups completing badges; community input adds to the depth of the finished work.

With the continued completion of pedestrian and bike trails connecting A.B. Sawyer Park to the Louisville Loop, increased traffic will permit additional interpretation projects, including signage. However, the security of the resources should be of utmost importance at all times. In particular, the rock shelters and cave sites located just outside the boundaries of the park should be concealed and preserved.

C. Environmental Assessment

In 2009 and 2010, Redwing Ecological Services, Inc. (Redwing) completed an environmental assessment of approximately 20 acres of A.B. Sawyer Park. This assessment was performed to meet Federal Highway Administration environmental guidelines for the implementation of a proposed greenway trail adjacent to the Middle Fork of Beargrass Creek. As part of the master planning process, Redwing was again retained to complete a planning level environmental assessment for the remainder of the parklands. The ecological assessment was conducted to determine the presence/absence of listed species, natural habitat assessment, and water/wetland resources within the park.

A complete copy of the ecological assessment is contained within the appendix of this master plan report. The following excerpts from the Redwing report are provided here to highlight the environmental features and conditions that helped to influence the development of the master plan.

Rare, Threatened or Endangered Species

Federal species of concern were identified by comparing the records from coordination with the resource agencies to habitats identified within the study area. Suitable habitat was found for three federally listed species—Indiana bat (Myotis sodalis), gray bat (Myotis grisescens), and American burying beetle (Nicrophorus americanus).

A.B. Sawyer Park is located in the vicinity of a known Indiana bat maternity colony. Additionally, the site assessment performed by Redwing identified one sinkhole that contains potentially suitable roosting habitat for both bat species. Portions of the upland woods habitat within the Park are considered potential


Natural habitat near Beargrass Creek

summer roosting and foraging habitat for both bat species.

Although there is potential habitat within the park for the American burying beetle, the species is considered extirpated and no known reintroduction programs exist in Jefferson County. Therefore, it is not likely that this species will occur on this site.

Limited potential habitat exists within the park for seven state-listed bird species, as listed by the Kentucky Department of Fish and Wildlife Resources. Those species are: American coot, barn owl, dark-eyed junco, great blue heron, savannah sparrow, sedge wren, and harp-shinned hawk. Of these, three are wetland species, two are forest species, one is a grassland species, and one prefers various open areas. Most of these species would use the area for winter or foraging habitat only. The Middle Fork Beargrass Creek represents potential habitat for the Louisville crayfish.

In addition to the federal and state-listed species identified, A.B. Sawyer offers potential habitat for the evening bat, which was documented by the Kentucky State Nature Preserves Commission. Potential suitable habitat for this species would include land like the wooded area surrounding Middle Fork Beargrass Creek.

Natural Habitats

Redwing conducted site visits on August 24, 2009 and May 23, 2011, reviewing approximately 51.7 acres and identified the following natural habitat types: upland woods, scrub/shrub, and open field/urban. One wetland, 1.6 acres in size, was also identified.

Upland Woods. Approximately 10.2 acres of the study area consisted of this habitat type. The habitat is dominated by sugar maple, boxelder, hackberry, eastern red cedar, white mulberry, black walnut, and black cherry. The understory of this habitat is extensively dominated by bush honeysuckle.

Scrub/Shrub. Approximately 2.6 acres of the study area consisted of this habitat type. This habitat lacks large woody vegetation and observed species included: boxelder, green ash, red maple, sycamore, silky dogwood, Frank's sedge, blackberry, and Johnson grass.

Open Field/Urban. This habitat, which represents mown fields, trails, and roads represents the largest habitat type within the study area, representing approximately 37.3 acres of land area. Species include tall fescue, field garlic, white clover, Kentucky bluegrass, and ground ivy.

The quality of the habitat within the study area is indicative of areas with few high quality native species.


Middle Fork Beargrass Creek

Waters and Wetlands

The most significant water feature found within

the study area is the Middle Fork Beargrass Creek, which flows along the southern boundary of the park. The creek is approximately 20 feet in width with banks of three to four feet in height. The stream as characterized as poor quality.

There are four intermittent streams within the study area totaling 855 feet in length. The streams range from one to eight feet in width with bank heights from one to two feet. The intermittent streams are characterized as poor quality.

The wetland habitat was located in the southwestern portion of the site and is dominated by sedges, cattail, ricecut grass, jewelseed, softstem bulrush, and black willow. It was observed to be approximately 1.6 acres in size. Beaver activity was observed, particularly in a large open water portion of the wetland.

There is one ephemeral stream located in the middle section of woods in the west-central portion of the study area. It is approximately two to five feet wide and contains only isolated pools. This stream begins near the northeastern edge of the woodlot and flows to the intermittent stream located near the foundation of the old springhouse.

The open water feature is located in the northwestern section of woods on-site. It originates from an intermittent stream off-site and becomes an open water feature with depths from two to six feet. Trees are growing in the shallow portion of this feature. The deeper portion of this feature is near a presumed sinkhole.

Sinkhole located near existing tennis court location

Karst Features

Redwing reviewed information maintained by the Kentucky Geological Survey regarding karst features within the study area including sinkholes and springs, which indicated the area contains medium to high karst potential. There are five sinkholes and three seeps located within the study area. Based on dye-trace studies by the Kentucky Division of Water, it has been determined that these karst features are part of a connected karst system where water is entering on the surface through the sinkholes and traveling through karst conduits toward Beargrass Creek (also known as a karst window-see appendix C).

Enhancement Opportunities

Natural Habitats

The natural habitats within the study area have been significantly degraded by non-native invasive species. Removal of the non-native species would provide more habitat for desirable native plants, which would increase available food and cover for wildlife. Upland woods habitat could also be enhanced through planting of hard-mast trees beneficial to wildlife such as oaks, hickories, and beech. This could be accomplished either by selectively clearing areas or replanting desirable species when non-native species are removed.

The power line easement area is dominated by wetland and old-field vegetation. Planting wetland and/or prairie herbaceous plugs and shrubs would help to restore and maintain old-field and scrub/shrub vegetation, creating a native prairie.

Waters and Wetlands

Planting native trees and shrubs along the riparian corridor may enhance Middle Fork Beargrass Creek. Intermittent and ephemeral streams may also be improved with invasive species removal and native plantings. Water quality may be enhanced by on-site trash removal. Planting native herbaceous, shrub, and tree species to enhance diversity may enhance the wetland. The on-site waters and wetland should be protected during any potential construction activities by implementation of proper erosion prevention and sediment controls.

Listed Species

Protected species habitat may be enhanced by removal of invasive species, planting native vegetation, and protecting water quality. Removal of the dense understory dominated by bush honeysuckle will enhance the foraging habitat for bats. Planting of white oak and shagbark hickory species in the upland woods and along the Middle Fork Beargrass Creek would enhance summer roosting habitat for the Indiana bat. Creating a native prairie and increasing wetland diversity within the power line easement will enhance habitat for state-listed bird species.

Karst Features

Efforts to protect water quality leading to and exiting from karst areas could include limiting or pretreating runoff from impervious surfaces prior to discharge to these areas, limiting herbicide, pesticide, and fertilizer application in the vicinity of the features, and removal of invasive species. The geologic features within the park present an excellent opportunity to develop an interpretive trail by exploring the karst features present in this portion of Jefferson County.

Major sinkhole located adjacent to main parking field

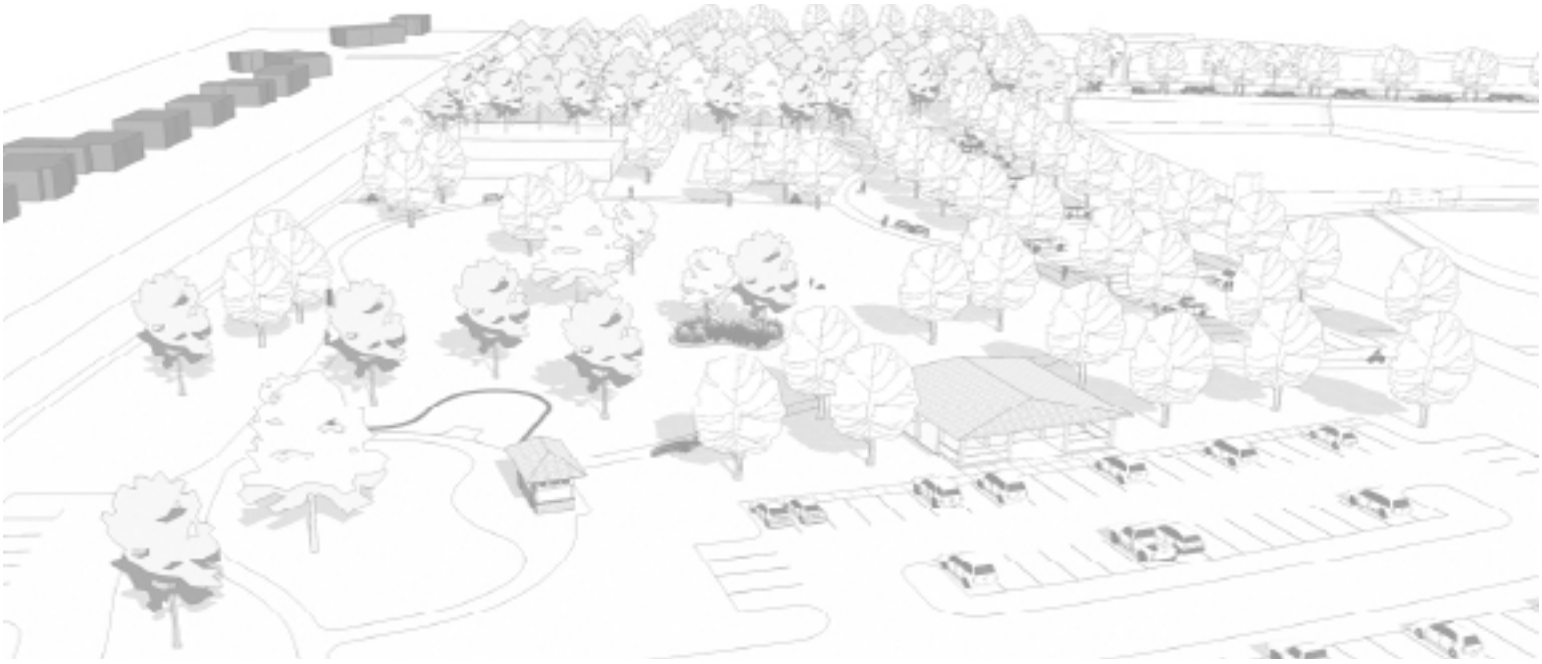
A.B. SAWYER PARK MASTER PLAN

Louisville, Kentucky

EXISTING CONDITIONS

June 29, 2011

PERENNIAL STREAM
INTERMITTENT STREAM
WETLANDS
SEEP/SPRING
SINKHOLE
DRAINAGE CONFLICT



III. Process, Issues & Considerations

A. Public Participation

Survey

A public survey was developed by Metro Parks staff as one tool for gathering broad based input into the master planning process. The survey consisted of 19 questions relating to park usage, accessibility, and existing and proposed programs and facilities. General demographic information was also collected. A copy of the complete survey document may be found in the appendix of this plan. The survey was accessed via the Metro Parks web site and was made available to park users during the inventory and analysis phase of the planning process. The survey was advertised through the Metro Council District 18 newsletter, on the Metro Parks web site, and during initial public meetings.

Stakeholder meetings

A.B. Sawyer Park serves a broad constituency involving a wide variety of user groups with a stake in the outcome of the master plan process. Soliciting specific feedback from each of these "stakeholders" was concerned critical to the success of the plan. The consultant team worked diligently with Metro Parks staff and sought input from the public to identify the park's critical stakeholders. Meetings conducted with each identified stakeholder group provided valuable input to the plan.

Project discussion during first public meeting

In addition to meeting with staff of Metro Park's Landscape and Maintenance Divisions, the consultants conducted face-to-face and/or telephone interviews with all adjacent property owners. A.B. Sawyer Park is adjoined by six properties. Starting to the north and traveling clockwise, these properties are: the Northeast YMCA, FGG Plaza 3 office building, FGG Plaza 1& 2 office buildings, the Homebuilders Association of Louisville, and the University of Louisville's Shelby Campus (see existing conditions map).

Public meetings

Three public meetings where held at critical milestones of the planning process. An initial public meeting was held on January 17, 2012 to present the findings of the inventory and analysis process and garner input on desired programs and facilities. A second public meeting was held on June 21, 2012 to present three alternatives for future growth and redevelopment of the park. A final public meeting was held on August 21, 2012 to present the recommended master plan alternative and discuss implementation priorities. A summary of the public meetings and public input is provided in the appendix of this plan.

Lyndon Recreation Association (LRA)

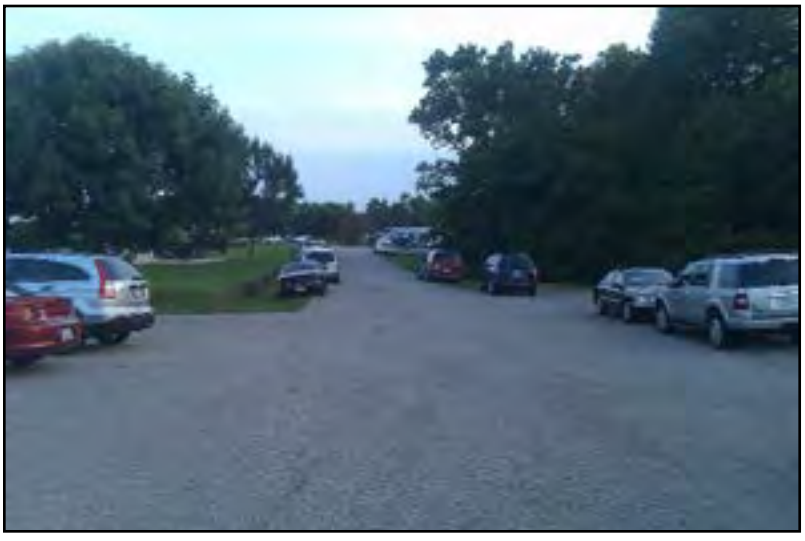
Lyndon Recreation, under an annual agreement with Metro Parks, is responsible for a number of functions at A.B. Sawyer Park from field care, to concession contracts, to infrastructure upkeep of the playing fields.

The LRA was established in the 1950s. Today, it provides league play for over 1,500 ball players, including t-ball, baseball, and softball. The baseball season traditionally began the Monday after the Kentucky Derby in early Mary and extended through mid-July; this year, the season began earlier—during April. A football season begins in the fall, which brings the total involvement to approximately 3,000 players per year. According to the LRA, park attendance over these two seasons may reach as high as 275,000. In addition to these youth leagues, participation in the Lyndon Lightning teams, affiliated with the Amateur Athletic Union, promotes serious competition throughout the region, including five neighboring states. Such serious play has produced athletes that have continued on to professional teams.

The Lyndon Recreation Association has also played an active part in providing recreational facilities at the park through its fundraising and capital campaign efforts which have resulted in the Brooks Field football facility, new and upgraded baseball fields, additional play equipment, and storage to irrigation systems and scoreboards. Connections between park trails and the Louisville Loop are greatly anticipated.

Issues

Based on information gathered as part of the inventory and assessment phase of the plan, including feedback provided from the user survey, stakeholder interviews, and initial public meeting, several issues relating to the park's physical facilities were identified to be addressed in the plan.



Two-way to One-way transition point; overflow parking

Access, Circulation and Wayfinding

There are four vehicular entrances to the park, all along Whipps Mill Road. The two middle entrances only provide access to the Metro Parks Landscape Division building and the recycling center. The other two entrances connect to the park's internal roadway and provide access to the tennis court/playground area, the maintenance facility, and the parking lots that serve the Lyndon Recreation Association play fields. The northern entrance to the park leads directly into a parking lot while the southern entrance takes you immediately past the maintenance building. The park lacks a definitive entry that provides visitors with a sense of having arrived at an attractive destination.

The park roadway, at both points where it intersects with Whipps Mill Road, is designed to accommodate two-way traffic. Once inside the park however, the road has been signed for one-way traffic heading southbound, requiring park visitors entering from the southern entrance to return to Whipps Mill Road in order to access the north end of the park. The park roadway also becomes a physical separation between parking and the play fields.

A gated service drive leads from the park's interior roadway to the multipurpose building and large concession building located in the center of the park. Although designed to accommodate service vehicles, this drive also represents the primary means for pedestrian access to the majority of the park's recreational facilities.

Wayfinding and signage for the park is generally limited to park identification signs at the park entrances. Once inside the park, there is no directional signage or informational signage to guide visitors to their destinations or inform park users of the presence or location of the park's amenities. Opportunities should also be evaluated for interpretive signage to inform visitors of the historic, cultural, and environmental resources within the park.

In 2011, Metro Parks and the Lyndon Recreation Association installed a series of asphalt walkways running in between the many of the existing baseball fields. Until that time, pedestrian paths were virtually nonexistent, with access from the parking lots to the playing fields occurring across the lawns. Even with the construction of the new asphalt walks, pedestrian connections are lacking. Without more direct pedestrian links, the park roadway becomes a physical and physiological barrier that separates the facilities located west of the road from those located east of the road.

Drainage

Storm water is generally managed within the park through sheet flow of water across lawn and open space areas with periodic drainage swales to direct water between and around the play fields and other facilities. Ultimately, the storm water makes its way down to the Middle Fork of Beargrass Creek. There are however, isolated areas where the concentration of storm water flows or the steepness of the topography has created rills and other signs of erosion and should be stabilized.

The most significant drainage problems are occurring along the wooded slope behind ball field 5 where storm water from offsite development to the north of the park, conveyed through an underground pipe, is discharged at a headwall near the top of the slope and has severely eroded the gravel access to the football practice area. Storm water best management practices that will dissipate the velocity of this discharge during peak rain events will be needed to eliminate this problem (see existing conditions map).

Drainage issues along access road to practice fields

Parking

There are two primary issues associated with parking at A.B. Sawyer Park. The first is how to provide adequate parking during peak events. While parking is generally sufficient for day-to-day park use, large events such as tournament play, create the need for additional parking. Historically, the overflow parking as been accommodated by allowing cars to park on the edge of the park road and through off-site parking on

adjacent property north of the park including the YMCA and the FGG Plaza office building complex. Parking on the park road however, creates potential safety hazards due to narrower drive lanes, pedestrian/vehicle conflicts, limited sight lines and chaotic entry and exit to/from parked cars. The off-site parking has also created some issues with concerns over liability, perceived speeding, and litter. The FGG office buildings are owned and managed by two separate entities. One owner, Wittington Realty Partners (WRP), LLC as well as the management of the Northeast YMCA has expressed a desire to work with Metro Parks and enter into formalized agreements for sharing parking.

Structures

A variety of structures exist on A.B. Sawyer Park property. The buildings that house Metro Park's Landscape Division offices and operations maintenance facility, as well as the restroom structure near the playground and tennis court are all maintained by the Parks Department. Issues associated with the Landscape Division and maintenance facility structures concern how well these buildings are meeting the operational needs of these two groups. Specific needs identified by staff have been summarized within the "stakeholder" section of this plan and can also be found in the Stakeholder Meeting Minutes located in the appendix.

Existing restrooms at main concessions

View of Metro Parks Maintenance facility from tennis courts

The structures and associated storage yards comprising both the Landscape Division and the Metro Parks maintenance facility occupy a significant amount of land area. Because A.B. Sawyer is a land locked park with no real opportunity to expand in size, existing park land is at a premium. While both of these operations perform critical park functions, their service areas extend across the park system and are not solely tied to A.B. Sawyer Park. Consideration should be given to the costs/benefits of combining and/or relocating one or both of these operations to free up additional park land.

There are several other structures within the park that are part of the recreational programs managed by the Lyndon Recreation Association. The primary structures associated with LRA include restrooms, concession stands, and a multipurpose building. As part of the stakeholder interview process, LRA staff was questioned about facility needs including existing and proposed structures. LRA staff responses are detailed in the Stakeholder Meeting Notes found in the appendix of this report but can be summarized as follows:

Multi-purpose building located adjacent to main concessions

- All restrooms need to be updated to meet Americans with Disabilities Association (ADA) standards. Additional restrooms are needed to better accommodate use demands.
- Consideration should be given to reorganizing and possibly expanding the multi-purpose building to

provide for more meeting space (team meetings) and storage for future growth
- On-field storage (storage for isolated areas like practice fields) is valued LRA staff and further consideration is needed to find an appropriate solution while addressing issues like vandalism, flood plain, and general maintenance and upkeep.

Recreational

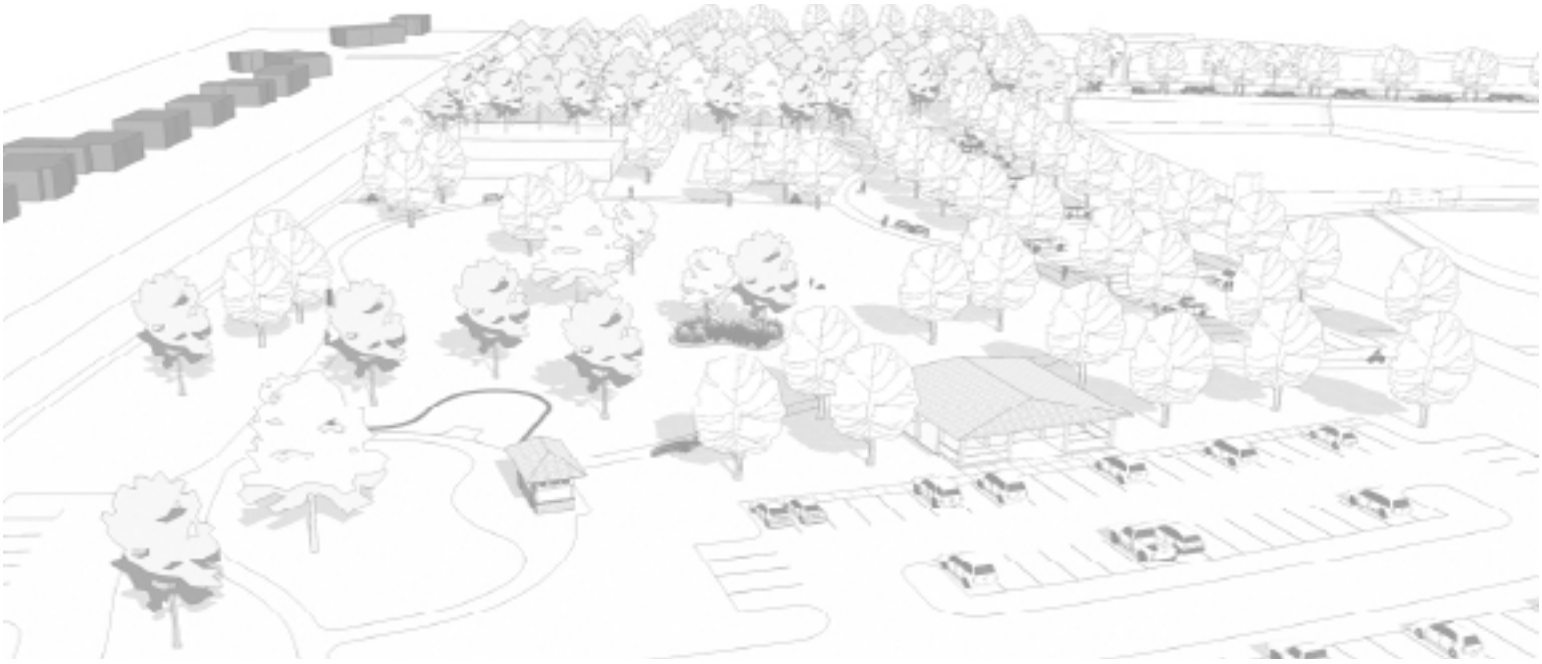
Issues associated with existing and future recreational facilities at the park were identified based on program analysis, stakeholder and user feedback, and through discussions with Metro Parks staff. While A.B. Sawyer Park, through the Lyndon Recreation Association, provides excellent facilities for a variety of active recreational needs, there was considerable interest expressed for more passive recreational opportunities. Examples that were noted included the need for more community gathering/ picnic space, more opportunities for walking trails, and more facilities to accommodate seniors. There was a general perception expressed at the public meetings that A.B. Sawyer does not feel like a public park but a recreational league facility. Meeting attendees noted there should be recreational opportunity within the park for citizens who are not involved with the league program.

Lyndon Recreation storage room located in multi-purpose building

Issues concerning the active recreational facilities at the park were also identified. Many issues however, such as the need for walking paths between the ball fields, new bleachers, and expanded playground equipment, were addressed during the course of the planning process through capital fundraising efforts by LRA and funding from Metro Government. Although the addition of a new playground already occurred as the master plan was being developed, there is still a need for updating the park's older existing playground and equipment.

LRA did however identify recreational additional recreational issues that still needed to be addressed. Currently, there is only one dedicated practice field for football at the park, located adjacent to Brooks Field. While informal practices now occur throughout the park, there is a need for more permanent practice facilities.

LRA also expressed interest in the construction of an indoor practice facility that would allow baseball teams to practice at the park year round. This concept was discussed with Metro parks staff to determine if such a facility should be included in the program elements as master plan alternatives were considered and evaluated. Metro Parks was receptive to the idea of an indoor practice facility and continuing discussions with LRA about the feasibility of such a facility but felt that because of the land area demands and interest in providing more passive recreational opportunities, A.B. Sawyer Park would not be an appropriate location.



IV. Alternative Concepts

Gresham, Smith and Partners, with help from the Metro Parks staff, identified some key elements that we believe need to be addressed in the design in order to make the park more functional and user friendly. Each of the design alternatives seeks to improve park circulation by eliminating the section of one way traffic, returning to a two way loop road. This will simplify and clarify vehicular circulation and encourage new visitors to explore an otherwise unfamiliar park. In addition to park road improvements, the alternatives seek to improve upon current parking conditions to provide more efficient lots that are easier to maintain.

Understanding circulation needs of user groups is key to all successful design, including parks. Well defined park entrances are the first elements users encounter and set the stage for the experience. Park wayfinding and pedestrian circulation key are elements in each of the alternative designs. Addressing these issues, the design alternatives provide expanded trail/pathway networks that connect users from one side of the park to the other. The pedestrian route from major parking areas to the baseball/softball complex has been improved to create a sense of arrival for guests and provides seating/viewing locations for visitors. The designs also improve pedestrian connections to adjacent properties that have been identified as assets to current and future park users.

Park amenities have been identified as a major point of interest and are addressed in all three design alternatives. While not a significant impact on the plans, improving existing restroom and concession spaces is inherent to the future success of the park. The designs include a large and a small pavilion to provide covered and rentable spaces for picnics and other gatherings. Playground improvements have been shown in areas expected to have the highest number of younger children, making play a convenience for guests. Finally, four large practice fields have been accommodated in the open areas along Beargrass Creek to further meet the needs of the Lyndon Recreation Association's programs.

Preservation and reclamation of natural/open land will allow for passive recreation that is not dependent upon planned events. The property along Whipps Mill Road will be reclaimed to help identify the property as park land. Preserved tree cover and proposed native/naturalized tree and shrub plantings will provide

patrons a natural respite from the surrounding urban and suburban lifestyle. The inclusion of native and naturalized plant materials will further reduce the need for and cost of ongoing landscape maintenance within the park.

A. Concept Plan One

Concept one maintains much of the existing park infrastructure while enhancing pedestrian and vehicular circulation. The plan reclaims some of the unused paved area behind the forestry building in order to improve parking and pedestrian connections. The large parking area has been redesigned to improve circulation, reduce unnecessary impervious cover, and improve the appearance of the park entry.

Two pavilions are proposed. The largest is located near a one acre passive recreation field and takes advantage of parking while staying in close proximity to the newer playground and restrooms. The second pavilion, located near the main concessions building, provides a covered shelter for families attending games at the park. An updated playground is located adjacent to this location, making the pavilion a destination. A second playground is provided near the existing football practice field and T ball complex.

The central focus of this plan is to update the existing park buildings and provide a true pedestrian experience to visitors. The entrance walk has been converted from a utilitarian driveway to a pedestrian promenade, lined with trees and benches for viewing games on the adjacent fields. The promenade leads the user to the main concessions building and small picnic pavilion, considered the hub of the facilities managed by the Lyndon Recreation Association.

Concept One provides a total of 320 parking spaces with 14 of them being ADA accessible.

B. Concept Plan Two

The major component of Concept Two is the relocation of the maintenance complex. Moving across the drive, tucked into the existing tree line, the maintenance activities are screened from the visitors' eyes. Large runs of parking are eliminated, reducing the negative visual impacts.

The relocation of the maintenance building allows for the creation of an expanded passive recreation field, giving the park a more naturalistic look. Two pavilions are proposed; one intended to serve participants in the LRA programs, the other for park users not necessarily involved with LRA programs. The larger pavilion is positioned in close proximity to parking and the recently constructed playground while taking advantage of views across the field. The second pavilion is located near the large concessions stand in the league center with an updated playground positioned nearby. A second playground is provided near the existing football practice field and T ball complex.

Concept Two provides an updated entrance to the baseball/softball complex with trees and benches lining the large promenade as shown in Concept One. The major payoff with this concept is the transition of some of park property from a purely functional, utilitarian use into true park grounds. The park's functionality and draw have been increased as a result.

Concept Two provides a total of 327 parking spaces with 14 of them being ADA accessible.

C. Concept Plan Three

Concept Three provides an opportunity to make A.B. Sawyer Park a community destination. Doing so requires complete reclamation of park lands, relocating both the maintenance facility and the landscape

division buildings and their functions off site. This allows the passive recreation field to expand to its maximum potential for the purpose of providing more community open space for passive recreation. The enhanced views of open space from Whipps Mill Road will help identify the site as a park, alleviating confusion. Benches and strategic tree plantings are proposed within the passive recreation area to create attractive views for visitors.

In order to maximize passive recreation, this concept relocates the tennis courts further north and provides a new basketball court immediately adjacent to them. Two pavilions have been provided. The larger pavilion is positioned in close proximity to parking and the recently constructed playground while maximizing views across the expanded passive recreation field. The second pavilion is located near the main concessions stand with an updated playground positioned nearby. A second playground is provided near the existing football practice field and T ball complex.

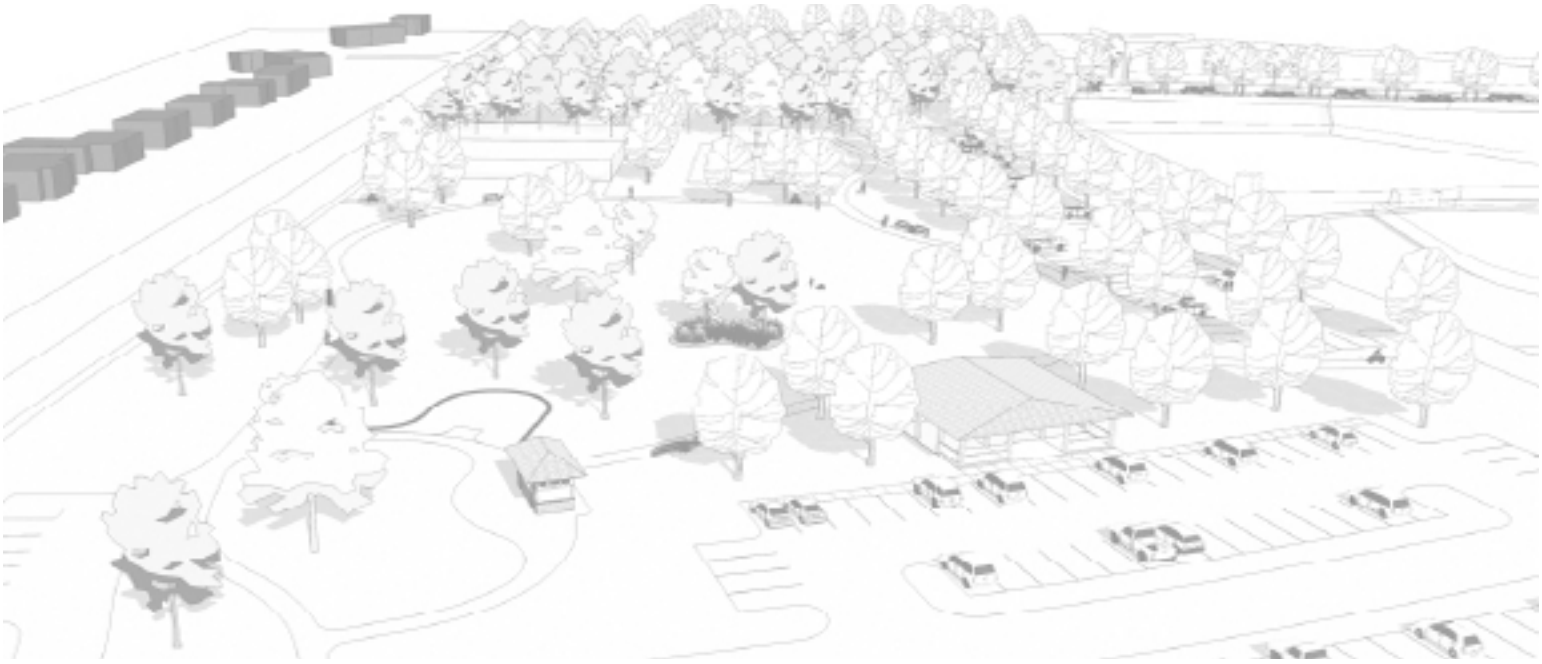
While Concept Three provides the same updated entrance to the baseball/softball complex with trees and benches lining the large promenade as shown in Concept One, the changes along Whipps Mill Road are the driving force. This concept requires a commitment to making A.B. Sawyer a multi-functional park that provides experiences for all user groups rather than focusing on those involved with Lyndon Recreation.

Concept Three provides the most parking of any of the three alternatives with a total of 360 parking spaces with 14 of them being ADA accessible.

A.B. SAWYER PARK MASTER PLAN
CONCEPT 1

A.B. SAWYER PARK MASTER PLAN
CONCEPT 2

A.B. SAWYER PARK MASTER PLAN
CONCEPT 3



V. Recommended Plan Solutions

A. Final Plan

Based on discussions with Metro Parks staff and input from public meeting attendees and the Lyndon Recreation Association, Alternative Plan Concept "C" was selected as critical to the future improvement of the park. The final plan is based on Alternative Plan Concept "C," which removes existing utilitarian maintenance and administration structures and parking and creates more park open space. Providing an opportunity to serve a wider range of users while improving the LRA facilities is the major focus of the park master plan. The final plan improves vehicular circulation and pedestrian connections, improves existing park amenities and provides new ones for guests and focusing on using landscape materials to create or improve upon the sense of place within the park.

The following sections will outline the key design elements, their probable costs and our understanding of short and long term improvement opportunities.

B. Probable Construction Costs

The cost projections below are based on the final recommended plan contained in this document. Represented in the costs below are materials, labor, taxes, overhead and contractor markup. Relocation and rebuilding of Parks operations have not been included.

A. Site Paving **$ 684,000.00**

Includes clearing and grubbing, asphalt paving for the new drive layout, asphalt paving for the updated parking layout, an asphalt access drive to the practice field, new asphalt pedestrian paths and concrete work for the entrance promenade.

B. Athletics Facilities **$ 160,000.00**

Includes clearing and grubbing, two new storage sheds, two new (relocated) tennis courts, one new basketball court and four new practice fields.

C. Pavilion / Playground Facilities **$ 165,000.00**

Includes clearing and grubbing, one large pavilion located in the passive recreation field, one small pavilion located near the existing large concession stand and two new and/or renovated playgrounds as shown on the plan.

D. Landscape / Site Furnishings **$ 194,000.00**

Includes landscape materials and labor, 40 new benches, 15 new trash receptacles, three new bike racks, six new drinking fountains, two new park identification signs, four new informational signs and 15 new directional/way finding signs.

E. Utilities **$ 16,000.00**

Includes anticipated work for minor sanitary sewer and electrical improvements.

F. Facility Improvements / Additions **$ 480,000.00**

Includes demolition, land restoration, one new restroom location, renovation of two existing restrooms to ADA standards, renovation of the concession stands and renovation of the multi-purpose facility.

Subtotal:	**$1,699,000.00**
15% Contingency:	**$ 255,000.00**
10% Design Fee:	**$ 170,000.00**
Total:	**$2,124,000.00**

View looking North across changes to Metro Parks Maintenance facility area

(Before)

(After)

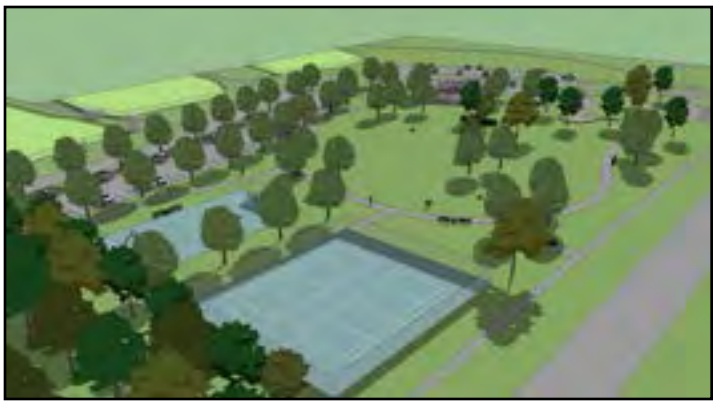
View of changes to entry promenade leading into the baseball/softball complex

(Before)

(After)

View of changes to entry promenade leading into the baseball/softball complex

(Before)



(After)

C. Recommended Phasing

Initial Project Opportunities

The following projects would allow work to start within the park while funding is secured for the major park components. These elements have been identified as major needs for the park in order to improve the visitor's experience and strengthen connections to adjacent properties.

A. Practice Fields - Design and implement four multi-purpose practice fields adjacent to the proposed greenway extension. This will include the construction of a paved access road for the fields.

B. Shared Parking Agreements - Establish shared parking agreements with adjacent land uses to ease the strain on parking needs for the short term.

C. Adjacent Property Connections - Improve pedestrian connections to adjacent properties on the North side of the park in order to improve circulation and allow for greater access to the park.

D. Shade Trees for Bleachers - Plant shade trees at all bleacher locations as new bleachers are installed in order to provide users a more comfortable experience.

E. Renovations to Existing Restrooms - Renovate all existing restrooms to bring them with ADA code compliance. Flush conditions at thresholds, wider stalls and other amenities should be provided to accommodate all potential users.

F. Small Pavilion Construction - Design and construct one small pavilion immediately adjacent to the main concession stand and renovated playground location for visitors to the ball fields.

G. New Pedestrian Pathways - Complete all pathways within the area that comprises baseball/softball fields and football fields. This will make site navigation easier and more accommodating for guests. Take care to provide accessible routes for ADA compliance.

H. Existing Playground Renovation - Renovate equipment, mulch surface and access to the existing playground near the main concession stand to provide improved play opportunities for children.

Major Capital Investment Projects

The following projects will require long range planning and significant capital investment. These components will allow A.B. Sawyer Park to provide activities and amenities for a wider range of users than while further improving the experience of its current users.

A. New Restroom Facility - Provide one new, ADA accessible restroom facility located as shown on the plan.

B. Entrance Promenade - Remove existing asphalt walkway leading to the concession stand and replace with a concrete promenade using varying paving textures and colors. The promenade will include site furnishings (benches, trash receptacles, bike racks, etc.) and new canopy trees to provide shade for visitors.

C. Relocation of Maintenance Facility - Relocate the maintenance facility to a location to be identified off of the park property. All building and paving shall be removed and disposed of to allow this part of the park to be returned to passive recreation until further development.

D. Large Pavilion Construction and Parking - Design and construct one large 40' x 54' pavilion as located on the plan. Provide additional parking to accommodate the maximum anticipated crowd for this pavilion.

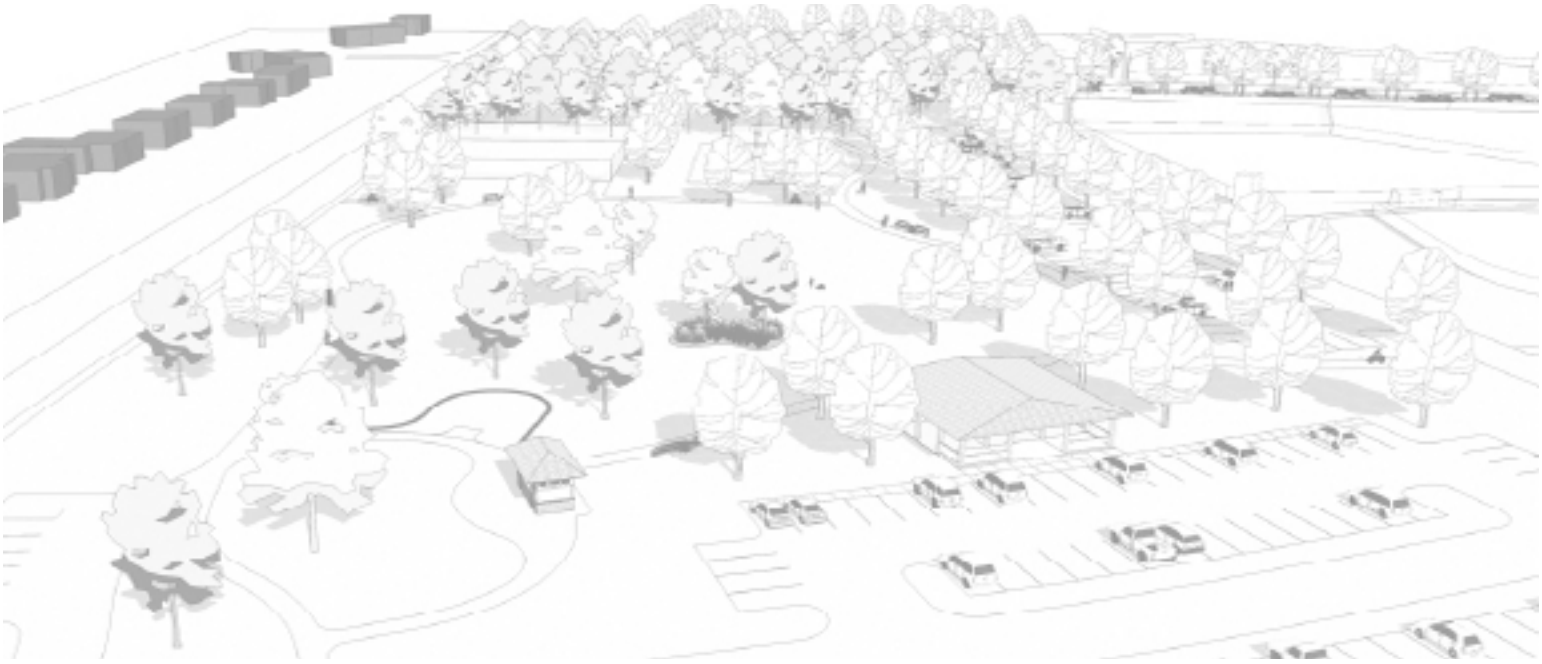
E. New Park Entrance, Drive and Parking Renovations - Close and relocate the park's northern entrance to improve park circulation. Eliminate one-way traffic and provide a new, linear parking lot adjacent to the passive recreation field. The large, existing parking field will be redesigned and striped to improve parking efficiency. Parking lot and street trees are to be included in this project to create an improved sense of place for the park.

F. Relocation of Landscape Division - Relocate the landscape division to a location to be identified off of the park property. All building and paving shall be removed and disposed of to allow this part of the park to be returned to passive recreation until further development.

G. Tennis/Basketball Courts and Pathways - Relocate existing tennis courts and provide one new basketball court so to maximize the passive open space available to users. Provide a loop walking trail on the perimeter of this space with connections to other park features.

H. Renovate Existing Multi-Purpose Facility - Renovate the existing multi-purpose facility within the LRA complex to maximize the space for meeting rooms, umpire's rooms, offices and park equipment/ maintenance storage.

A.B. SAWYER PARK MASTER PLAN



VI. Appendices

- A. Environmental Assessment
- B. Historical / Cultural Assessment
- C. Geologic Study
- D. User Survey
- E. Stakeholder Interview Notes
- F. Public Meetings Summary
- G. Bike and Pedestrian Connections to/from Park

REDWING
ECOLOGICAL SERVICES, INC.
1139 South Fourth Street • Louisville, KY 40203 • Phone 502.625.3009 • Fax 502.625.3077

January 21, 2013

Mr. Jon Henney
Gresham Smith & Partners, Inc.
101 South 5th Street
Suite 1400
Louisville, Kentucky 40202

Subject: **Ecological Assessment Report**
AB Sawyer Master Plan Project
Jefferson County, Kentucky
Redwing Project 11-005

Dear Mr. Henney:

Redwing Ecological Services, Inc. (Redwing) is pleased to submit this Ecological Assessment Report to Gresham Smith & Partners, Inc. (GSP) in support of the Master Plan for the AB Sawyer Park located in Louisville, Jefferson County, Kentucky (Figure 1). The purpose of this report is to identify potential habitat of federal and state listed threatened/endangered species, or their designated critical habitat, and the presence of waters of the U.S. for use during future planning activities. This submittal includes: a summary of the project background; study methodology; identification of listed species; the results of the ecological assessment in terms of existing natural habitats like jurisdictional waters/wetlands, and karst features; and enhancement opportunities.

BACKGROUND

Redwing, under contract with GSP, provided an environmental assessment of approximately 20 acres of the AB Sawyer property located adjacent to the Middle Fork Beargrass Creek in 2009 and 2010. This assessment was performed following Kentucky Transportation Cabinet (KYTC) and Federal Highway Administration (FHWA) environmental guidelines. Upon completion of the environmental assessment, a Categorical Exclusion (CE) report was submitted to allow funding of a greenway under the American Recovery and Reinvestment Act of 2009 (Act).

Louisville Metro Parks requested a planning level environmental assessment of the remaining portions of the park. This assessment utilized pertinent ecological database and literature searches performed for the initial project but required an additional field assessment to address ecological issues. This assessment did not include a review of environmental contamination or cultural/historic issues.

STUDY METHODOLOGY

The ecological assessment was conducted to determine the presence/absence of listed species, natural habitat assessment, and water/wetland resources in the study area.

Listed Species: Protected species known to occur, or having the potential to occur, in the vicinity of the project were identified through coordination with relevant state and federal agencies. Lists of protected species known to occur in the county and within the same USGS topographic quadrangle were obtained from the U.S. Fish and Wildlife Service (USFWS) and the Kentucky Department of Fish and Wildlife Resources (KDFWR), respectively. The Natural Heritage Database maintained by the Kentucky State

Nature Preserves Commission (KSNPC) was also reviewed for the occurrence of rare species in the vicinity of the project. Following coordination with the resource agencies, the study area was assessed for habitats suitable for use by state and federal threatened/endangered species. The assessment included identification of natural areas and their representative plant and animal communities.

Natural Habitat Assessment: A reconnaissance of plant communities present within the study area was conducted during a site visit on May 23, 2011. Qualitative data consisted of identifying all species observed and compiling an overall species list by area. Plant species not recognized in the field were collected and later identified using standard botanical keys. The qualitative species lists were analyzed using the Floristic Quality Assessment method, which assigns each native species a coefficient of conservatism value (C value). The C values range from 0 to 10, with low numbers indicating plants found in disturbed habitats and high numbers indicating plants found in relatively undisturbed, relict native communities. C values specific to Kentucky were obtained from the KSNPC. The C value ranges include: 0-3 (represents a community that does not signify a remnant natural area); 4-6 (represents a remnant community that has significant to moderate disturbance); 7-8 (represents a remnant community that has some periodic disturbance); and 9-10 represents a remnant community that has very little post settlement disturbance. An Adjusted Floristic Quality Index (AFQI) is determined by summing the C values for an area then dividing by the number of species. The generated mean C value is then multiplied by the square root of the number of species to allow better comparison of large sites with greater number of species to small sites with fewer species. This method is further modified by using "0" for the C value for non-native species.

Water/Wetland Delineation: A delineation of wetlands within the study area was accomplished through documentation of the presence/absence of hydric soils, wetland hydrology, and hydrophytic vegetation per the guidelines of *the Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region (July 2010).* A jurisdictional determination of open waters, such as streams and ponds, within the study area was made based on the presence/absence of ordinary high water mark (OHWM), defined bed and bank features, and flow regime. Soil, hydrology and vegetation data were collected on Routine Wetland Determination Data Forms for 13 points within the study area during the 2009 and 2011 site visits. The data point collected in 2011 is presented as Appendix A (Figure 2). A Rapid Bioassessment Protocol data form was collected for the intermittent stream located within the current study area and is included as Appendix B.

Karst Areas: Redwing reviewed documents provided by the Kentucky Division of Water (KDOW) and the Kentucky Geological Survey (KGS) prior to survey the site. Redwing used this information, particularly the dye trace test provided by KDOW, to investigate for sinkholes and seeps on-site. Redwing evaluated these areas for potential threatened and endangered species habitat.

IDENTIFICATION OF LISTED SPECIES

Listed species in relation to the project are discussed below in terms of resource agency coordination and identification of species.

Resource Agency Coordination: Agency correspondence is summarized below and included as Appendix C.

United States Fish and Wildlife Service: A published list of known occurrences of federally-listed species in Jefferson County, Kentucky (USFWS, 2008) includes two bat species, eight mussel species, one plant species, one bird species, and two insect species.

Kentucky Department of Fish and Wildlife Resources: The database maintained by the KDFWR of known occurrences of state and federally-listed species was reviewed for the Anchorage quadrangle (KDFWR, 2009). The review determined that one federally-listed species has documented occurrences in the Anchorage quadrangle. In addition, 12 state-listed species have documented occurrences in the Anchorage quadrangle. In a letter dated October 9, 2009, KDFWR indicated that the federally-endangered Indiana bat (*Myotis sodalis*) is known to occur within close proximity to the project area.

Kentucky State Nature Preserves Commission: An electronic data request was submitted to the KSNPC, requesting information regarding documented occurrences of listed plant or animal species, or exemplary natural communities, within or in the vicinity of the study area. The KSNPC identified no records of protected or rare species within one mile of the study area, 5 records for federally-listed species within five miles of the study area, 9 records for aquatic species within five miles of the study area, and 37 records for mammals and birds within ten miles of the study area.

Kentucky Division of Water: Redwing received a letter from KDOW dated September 28, 2009 following a request for information. This letter indicated the presence of several pollutants contained in Middle Fork Beargrass Creek and stressed the importance of proper installation and maintenance of erosion prevention and sediment controls during any construction on-site.

Identification of Species: USFWS identifies fourteen federally-listed species as potentially occurring in Jefferson County, Kentucky. The KDFWR lists one federally-listed species and 12 state-listed species that are known to occur in the Anchorage quadrangle. The KSNPC identified no records of protected or rare species within one mile of the study area, five records for federally-listed species within five miles of the study area, nine records for aquatic species within five miles of the study area, and 37 records for mammals and birds within ten miles of the study area. Potential habitat for listed species within the survey area is discussed in more detail below.

Federal: Species of concern were identified by comparing the records from coordination with the resource agencies to habitats identified within the study area. Suitable habitat was found for the following federally-listed species: Indiana bat, gray bat (*Myotis grisescens*), and American burying beetle (*Nicrophorus americanus*). Each of these species and their associated habitat is outlined in the table below.

Species	Common Name	Status	Habitat Present	General Habitat Type	Enhancement Potential
Mammals					
Myotis grisescens	Gray Bat	E	Yes	caves and wooded areas	Yes
Myotis sodalis	Indiana Bat	E	Yes	caves and wooded areas	Yes
Mussels					
Pleurobema clava	Clubshell	E	No	rivers and streams	Yes
Cyprogenia stegaria	Fanshell	E	No	rivers and streams	Yes
Potamilus capax	Fat Pocketbook	E	No	rivers and streams	Yes
Plethobasus cooperianus	Orangefoot Pimpleback	E	No	rivers and streams	Yes
Obovaria retusa	Ring Pink	E	No	rivers and streams	Yes
Lampsilis abrupta	Pink Mucket	E	No	rivers and streams	Yes
Plethobasus cyphus	Sheepnose	PE	No	rivers and streams	Yes
Pleurobema plenum	Rough Pigtoe	E	No	rivers and streams	Yes
Plants					
Trifolium stoloniferum	Running Buffalo Clover	E	No	mesic forests with filtered sunlight and light disturbance	Yes
Birds					
Sterna antillarum	Interior Least Tern	E	No	sandbars associated with rivers	No
Insects					
Nicrophorus americanus	American Burying Beetle	E	Yes	unknown	No
Pseudanopthalmus troglodytes	Louisville Cave Beetle	C	Yes	caves	Yes

E = Federally Endangered Species; C = Candidate Species; PE = Proposed Endangered

Indiana Bat: This species uses limestone caves for winter hibernation, preferably with a temperature between 37° Fahrenheit (F) and 43° F in midwinter and relative humidity of approximately 87 percent. In late April to early May Indiana bats emerge from the hibernation caves and migrate to summer roost habitat, which consists primarily of dead or live trees with loose bark. Tree cavities and hollow tree boles may also provide summer roost habitat. During the summer, this species feeds on moths, beetles, flies, and aquatic insects within riparian forests. In late August Indiana bats begin to congregate and swarm near the caves as they prepare for mating and hibernation in October and November.

The study area is located in the vicinity of a known maternity colony (Figure 3). The site assessment identified one sinkhole that contains potentially suitable roosting habitat for this species (Sinkhole 3). Portions of the upland wood habitat within the study area are considered potential summer roosting and foraging habitat. The location of the upland woods habitat within the study area is presented on Figure 2.

Gray Bat: The gray bat utilizes caves as roosting habitat throughout the year. In the early fall gray bats leave the caves where the young were raised and migrate to other caves used for hibernation. These hibernacula generally have temperatures between 45° F and 50° F. In early spring, gray bats emerge from the hibernation caves and migrate to summer roosting caves, where the population usually segregates into maternity and bachelor colonies. Foraging for this species appears to occur mainly in wooded areas adjacent to open water or larger streams.

The site assessment identified one sinkhole that contains potentially suitable roosting habitat for this species (Sinkhole 3). The wooded areas along the Middle Fork Beargrass Creek represent potential foraging habitat for this species.

American Burying Beetle: Potential habitat for the federally-endangered American burying beetle exists in the survey area. However, since the species is considered extirpated and no known reintroduction programs for the species exist in Jefferson County, the species is not likely to occur on-site. Little is known about specific habitat requirements for this species; however, carrion availability is highly important, which can not be controlled by the park. Due to the limited knowledge about habitat for this species and the limited carrion availability, no efforts can be made to improve habitat suitability on-site.

Louisville Cave Beetle: This species is cave dependent and is not found outside of cave systems. This species has been found only within two caves located in Louisville, Jefferson County, Kentucky, and one of the caves was closed during residential development in the 1990's. Ten other caves in the surrounding area were surveyed, which identified the second cave where the species is known to occur. The on-site subterranean karst areas may provide habitat for this species.

State: Limited potential habitat exists for seven state-listed bird species listed by the KDFWR including: American coot (*Fulica Americana*), barn owl (*Tyto alba*), dark-eyed junco (*Junco hyemalis*), great blue heron (*Ardea herodias*), savannah sparrow (*Passerculus sandiwchensis*), sedge wren (*Cistothorus platensis*), and sharp-shinned hawk (*Accipiter striatus*). Of these, three are wetland species, two are forest species, one is a grassland species, and one prefers various open areas. Most of these species would use the study area for winter or foraging habitat only. The Middle Fork Beargrass Creek represents potential habitat for the Louisville crayfish (*Orconectes jeffersonii*).

In addition to the federal and state-listed species outlined above, the study area offers potential habitat for the evening bat (*Nycticeius humeralis*), which was documented by the KSNPC. Habitat for this species includes bottomland forests, swamps, and riparian corridors; therefore, the wooded areas surrounding Middle Fork Beargrass Creek represent potentially suitable habitat for this species. The KSNPC list of species occurring between five and ten miles was not used based on the high availability of habitats similar to study area within the ten mile radius.

HABITAT ASSESSMENT RESULTS

Redwing conducted site visits of the project area on August 24, 2009 and May 23, 2011 to identify existing natural habitats and jurisdictional water/wetlands, as well as to determine the on-site presence/absence of federal and state-listed species or their critical habitat. The results of the ecological assessment are presented below in terms of natural habitats, waters and wetlands, and karst features.

NATURAL HABITATS

The approximately 51.7-acre study area contains upland woods, scrub/shrub, and open field/urban habitats (Figure 2). One wetland was identified within the powerline corridor along Beargrass Creek (Figure 2). The site contains three wooded areas within the urban park setting.

The quality of the upland woods habitat and the powerline easement was assessed as described under the methodology. A quality assessment of the urban habitat associated with the remainder of the park was not performed due to the highly developed nature of these areas and the limited opportunity for future enhancement. Habitats observed in the study area are discussed below followed by a discussion of habitat quality. The following table summarizes habitats within the study area.

Habitat	Area (acres)
Upland Woods	10.2
Scrub/Shrub	2.6
Open Field / Urban	37.3
Wetland	1.6
Open Water	0.02

The three areas of upland woods habitat are located on the hillslopes in the southern portion of the study area adjacent to Middle Fork Beargrass Creek, in an area in the west-central portion of the site, and in the northwestern corner of the site. This habitat is dominated by sugar maple (*Acer saccharum*), boxelder (*Acer negundo*), hackberry (*Celtis occidentalis*), eastern red cedar (*Juniperus virginiana*), white mulberry (*Morus alba*), black walnut (*Juglans nigra*), and black cherry (*Prunus serotina*). The understory of this habitat is extensively dominated by bush honeysuckle (*Lonicera maackii*).

An area of scrub/shrub habitat is located along the Middle Fork Beargrass Creek and within the utility easement located in the southern portion of the study area. This area lacks large woody vegetation, but does not appear to be regularly maintained. Species observed in this habitat include boxelder, green ash, red maple (*Acer rubrum*), sycamore (*Platanus occidentalis*), silky dogwood (*Cornus amomum*), Frank's sedge (*Carex frankii*), blackberry (*Rubus allegheniensis*), and Johnson grass (*Sorghum halepense*).

The open field habitat includes areas that are regularly maintained through mowing as well as existing trails, access roads, and Hurstbourne Lane, which bisects the eastern portion of the study area. This habitat is dominated by tall fescue (*Festuca arundinacea*), field garlic (*Allium vineale*), white clover (*Trifolium repens*), Kentucky bluegrass (*Poa pratensis*), and ground ivy (*Glechoma hederacea*).

The wetland habitat includes an area in the southwestern portion of the site dominated by sedges (*Carex* spp.), cattail (*Typha angustifolia*), ricecut grass (*Leersia oryzoides*), jewelweed (*Impatiens capensis*), softstem bulrush (*Schoenoplectus tabernaemontani*), and black willow (*Salix nigra*). This feature is discussed in more detail below.

The upland woods habitat includes three separate woodlots as previously discussed. The Adjusted Floristic Quality Index (AFQI) of these areas is 11.49 for Woodlot 1, 5.88 for Woodlot 2, and 7.33 for Woodlot 3. These values are indicative of small areas with significant non-native species growth. To qualify these values, an AFQI of 50 to 56 would be considered exceptional (very little post settlement

disturbance); an AFQI of 39 to 45 would be considered high quality (remnant community with periodic disturbance); and an AFQI of 22 to 34 would be considered average quality (remnant community with moderate to significant disturbance); and an AFQI of 0 to 17 would be considered poor quality (not a remnant natural area). The native species present include trees such as box elder, silver maple, and black cherry and shrubs such as dogwood, sumac, and eastern red cedar. The areas lack a diverse mix of hard-mast native tree species such as oaks and hickories. Table 1 presents a summary of the quality assessment of the upland woods area.

The powerline corridor is dominated by wetland and scrub/shrub habitat. A greater number of species were observed in the powerline easement due to the diversity of habitat; however, the species observed included a large number of non-native species. The area is characterized by an AFQI of 11.81, which describes an area with few high quality native species. The highest quality area within the powerline corridor is the wetland area, which contains several species of native sedge. Table 2 contains a species list and the Adjusted Floristic Quality Index for this area.

WATERS AND WETLANDS

Jurisdictional waters/wetlands identified within the study area are limited to approximately 180 feet (0.06 acre) of the Middle Fork Beargrass Creek, 855 feet of intermittent stream, 110 feet of ephemeral stream, 0.02 acre of an open water feature, and 1.56 acre of wetland (Figure 2). The following table summarizes jurisdictional waters within the study area, and a completed RBP data form is provided in Appendix B.

Feature	Length (feet)	Area (acre)
Middle Fork Beargrass Creek	180	0.06
Intermittent Stream 1	300	0.02
Intermittent Stream 2	125	0.03
Intermittent Stream 3	200	0.01
Intermittent Stream 4	120	0.02
Ephemeral Stream 1	110	0.01
Open Water Feature 1	--	0.02
Wetland 1	--	1.56
Total Jurisdictional Waters/Wetlands	**1,035**	**1.73**

The Middle Fork Beargrass Creek flows along the southern boundary of the study area and crosses the proposed project east of Hurstbourne Lane. At the proposed crossing, the Middle Fork Beargrass Creek is approximately 20 feet wide with bank heights of three to four feet and a substrate dominated by silt, gravel, and cobble. A RBP data form completed for the Middle Fork Beargrass Creek scored a 94, which characterizes this reach as poor quality.

Four intermittent streams were identified within the study area. The streams range from one to eight feet wide with bank heights ranging from one to two feet. The substrate consists of silt and cobble. The intermittent streams are characterized as poor quality through the RBP scoring. The limiting factors were the lack of epifaunal substrate, sedimentation, and limited flows associated with headwater streams.

The 1.56-acre wetland is located adjacent to the Middle Fork Beargrass Creek in the southwestern portion of the study area. This feature is dominated by emergent wetland vegetation such as cattail, sedges, and rice cutgrass. Woody species observed in the wetland include black willow and red maple (*Acer rubrum*). Low-chroma soils, typically found under wetland conditions, were observed within the area. Wetland hydrology indicators observed include redoxomorphic features, standing water, and bare ground. Beaver activity was observed in this area, particularly in a large open water portion of the wetland near the southwestern corner of the site. The wetland data form completed in 2011 is attached as Appendix A.

The ephemeral stream is located in the middle section of woods in the west-central portion of the site. It is approximately two to five feet wide and contains only isolated pools. Downstream the substrate is dominated by cobble ands gravel; however, upstream the only substrates are silt and clay. This stream begins near the northeastern edge of this woodlot and flows to Intermittent Stream 4 near the foundation of an old spring house.

The open water feature is located in the northwestern section of woods on-site. It originates from an intermittent stream off-site and becomes an open water feature with depths ranging from two to six feet deep. Trees are growing in the shallow portion of this area. The deeper portion of this open water feature is near its presumed sinkhole in the southeastern section where the water becomes deep very quickly and trash is accumulating.

KARST FEATURES

Redwing reviewed database information maintained by the Kentucky Geological Survey for information regarding karst areas within the study including sinkholes and springs. The results, attached in Appendix C, indicate the study area contains medium to high karst potential. Dye-trace test results provided by KDOW indicate the presence of three sinkholes on or in the vicinity of the site. The sinkhole locations were confirmed by Redwing.

Based on the KDOW dye-trace study, Sinkhole 4 flows to Seep 3 and then enters Sinkhole 2, which then flows to Seep 1 and Intermittent Stream 3. In general, it appears that surface water collects in the on-site sinkholes and is transferred through the karst conduits toward Beargrass Creek. An additional seep, Seep 2, was observed east of Seep 1. Seep 2 was not addressed in the KDOW assessment; however, it is likely that this seep is connected to the same karst system. Redwing observed a total of five sinkholes and three seeps within the study area. The location of each feature is presented on Figure 2, and each feature is discussed in more detail below.

Sinkholes

Sinkhole 1 is located just north of the seep associated with Intermittent Stream 3. This sinkhole is approximately one foot tall by three feet wide at the narrowest opening. The narrow opening is approximately five feet below the outer opening, which measures approximately two feet tall by eight feet wide. Flowing water was observed during the site visit.

Sinkhole 2 is located at the southern end of Intermittent Stream 4. Water from Intermittent Stream 4 flows to a rock wall and into the sinkhole. This area appears to be approximately five feet wide; however, debris and water had accumulated in this area at the time of assessment. The rock wall may be a man-made structure.

Sinkhole 3 is located south east of Sinkhole 2 on the hillside. This sinkhole is approximately one foot tall by five feet wide at the narrowest opening. The narrow opening is approximately five feet below the outer opening, which measures approximately three feet tall by six feet wide. Flowing water was heard during the site visit, and air was flowing into this sinkhole. It is unknown how this sinkhole is connected to other hydrologic features in the area.

Sinkhole 4 is located at the southern end of Open Water Feature 1. The sinkhole was inundated at the time of assessment by water from this open water feature, and flows to the sinkhole appear blocked by debris. The ground elevation changes four feet in this area, indicating the sinkhole is below the toe of slope.

Sinkhole 5 is located southeast of the on-site tennis courts. This feature is approximately 12 to 15 inches in diameter and descends vertically for greater than four feet. The feature narrows significantly as it descends and is not considered habitat for cave-dwelling bats. The feature

does not receive concentrated surface water flows but appears to collect surface runoff from adjacent areas.

Seeps

Seep 1 is approximately 12 feet across and 2 to 12 inches high. A larger hole on the western side is approximately one foot tall by three feet wide. Water was flowing out of the seep during the site visit providing flow to Intermittent Stream 3.

Seep 2 is a ground seep at the toe of slope; therefore, there is no opening. This area appears to have been historically used for dumping large pieces of trash. Water was flowing out of an area approximately six to eight feet wide during the site visit. Trash was present around the seep and within Intermittent Stream 1.

Seep 3 is a ground seep at the toe of slope; therefore, there is no opening. Seep 3 is located on a hillside covered in the invasive vine wintercreeper (*Euonymus fortunei*) and feeds Intermittent Stream 4. Water was flowing from an area approximately eight feet wide during the site visit.

ENHANCEMENT OPPORTUNITIES

Natural Habitats: The natural habitats within the study area have been significantly degraded by non-native invasive species, especially bush honeysuckle (*Lonicera maackii*), Japanese honeysuckle (*Lonicera japonica*), garlic mustard (*Alliaria petiolata*), multiflora rose (*Rosa multiuflora*), and wintercreeper. Non-native white mulberry (*Morus alba*) trees are also abundant, but they produce fruit that provides food for wildlife. Removal of the non-native species from the study area would provide more habitat for desirable native plants, which would increase available food and cover for wildlife. In particular, removal of bush honeysuckle would be beneficial because it secretes chemicals into the soil that are believed to impair the growth of native plants. Clearing the honeysuckle shrubs and vines from the forest understories would also provide an open, accessible, and aesthetically-pleasing environment for park visitors. Additional invasive species identified during the site visit include princess tree (*Paulownia tomentosa*), ricecut grass, bluegrass (*Poa* cf. *pratensis*), porcelainberry (*Ampelopsis brevipedunculata*), Bradford pear (*Pyrus calleryana*), yellow rocket (*Barbarea vulgaris*), ground ivy (*Glechoma hederacea*), English ivy (*Hedera helix*), and narrowleaf cattail.

The upland woods habitat could also be enhanced through planting of hard-mast trees beneficial to wildlife such as oaks, hickories, and beech. This could be accomplished either by selectively clearing areas or replanting desirable species when non-native species are removed.

The powerline easement is dominated by wetland and old field vegetation. A complete list of species found within the easement is presented in Table 3. Much of the powerline easement along the southern portion of Middle Fork Beargrass Creek was dominated by curly dock (*Rumex crispus*). Old field and scrub/shrub vegetation may be restored and maintained to create a native prairie. Habitat within the powerline easement may be enhanced by planting wetland and/or prairie herbaceous plugs and shrubs.

Waters and Wetlands: Middle Fork Beargrass Creek may be enhanced by planting native trees and shrubs along the riparian corridor. On-site intermittent and ephemeral streams may also be improved with invasive species removal and native plantings. Water quality may be enhanced with on-site trash removal, particularly near Intermittent Stream 1. The wetland may be enhanced by planting native herbaceous, shrub, and tree species to enhance diversity. The on-site waters and wetland should be protected during any potential construction activities by implementation of a proper erosion prevention and sediment control plan.

Listed Species: Protected species habitat may be enhanced by implementing the recommendations outlined above: remove invasive species, plant native vegetation, and protect water quality. Removal of the dense understory dominated by bush honeysuckle will enhance the foraging habitat of the Indiana bat, gray bat, and evening bat. Planting of white oak (*Quercus alba*) and shagbark hickory (*Carya ovata*) species in the upland woods and along Middle Fork Beargrass Creek would enhance summer roosting habitat for the Indiana bat. Creating a native prairie and increasing wetland diversity within the powerline easement will enhance habitat for state-listed bird species.

Karst Features: Little enhancement can be performed of the subterranean portions of the on-site karst features. However, water quality could be improved leading to, and exiting from, the features by removing trash, specifically from Sinkhole 4 and Seep 2. Other efforts to protect these areas could include: limiting or pretreating runoff from impervious surfaces prior to discharge to these areas; limiting herbicide, pesticide, and fertilizer application in the vicinity of the features; and removal of invasive species.

SUMMARY

This report presents an assessment of ecological features identified within the study area for the AB Sawyer Master Plan Project. The purpose of this assessment was to identify significant ecological resources within the study area. These resources include 180 feet (0.06 acre) of the Middle Fork Beargrass Creek, 855 feet of intermittent stream, 110 feet of ephemeral stream, 0.02 acre of an open water feature, 1.56 acre of wetland, four sinkholes, and three ground water seeps.

The mature woods habitat should be targeted for invasive species removal. Potential stream, wetland, and prairie restoration opportunities exist on-site to enhance habitat for local wildlife, including potentially federal and state-listed species.

We appreciate the opportunity to work with you on this important project. If you have any questions regarding this overview, please do not hesitate to call Richard Clausen at (502) 625-3009.

Sincerely,

Laura A. Darnell
Project Biologist

Richard S. Clausen
Principal
Senior Ecologist

File: P:\2011 Projects\11-005-ABSawyerMasterPlan\Report

Attachments: Tables
Figures
Photographs
Appendix A – Wetland Delineation Data Form
Appendix B – Rapid Bioassessment Protocol Data Form
Appendix C – Agency Coordination

TABLES

Table 1: Upland Woods Species List
AB Sawyer Master Plan Project
Jefferson County, Kentucky
Redwing Project 07-097

Scientific Name	Common Name	Indicator Status	COC	W1	W2	W3
Acer negundo	Box Elder	FAC	1	X	X	
Acer saccharinum	Silver Maple	FACW	2	X		
Acer saccharum	Sugar Maple	FACU	4	X	X	X
Ampelopsis brevipedunculata	Porcelainberry	FAC	*	X		
Carya cf. *alba*	Mockernut Hickory	UPL	5			X
Catalpa speciosa	Northern Catalpa	FAC	3	X		
Celtis occidentalis	Hackberry	FACU	3	X	X	X
Cercis canadensis	Eastern Redbud	FACU	3	X		
Cornus flordia	Flowering Dogwood	FACU	5	X		
Euonymus fortunei	Wintercreeper	UPL	*	X	X	X
Fraxinus pennsylvanica	Green Ash	FACW	3	X		
Hedera helix	English Ivy	UPL	*		X	
Juglans nigra	Black Walnut	FACU	4	X	X	X
Juniperus virginiana	Eastern Red Cedar	FACU	1	X	X	
Ligustrum sinense	Chinese Privet	FACU	*	X		
Lonicera japonica	Japanese Honeysuckle	FAC	*	X	X	
Lonicera maackii	Bush Honeysuckle	UPL	*	X	X	X
Morus alba	White Mulberry	UPL	*	X	X	
Parthenocissus quinquefolia	Virginia Creeper	FACU	2	X	X	X
Platanus occidentalis	American Sycamore	FACW	3	X		
Populus deltoides	Eastern Cottonwood	FAC	3	X		
Prunus serotina	Black Cherry	FACU	3	X	X	X
Pyrus calleryana	Bradford Pear	UPL	*	X		
Quercus rubra	Red Oak	FACU	6	X		
Rhus glabra	Smooth Sumac	UPL	2	X		
Robinia pseudoacacia	Black Locust	FACU	1			X
Rosa multiflora	Multiflora Rose	FACU	3	X		
Salix nigra	Black Willow	FACW	3	X		
Sassafras albidum	Sassafras	FACU	2		X	
Toxicodendron radicans	Poison Ivy	FAC	2	X	X	
Ulmus americana	American Elm	FACW	5	X		
Vitis riparia	Riverbank Grape	FACW	4	X		
		Total COC Value		65	22	22
		N		32	14	9
		Mean COC Value		2.031	1.571	2.444
		SQRT N		5.657	3.742	3.000
		AFQI[1]		11.490	5.880	7.333

Notes:
Woodlot 1(W1): southern wooded area
Woodlot 2(W2): middle wooded area
Woodlot 3 (W3): northern wooded area
COC = Coefficient of Conservatism

Entered by: LEH 5/27/11
Checked by: RJF 6/6/11

[1]The Adjusted Floristic Quality Index (AFQI) was calculated by multiplying the mean COC value of all species by the square root of the number of species
*Exotic Species (assigned a value of "0" when calculating the AFQI)
X = species present in areas

Table 2: Powerline Corridor Species List
AB Sawyer Master Plan Project
Jefferson County, Kentucky
Redwing Project 11-005

Scientific Name	Common Name	COC
Acer negundo	Boxelder	1
Acer saccharinum	Silver Maple	2
Allaria petiolata	Garlic Mustard	*
Ambrosia trifida	Giant Ragweed	0
Ampelopsis brevipedunculata	Porcelainberry	*
Apocynum cannabinum	Dogbane	0
Bidens coronata	Crowned Beggarticks	3
Bromus sp.	Brome[2]	
Calystegia sepium	Hedge Bindweed	*
Carex blanda	Eastern Woodland Sedge	2
Carex cf. *cristatella*	Crested Sedge	6
Carex cf. *shortiana*	Short's Sedge	4
Carex vulpinoidea	Fox Sedge	3
Conium maculatum	Poison Hemlock	*
Elymus cf. *virginicus*	Virginia Wildrye	5
Erigeron philadelphicus	Philadelphia Fleabane	3
Fraxinus pennsylvanica	Green Ash	3
Galium aparine	Cleavers	0
Glechoma hederacea	Ground Ivy	*
Gleditsia triacanthos	Honey Locust	1
Impatiens cf. *capensis*	Jewelweed	2
Iris pseudacorus	Yellowflag Iris	*
Juglans nigra	Black Walnut	4

Scientific Name	Common Name	COC
Leersia oryzoides	Ricecut Grass	3
Lysimachia nummularia	Moneywort	*
Maclura pomifera	Osage Orange	*
Myosotis laxa	Bay Forget-me-not	6
Oxalis stricta	Yellow Woodsorrel	0
Paulownia tomentosa	Princess Tree	*
Perilla frutescens	Beef-steak	*
Poa cf. *pratensis*	Bluegrass	*
Polygonum cf. *hydropiperoides*	Swamp Smartweed	3
Pyrus calleryana	Bradford Pear	*
Rosa multiflora	Multiflora Rose	*
Rubus allegheniensis	Mountain Blackberry	2
Rumex crispus	Curly Dock	*
Salix nigra	Black Willow	3
Sambucs canadensis	Common Elderberry	2
Schoenoplectus tabernaemontani	Softstem Bulrush	3
Senecio glabellus	Butterweed	2
Solidago cf. *canadensis*	Canada Goldenrod	8
Taraxacum officinale	Common Dandelion	*
Typha angustifolia	Narrowleaf Cattail	2
Verbesina alternifolia	Wingstem	2
Vernonia cf. *gigantea*	Tall Ironweed	2
Vitis riparia	Frost Grape	4

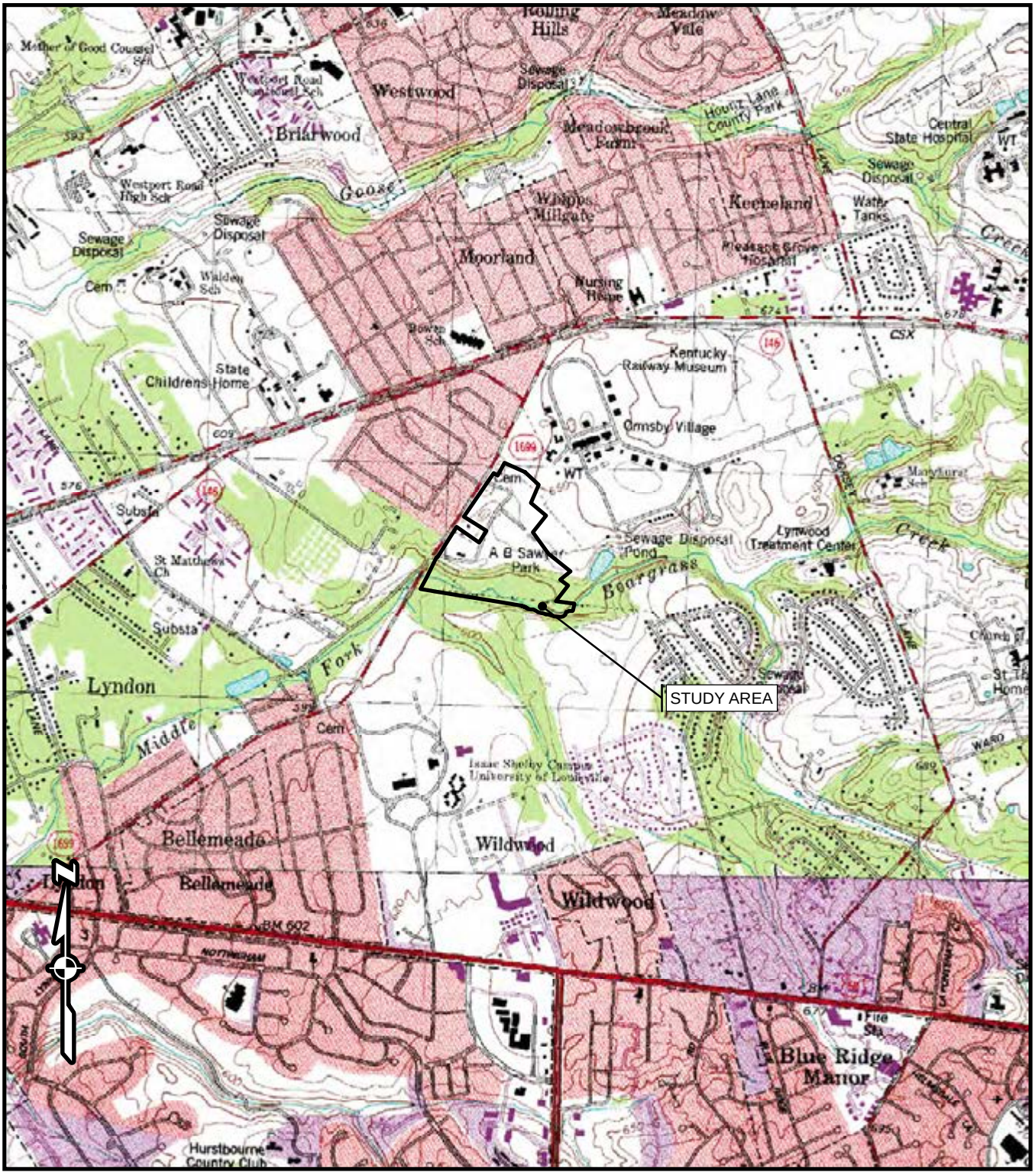
Entered by: RJF 6/6/11
Checked by: LEH 6/15/11

Total COC Value = 81
Total Number of Species (N) = 45
Mean COC Value = 1.76
Square Root of N = 6.71
[1]AFQI = 11.81

COC = Coefficient of Conservatism
[1]The Adjsuted Floristic Quality Index (AFQI) was calculated by multiplying the mean COC value of all species by the square root of the number of species
*Exotic Species (assigned a value of "0" when calculating the AFQI)
[2]Not Included in AFQI calculation

FIGURES

Source: 7.5 Minute Topographic Map: Achorage and Jeffersontown Quadrangles



AB SAWYER MASTER PLAN
JEFFERSON COUNTY, KENTUCKY

SITE LOCATION MAP

FILE: Redwing/11-005/Figure/Eco Report/USGS

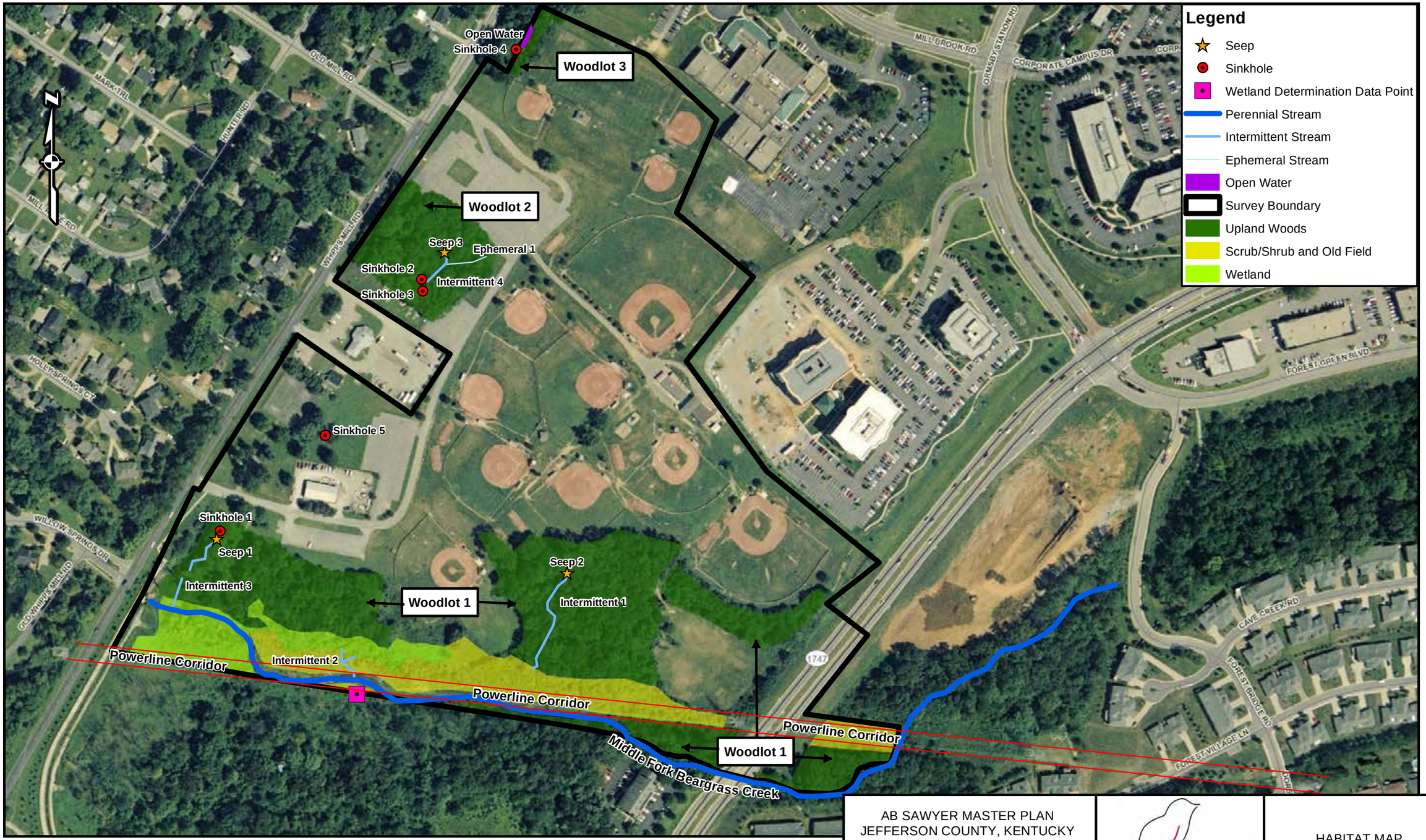
REDWING PROJECT 11-005

REVISED DATE 8.03.2011 | DRAWN BY LEH

REDWING ECOLOGICAL SERVICES, INC.

FIGURE 1

Source: Bing aerial imagery (c) 2010 Microsoft Corporation and its data suppliers



0 250 500 750 1,000 Feet

AB SAWYER MASTER PLAN
JEFFERSON COUNTY, KENTUCKY

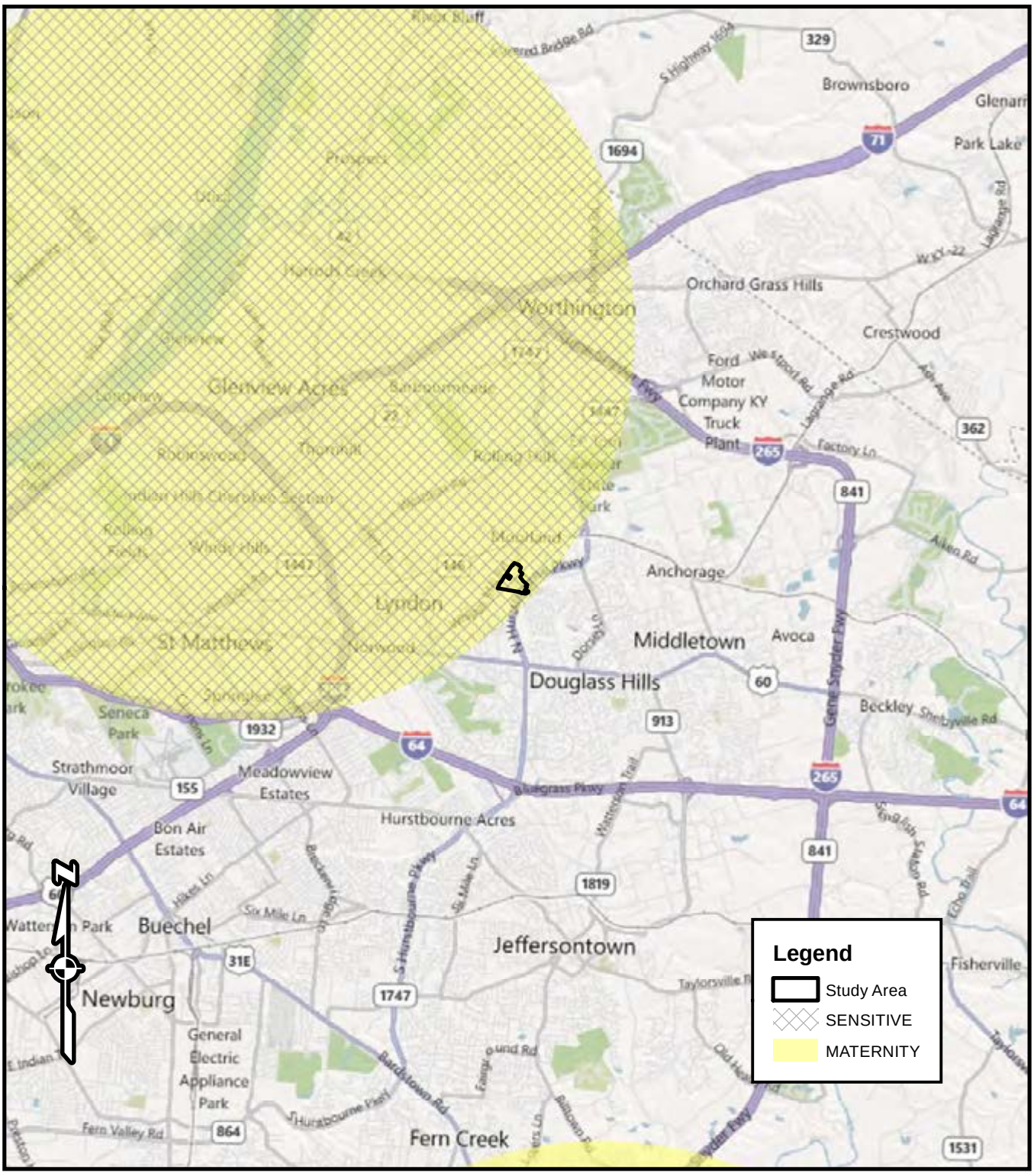
FILE: Redwing/11-005/Figures/Eco Report/HabitatMap
REDWING PROJECT 11-005
REVISED DATE: 8.3.2011 | DRAWN BY RSC/LEH

REDWING ECOLOGICAL SERVICES, INC.

HABITAT MAP

FIGURE 2

Source: Bing Maps Road(c) 2010 Microsoft Corporation and its data suppliers; Known Indiana Bat Habitat USFWS 2011



AB SAWYER MASTER PLAN
JEFFERSON COUNTY, KENTUCKY

USFWS KNOWN
INDIANA BAT
HABITAT MAP

FILE: Redwing/11-005/Figure/Eco Report/Bat Circle

REDWING PROJECT 11-005

REVISED DATE 8.03.2011 | DRAWN BY LEH

REDWING
ECOLOGICAL SERVICES, INC.

FIGURE 3

PHOTOGRAPHS

Photograph 1: General view of upland woods habitat. AB Sawyer Master Plan Project. May 23, 2011.

Photograph 2: General view of open field habitat. AB Sawyer Master Plan Project. May 23, 2011.

Photograph 3: General view of wetland habitat. AB Sawyer Master Plan Project. May 23, 2011.

Photograph 4: General view of scrub/shrub woods habitat. AB Sawyer Master Plan Project. May 23, 2011.

Photograph 5: General view of urban areas within the park. AB Sawyer Master Plan Project. May 23, 2011.

Photograph 6: General view of Middle Fork Beargrass Creek. AB Sawyer Master Plan Project. May 23, 2011.

Photograph 7: View of Seep #2 with large items of trash. AB Sawyer Master Plan Project. May 23, 2011.

Photograph 8: View of Sinkhole #3, which represents potential winter bat roosting habitat. AB Sawyer Master Plan Project. May 23, 2011.

Photograph 9: View of Seep #3 which originates at the toe of a hillside covered with the invasive vine winter creeper (*Euonymus fortunei*). AB Sawyer Master Plan Project. May 23, 2011.

Photograph 10: View of Intermittent Stream #4. AB Sawyer Master Plan Project. May 23, 2011.

Photograph 11: View of Ephemeral Stream #1. AB Sawyer Master Plan Project. May 23, 2011.

Photograph 12: View of Open Water Feature #1 and Sinkhole #4. AB Sawyer Master Plan Project. May 23, 2011.

APPENDIX A

WETLAND DELINEATION DATA FORMS

WETLAND DETERMINATION DATA FORM -- Eastern Mountains and Piedmont

Project/Site: A.B. Sawyer Master Plan City/County: Jefferson Sampling Date: 5/23/2011

Applicant/Owner: Gresham Smith & Partners, Inc. State: Kentucky Sampling Point: 1

Investigator(s): LMB and LEH Section, Township, Range:

Landform (hillslope, terrace, etc.): floodplain south of Middle Fork Beargrass Creek Local relief (concave, convex, none): none Slope (%): 0-1

Subregion (LRR or MLRA) LRR N Lat: 38.26 Long: -85.581 Datum:

Soil Map Unit Name NWI classification:

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present?

Are Vegetation , Soil , or Hydrology naturally problematic? Yes X No

(If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS -- Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No		
Hydric Soil Present?	Yes	No X	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes X	No	**within a Wetland?**	Yes No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators

Primary Indicators (minimum of one is required; check all that apply)

Surface Water (A1)	True Aquatic Plants (B14)	
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	
Water Marks (B1)	Presence of Reduced Iron (C4)	
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	
Drift Deposits (B3)	Thin Muck Surface (C7)	
Algal Mat or Crust (B4)	Other (Explain Remark)	
Iron Deposits (B5)		
Inundation Visible on Aerial Imagery (B7)		
Water-Stained Leaves (B9)		
Aquatic Fauna (B13)		

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Sparsely Vegetated Concave Surface (B8)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No X	Depth (inches):		
Water Table Present?	Yes X	No	Depth (inches):	5 -<14	**Wetland Hydrology Present?** **Yes** X **No**
Saturation Present? (includes capillary fringe)	Yes X	No	Depth (inches):	Surface	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants. Sampling Point: 1

	Absolute		Dominant	Indicator
Tree Stratum (Plot size: ____30_____)	% Cover		Species?	Status
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
	=		Total Cover	
Sapling/Shrub Stratum (Plot size: ___15____)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
	=		Total Cover	
Herb Stratum (Plot size: _____5_____)				
1. *Rumex crispus*	10		X	FACU
2. *Perilla frutescens*	5			FACU
3. *Impatiens capensis*	10		X	FACW
4. *Calystegia sepium*	0.5			UPL
5. *Acer saccharinum*	3			FACW
6. *Veronia sp.*	0.1			
7. *Leersia oryzoides*	1			OBL
8. *Bidens coronata*	5			OBL
9. *Myosotis sp.*	0.5			
10. *Polygonum sp.*	2			
11.				
12.				
	37.1	=	Total Cover	
Woody Vine Stratum (Plot size: ____30____)				
1.				
2.				
3.				
4.				
5.				
6.				
	=		Total Cover	

Dominant Test worksheet

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	2	x 1 =	2
FACW species	2	x 2 =	4
FAC species	0	x 3 =	0
FACU species	2	x 4 =	8
UPL species	1	x 5 =	5
Column Totals:	7 (A)		19 (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

_X_ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features				Texture	Remarks
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]		
0-14	10YR 4/2	100					Silty Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR, N MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Darm Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Maganese Masses (F12) **(LRR N MLRA 136**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils[3]

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surfave (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** **X**

Remarks:

APPENDIX B

RAPID BIOASSESSMENT PROTOCOL DATA FORMS

High Gradient Stream Data Sheet

STREAM NAME: Intermittent Stream 4	LOCATION: AB Sawyer Park
STATION #: MILE:	BASIN/WATERSHED: Middle Fork Beargrass Creek
LAT: 38.2635 LONG: -85.5806	COUNTY: Jefferson USGS 7.5 TOPO: Anchorage
DATE: 5/23/11 TIME: 2:00 [ ] AM [X] PM	INVESTIGATORS: L. Hesch
TYPE SAMPLE: P-CHEM Macroinvertebrate FISH BACT.	

WEATHER:

Now	Past 24 Hours
Heavy Rain	Heavy Rain
Steady Rain	Steady Rain
Intermittent Showers	[Intermittent Showers]
[Clear/Sunny]	Clear/Sunny

Has there been a heavy rain in the last 7 days? [Yes] No

Air Temperature 70 °F ____ °C

Rainfall in the past 24 hours 0.4 in.

20 % Cloud Cover

P-Chem: Temp (°C) ____ D.O. (mg/l) ____ % Saturation ____ pH (S.U.) ____ Cond. ____ Grab

INSTREAM WATERSHED FEATURES:

Stream Width	6-8	ft
Range of Depth	0.5-1	ft
Average Velocity	<1	ft/s
Discharge		cfs
Est. Reach Length	200	ft

LOCAL WATERSHED FEATURES:

Predominant Surrounding Land Use:

Surface Mining	Construction	[Forest]
Deep Mining	Commercial	Pasture/Grazing
Oil Wells	Industrial	Silviculture
Land Disposal	Row Crops	[Urban Runoff/Storm Sewers]

Hydraulic Structures

Dams Bridge Abutments
Island Waterfalls
[Other] seep/sinkhole

Stream Flow:

Dry Pooled Low [Normal]
High Very Rapid or Torrential

Stream Type:

Perennial [Intermittent]
Ephemeral Seep

Riparian Vegetation

Dominant Type:

[Trees] [Shrubs]
Grasses [Herbaceous]
Number of strata: 3

Dom. Tree/Shrub Taxa

Bush Honeysuckle
Black Walnut, Black Cherry
White Mulberry
Boxelder, Sassafras

Canopy Cover:

Fully Exposed (0-25%)
Partially Exposed (25-50%)
Partially Shaded (50-75%)
[Fully Shaded (75-100%)]

Channel Alterations:

Dredging
[Channelization]
(Full [Partial])

Substrate Est. P.C	Riffle ____ %	Run 100 %	Pool ____ %
Silt/Clay (<0.06 mm)		X	
Sand (0.06 - 2 mm)			
Gravel (2-64 mm)			
Cobble (64 - 256 mm)			
Boulders (>256 mm)			
Bedrock			

Habitat Parameter	Condition Category: Excellent	Good	Fair	Poor
1. Epifaunal Substrate/ Available Cover **5**	Greater than 70% of substrate favorable for epifaunal colonization and fish cover	40-70% mix of stable habitat: well-suited for full colonization potential	20-40% mix of stable habitat; habitat availability less than desirable	Less than 20% stable habitat; lack of habitat is obvious
	16 - 20	11 - 15	6 - 10	0 - 5
2. Embeddedness **2**	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment
	16 - 20	11 - 15	6 - 10	0 - 5
3. Velocity/Depth Regime **5**	All four velocity/depth regimes present (slow-deep, slow-shallow, fast-deep, fast-shallow). (Slow is <0.3 m/x, deep is >0.5 m).	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 of the 4 habitat regimes present (if fast-shallow or slow-shallow are missing, score low).	Dominated by 1 velocity/depth regime (usually slow-deep)
	16 - 20	11 - 15	6 - 10	0 - 5

Project Name: AB Sawyer Park Stream Name: Intermittent Stream 4

4. Sediment Deposition	Little or no enlargement of islands or point bars and less than <20% of bottom affected by deposition.	Some new increase in bar formation, mostly from gravel, sand, or fine sediment; 20-50% of the bottom affected	Moderate deposition of new gravel, sand, or fine sediment on old and new bars; 50-80% of the bottom affected. Sediment deposits at obstructions, constrictions, and bends.	Heavy deposits of fine material, increased bar development; more than 80% of bottom changing frequently.
10	16 - 20	11 - 15	6 - 10	0 - 5
5. Channel Flow Status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel is exposed.	Water fills 25-50% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
17	16 - 20	11 - 15	6 - 10	0 - 5
6. Channel Alteration	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, evidence of past channelization (> past 20 years) may be present.	Channelization may be extensive; shoring structures on both banks and 40-80% stream reach channelized.	Brush shored with gabion or cement; over 80% of reach channelized and disrupted.
12	16 - 20	11 - 15	6 - 10	0 - 5
7. Frequency of Riffles (or bends)	Occurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream <7:1.	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream is between 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is a ratio of >25.
5	16 - 20	11 - 15	6 - 10	0 - 5
8. Bank Stability	Stable; evidence of erosion of bank failure absent or minimal. Little potential for future problem.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank has areas of erosion.	Moderately unstable; 30-60% of bank has areas of erosion; high erosion potential during floods.	Unstable; eroded areas frequent; obvious bank sloughing; 60-100% of bank has erosional scars.
SCORE (LB) 7	9 - 10	6 - 8	3 - 5	0 - 2
SCORE (RB) 7	9 - 10	6 - 8	3 - 5	0 - 2
9. Vegetative Protection	More than 90% of streambank surfaces and immediate riparian zone covered by native vegetation.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants not well-represented; disruption evident.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil.	Less than 50% of the streambank surfaces covered by vegetation disruption of streambank vegetation is very high.
SCORE (LB) 3	9 - 10	6 - 8	3 - 5	0 - 2
SCORE (RB) 3	9 - 10	6 - 8	3 - 5	0 - 2
10. Riparian Vegetative Zone Width	Width of riparian zone >18 meters; human activities have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters; little or no riparian vegetation due to human activities.
SCORE (LB) 4	9 - 10	6 - 8	3 - 5	0 - 2
SCORE (RB) 6	9 - 10	6 - 8	3 - 5	0 - 2

Total Score: **86** **NOTES/COMMENTS:** Water Very Turbid; Stream of Poor Quality

Bluegrass Bioregion (High Gradient Assessments) Headwater Streams (<5.0 mi^2)

Fully Supporting	(Excellent)	156-200
Supporting but Threatened and Partially Supporting	(Average)	142-155
Not Supporting	(Poor)	0-141

Reference: Kentucky Division of Water. 2008. Revision 3. "Methods for Assessing Biological Integrity of Surface Waters in Kentucky."

APPENDIX C

AGENCY COORDINATION

U.S. Fish & Wildlife Service
Kentucky Ecological Services Field Office

U.S. Fish & Wildlife Service
330 West Broadway, Rm 265
Frankfort, KY 40601
Phone: 502-695-0468
Fax: 502-695-1024

Endangered, Threatened, & Candidate
Species in _____JEFFERSON_____ County, KY

Group	Species	Common name	Legal* Status	Known** Potential	Special Comments
Mammals	*Myotis grisescens*	gray bat	E	K	
	Myotis sodalis	Indiana bat	E	K	
Mussels	*Pleurobema clava*	clubshell	E	K	
	Cyprogenia stegaria	fanshell	E	K	
	Potamilus capax	fat pocketbook	E	K	
	Plethobasus cooperianus	orangefoot pimpleback	E	K	
	Obovaria retusa	ring pink	E	K	
	Lampsilis abrupta	pink mucket	E	K	
	Plethobasus cyphyus	sheepnose	C	P	
	Pleurobema plenum	rough pigtoe	E	P	
Plants	*Trifolium stoloniferum*	running buffalo clover	E	K	
Birds	*Sterna antillarum*	interior least tern	E	K	
Insects	*Nicrophorus americanus*	American burying beetle	E	historic	considered extirpated
	Pseudanopthalmus troglodytes	Louisville cave beetle	C	K	

NOTES:

* Key to notations: E = Endangered, T = Threatened, C = Candidate, CH = Critical Habitat

**Key to notations: K = Known occurrence record within the county, P = Potential for the species to occur within the county based upon historic range, proximity to known occurrence records, biological, and physiographic characteristics.

Species Information

State Threatened, Endangered, and Special Concern Species observations for selected quads

Linked life history provided courtesy of NatureServe Explorer.
Records may include both recent and historical observations.
US Status Definitions Kentucky Status Definitions

List State Threatened, Endangered, and Special Concern Species observations in 1 selected quad.
Selected quad is: , Anchorage.

Scientific Name and Life History	Common Name and Pictures	Class	Quad	US Status	KY Status	WAP	Reference
Fulica americana	American Coot	Aves	Anchorage	N	E		Reference
Aimophila aestivalis	Bachman's Sparrow	Aves	Anchorage	N	E	Yes	Reference
Tyto alba	Barn Owl	Aves	Anchorage	N	S	Yes	Reference
Thryomanes bewickii	Bewick's Wren	Aves	Anchorage	N	S	Yes	Reference
Junco hyemalis	Dark-eyed Junco	Aves	Anchorage	N	S		Reference
Phalacrocorax auritus	Double-crested Cormorant	Aves	Anchorage	N	E		Reference
Ardea herodias	Great Blue Heron	Aves	Anchorage	N	S		Reference
Ammodramus henslowii	Henslow's Sparrow	Aves	Anchorage	N	S	Yes	Reference
Orconectes jeffersoni	Louisville Crayfish	Malacostraca	Anchorage	N	E		Reference
Passerculus sandwichensis	Savannah Sparrow	Aves	Anchorage	N	S	Yes	Reference
Cistothorus platensis	Sedge Wren	Aves	Anchorage	N	S	Yes	Reference
Accipiter striatus	Sharp-shinned Hawk	Aves	Anchorage	PS	S	Yes	Reference
Percopsis omiscomaycus	Trout-perch	Actinopterygii	Anchorage	N	S		Reference

13 species are listed.

STEVEN L. BESHEAR
GOVERNOR

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION OF WATER
200 FAIR OAKS LANE
FRANKFORT, KENTUCKY 40601
www.kentucky.gov

LEONARD K. PETERS
SECRETARY

September 28, 2009

Mr. L. Matthew Blake
Redwing Ecological Services, Inc.
1139 South Fourth Street
Louisville, Kentucky 40203

RE: Information Request on Significant Aquatic Resources
A.B> Sawyer Greenway Project
Jefferson County, Kentucky
Redwing Project 07-085-01

Dear Mr. Blake:

The project area has two significant streams flowing through it, Middle Fork Beargrass Creek and Goose Creek. Both streams are not supporting the designated uses warmwater aquatic life and primary contact recreation. Middle Fork Beargrass Creek has the following pollutants of issue: nutrients/eutrophication, organic enrichment, cadmium and fecal coliform. Pollutants of issue for Goose Creek are: nutrients/eutrophication, organic enrichment, cadmium and fecal coliform. There are no special use waters, or known municipal intakes in the area of question. With any construction please use proper BMPs to mitigate erosion runoff into all waterways. As you know soil erosion will only exacerbate the pollutants already of concern and add to that list.

If you have any questions or concerns please contact me at (502) 564-3410.

Sincerely,

Randall G. Payne

Randall G. Payne
Environmental Scientist III

c: File

KENTUCKY DEPARTMENT OF FISH & WILDLIFE RESOURCES
TOURISM, ARTS, AND HERITAGE CABINET

Steven L. Beshear
Governor

#1 Sportsman's Lane
Frankfort, Kentucky 40601
Phone (502) 564-3400
1-800-858-1549
Fax (502) 564-0506
fw.ky.gov

Marcheta Sparrow
Secretary

Dr. Jonathan W. Gassett
Commissioner

October 9, 2009

Matthew Blake
Redwing Ecological Services, Inc
1139 South Fourth Street
Louisville, KY 40203

RE: Request for Information on Protected Species
A.B. Sawyer Greenway Project
Jefferson County, Kentucky
Redwing Project 07-085-01

Dear Mr. Blake:

The Kentucky Department of Fish and Wildlife Resources (KDFWR) have received your request for the above-referenced information. The Kentucky Fish and Wildlife Information System indicate that the federally endangered Indiana bat, *Myotis sodalis*, is known to occur within close proximity to the project area. Please be aware that our database system is a dynamic one that only represents our current knowledge of the various species distributions.

- The Indiana bat utilizes a wide array of habitats, including riparian forests, upland forest, and fencerows for both summer foraging and roosting habitat. Indiana bats typically roost under exfoliating bark, in cavities of dead and live trees, and in snags (i.e., dead trees or dead portions of live trees). Removal of suitable Indiana bat roost trees due to construction of the proposed project should be completed between October 15 and March 31 in order to avoid impacting summer roosting Indiana bats.

For more information on how to proceed with the federally listed threatened/endangered species please contact the US Fish and Wildlife Service Kentucky Field Office at (502) 695-0468.

KDFWR recommends that erosion control measures be developed and utilized during any construction to minimize siltation into nearby waterways. Such erosion control measures may include, but are not limited to silt fences, staked straw bales, brush barriers, sediment basins, and diversion ditches. Erosion control measures will need to be installed prior to construction and should be inspected and repaired regularly as needed.

I hope this information proves helpful to you. If you have any questions or require additional information, please call me at (800) 852-0942 Extension 4473.

Sincerely,

Courtney C Hunt

Courtney C. Hunt
Fisheries Biologist II

Steven L. Beshear
Governor

Leonard K. Peters
Secretary
Energy and Environment Cabinet

Donald S. Dott, Jr.
Director

Commonwealth of Kentucky
Kentucky State Nature Preserves Commission
801 Schenkel Lane
Frankfort, Kentucky 40601-1403
502-573-2886 Voice
502-573-2355 Fax

October 19, 2009

Laura Darnell
Redwing Ecological Services, Inc.
1139 South Fourth Street
Louisville, KY 40203

Data Request 10-033

Dear Ms. Darnell:

This letter is in response to your data request of October 19, 2009 for the AB Sawyer Greenway project. We have reviewed our Natural Heritage Program Database to determine if any of the endangered, threatened, or special concern plants and animals or exemplary natural communities monitored by the Kentucky State Nature Preserves Commission occur near the project area on the Anchorage and Jeffersontown USGS Quadrangles, as shown on the map provided. Please see the attached reports for more information, which reflect analysis of the project area with three buffers applied:

1-mile for all records – no records
5-mile for aquatic records – 9 records
5-mile for federally listed species – 5 records
10-mile for mammals and birds – 37 records

Orconectes jeffersoni (Louisville crayfish, KSNPC endangered, USFWS Species of Management Concern) occurs in several locations near this project. This species is globally ranked as critically imperiled because it is endemic to several drainages in urban areas of Jefferson, Bullitt and Oldham counties, Kentucky. Aquatic species in the area are sensitive to increased turbidity, sediment and other adverse influences on water quality. Our data are not sufficient to guarantee absence of endangered, threatened or sensitive species from the sites of proposed construction disturbance. We recommend that impacted streams be thoroughly surveyed by a qualified biologist prior to any in-stream disturbance.

Pseudanophthalmus troglodytes (Louisville Cave Beetle, federal candidate, KSNPC Threatened) is known to occur near this project. This species is globally ranked as critically

imperiled/imperiled and is endemic to the Louisville area. This area is located within a karst landscape characterized by numerous sinkholes, underground conduits, or caves. Construction disturbance or release of pollutants within the specified area could easily cause contamination of groundwater and disturbance of the sensitive cave ecosystem which support this cave obligate species and other subterranean species. Cave organisms are heavily dependent on water quality, and steps should be taken to avoid introducing contaminants into the water system.

Trifolium stoloniferum (Running buffalo clover, federally endangered, KSNPC threatened) is known to occur within five miles of the project area. This plant grows in mesic soils that receive filtered light. It is recommended that a thorough search be conducted by a qualified biologist in the months of May through July. The optimal time to search is in May, during its flowering period. Areas to search include stream banks, bars, and terraces, footpaths, dirt roads, and grazed bottomlands.

Nycticeius humeralis (Evening Bat, KSNPC special concern) occurs within your search area. Summer habitats include bottomland forests, swamps, and riparian corridors. In order to avoid impacts to bats, a thorough survey should be conducted. The survey should include a search for potential roost and winter sites, and a mistnetting census at numerous points within the proposed corridor, particularly in preferred summer habitat.

Myotis grisescens (Gray myotis, federally listed endangered, KSNPC threatened) and *Myotis sodalis* (Indiana myotis, federally listed endangered, KSNPC endangered) are known to occur within ten miles of the proposed project. A thorough survey for these species should be conducted by a qualified biologist if suitable habitat will be disturbed. The survey should include a search for potential roost and winter sites, and a mistnetting census at numerous points within the proposed corridor, particularly in preferred summer habitat. Summer foraging habitats include upland forests, bottomland forests and riparian corridors. Suitable roost and winter sites include sandstone and limestone caves, rockhouses, clifflines, auger holes, and abandoned mines. In order to avoid impacts to bats, bottomland forests and riparian corridors, particularly near caves, should not be disturbed.

Accipiter striatus (Sharp-shinned Hawk, KSNPC special concern) can be found in a variety of habitats from semi-open farmland to woodland openings and borders. This species typically nests in areas of extensive forest, especially areas with some evergreen trees.

Ammodramus henslowii (Henslow's Sparrow, KSNPC special concern, federal species of management concern) is associated with fallow hayfields, ungrazed pastures with scattered small trees and tall weeds, grassland, and brushland.

Cistothorus platensis (Sedge Wren, KSNPC special concern) can be found in hayfields, meadows, and weedy fields.

Falco peregrinus (Peregrine Falcon, KSNPC endangered, federal species of management concern) typically nests on rocky cliffs, bluffs, or dirt banks. Ideal locations include undisturbed areas with a wide view, near water, and close to plentiful prey. Substitute man-made sites include tall buildings, bridges, rock quarries, and raised platforms.

Passerculus sandwichensis (Savannah Sparrow, KSNPC special concern) can be found in sparsely vegetated grasslands such as pastures.

Thyromanes bewickii (Bewick's Wren, KSNPC special concern, federal species of management concern) can be found in brushy areas, thickets, scrub in open country, open and riparian woodlands, and in country towns and farms.

Tyto alba (Barn Owl, KSNPC special concern) can be found in hollow trees, old buildings, barns, silos and other abandoned structures. Before demolition of existing structures, it should be determined that these birds are not present.

I would like to take this opportunity to remind you of the terms of the data request license, which you agreed upon in order to submit your request. The license agreement states "Data and data products received from the Kentucky State Nature Preserves Commission, including any portion thereof, may not be reproduced in any form or by any means without the express written authorization of the Kentucky State Nature Preserves Commission." The exact location of plants, animals, and natural communities, if released by the Kentucky State Nature Preserves Commission, may not be released in any document or correspondence. These products are provided on a temporary basis for the express project (described above) of the requester, and may not be redistributed, resold or copied without the written permission of the Kentucky State Nature Preserves Commission's Data Manager (801 Schenkel Lane, Frankfort, KY, 40601. Phone: (502) 573-2886).

Please note that the quantity and quality of data collected by the Kentucky Natural Heritage Program are dependent on the research and observations of many individuals and organizations. In most cases, this information is not the result of comprehensive or site-specific field surveys; many natural areas in Kentucky have never been thoroughly surveyed, and new plants and animals are still being discovered. For these reasons, the Kentucky Natural Heritage Program cannot provide a definitive statement on the presence, absence, or condition of biological elements in any part of Kentucky. Heritage reports summarize the existing information known to the Kentucky Natural Heritage Program at the time of the request regarding the biological elements or locations in question. They should never be regarded as final statements on the elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments. We would greatly appreciate receiving any pertinent information obtained as a result of on-site surveys.

If you have any questions or if I can be of further assistance, please do not hesitate to contact me.

Sincerely,

Sara Hines
Data Manager

SLD/SGH

Enclosures: Data Report and Interpretation Key

Berner, Martha

From: Blair, Robert (EEC) [Robert.Blair@ky.gov]
Sent: Friday, February 25, 2011 3:53 PM
To: Berner, Martha
Subject: RE: AB Sawyer Park
Attachments: BeargrassGeology.doc; ABSawyer.jpg

Ms. Berner-

I've attached the draft write up for the geology section of our Beargrass Creek karst project. I've also included a map showing results of the dye trace recovered at AB Sawyer Spring. This map is pretty rough and intended as a basic illustration, definitely not presentation quality. In particular, you'll see that the dye trace to AB Sawyer Spring originated outside of the Beargrass Creek watershed – a case where karst drainage deviates from the topographic watershed boundary.

AB Sawyer Spring is considered a sub-basin of the A'Sturgus Station Spring basin (near Oxmoor Mall). Water discharged from AB Sawyer Spring flows down the Middle Fork to a swallet (sink point) that re-emerges at A'Sturgus Station Spring.

I hope this information is helpful. Please contact me if you have any questions.

Thanks,

Rob Blair, P.G.
Groundwater Section
Watershed Management Branch
KY Division of Water
(502)564-3410, ext 4926

From: Berner, Martha [mailto:Martha.Berner@louisvilleky.gov]
Sent: Thursday, February 24, 2011 12:08 PM
To: Blair, Robert (EEC)
Subject: AB Sawyer Park

Mr. Blair,
I am writing on behalf of Louisville Metro Parks regarding a park master plan we are undertaking for A.B.Sawyer Park. The park lies in the eastern half of Jefferson County, adjacent to the Middle Fork of Beargrass Creek, near E.P. "Tom" Sawyer Park. It's most impressive features include two perennial springs and a series of sink holes.

We would very much like to include as much information as possible about these features in our park planning project, as it could be a very effective way to illustrate and interpret karst geology to park visitors.

I will give you a call this afternoon and hopefully catch you in the office. We'd be very interested to know more about resources that might be available for our use through your agency.

Sincerely,

Martha Berner

1.6 Geologic Information

The Beargrass Creek watershed is in the Outer Bluegrass Physiographic Region of Kentucky. Rock units in the Outer Bluegrass region are generally thin-bedded limestones, dolostones and shales (McDowell, 2001). Although most of the Outer Bluegrass is characterized as having low- to moderately-developed karst, the geologic formations underlying Beargrass Creek watershed exhibit well-developed karst. In particular, the watershed is underlain by the Sellersburg, Jeffersonville and Louisville limestones, with minor amounts of New Albany Shale and Quaternary deposits.

The Quaternary deposits are derived from a variety of sources. Kepferle (1974) notes terrace deposits, loess, glacial outwash, lacustrine deposits and alluvium. However, for the purposes of this report these will be considered holistically as undifferentiated Quaternary deposits (this includes minor amounts of artificial fill). Kepferle (1974) describes the New Albany Shale as silty and carbonaceous, appearing massive in fresh exposures but weathering to thin, brittle chips. Shale is typically thought to inhibit groundwater movement, and therefore, karst development. However, in the Beargrass Creek watershed the New Albany Shale is rather thin, limited in geographic extent, displays sinkhole formation and has active karst conduit flow beneath it (Ray and others, 2008).

The three limestone units referenced above are the focus for karst development in the Beargrass Creek watershed. The Sellersburg Limestone is partly dolomitic, very fine grained and occurs in thin beds. The Jeffersonville Limestone is also partly dolomitic, but is coarse grained and thinly crossbedded. The Louisville Limestone is dolomitic, very fine grained and occurs as thin to thick beds (Kepferle, 1974). Evidence of significant karst development includes large cover-collapse sinkholes and documented groundwater velocities in excess of 1.4 km/day (Ray and others, 2008). Numerous tracer tests from sinkholes and stream swallets within the watershed provide further evidence of karst conduit flow.

These groundwater recharge, or insurgence, features typically do not adequately attenuate or filter contaminants entering the karst drainage network. Potential impacts to water quality in karst regions can take various forms. Thrailkill and others (1982) note that due to the dendritic pattern of karst drainage systems, NPS contaminants can be introduced across a large area and coalesce to be discharged at a single spring. Thus, NPS pollution can be concentrated at one spring which may have significant impacts to the water quality of the receiving stream. Conversely, well-developed karst drainage may also have a radial discharge pattern from topographic highs, allowing contaminants from a single source to be dispersed over a large area (Joseph A. Ray, oral comm. 2008).

Geologic formations in the Beargrass Creek watershed are summarized in Table 1.2 and illustrated in Figure 1.3 (Kepferle, 1974; Nelson, 2002a-e and Ray and others, 1994).

Table 1.2 Geologic Formations in the Beargrass Creek Watershed

Geologic Formation	Karst Development	Hydrogeologic Sensitivity to Pollution
Quaternary Deposits	None	Moderate - significant permeability
New Albany Shale	Minor	High - thin shale underlain by significant karst development
Sellersburg Limestone	Well-Developed	Extremely High - swallet and shaft drain with conduit flow
Jeffersonville Limestone	Well-Developed	Extremely High - swallet and shaft drain with conduit flow
Louisville Limestone	Well-Developed	Extremely High - swallet and shaft drain with conduit flow

Figure 1.3 Geologic Map of the Beargrass Creek Watershed

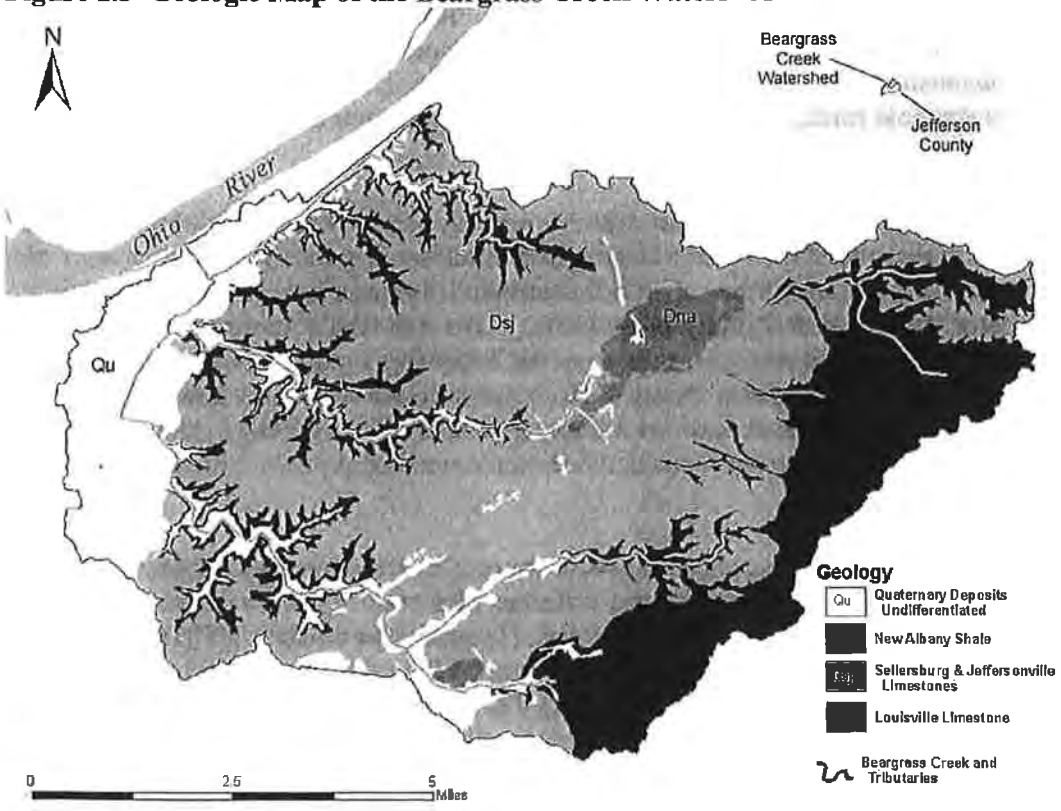


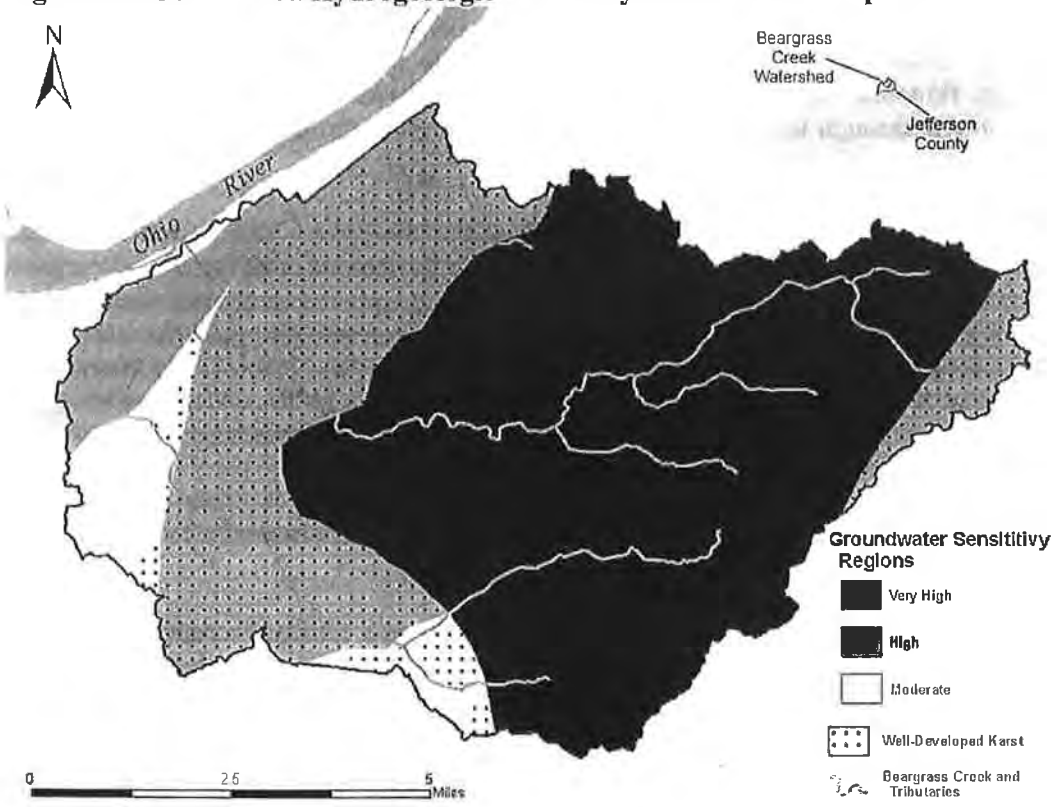
Figure 1.4 illustrates the generalized hydrogeologic sensitivity of geologic formations that underlay the Beargrass Creek watershed. The hydrogeologic sensitivity of an area is defined as "the ease and speed with which a contaminant can move into and within the groundwater system". The hydrogeologic sensitivity ratings range across five categories. The criteria that control these sensitivity ratings are recharge to the system, flow rate and

dispersion potential within the system. Low sensitivity ratings are characterized by slow, diffuse recharge, flow and dispersion. Groundwater movement is through any combination of tight fractures, intergranular porosity or bedding plane partings and discharge is localized. Higher sensitivity ratings are characterized by rapid, turbulent recharge, flow and dispersion. Groundwater recharges via sinkholes, swallets and shaft drains, flows through solutionally enlarged fractures or conduits and dispersion may be widespread or radial (Ray and others, 1994).

The hydrogeologic sensitivity ratings within the Beargrass Creek watershed are predominantly high. This indicates that the geologic formations underlying the Beargrass Creek watershed have relatively large infiltration pore size and groundwater flow velocity with the potential for widespread and radial dispersion patterns. Areas underlain by karst terrane can have rapid groundwater flow rates and complex flow routes. Stormwater and associated pollutants can quickly percolate through soils, or infiltrate stream swallets and sinkholes with little or no filtration or attenuation of the contaminants. Groundwater velocities within conduits are commonly measured in thousands of feet per day instead of the typical rate of inches or feet per year in non-karst systems. Ray and others (2008) note verified, traced groundwater velocities in the Beargrass Creek watershed exceeding 1.4 kilometers per day.

In order to be conservative from a management perspective, all surface runoff is modeled assuming that it flows consistent with surface catchment topography. With the exception of the small karst addition to the Middle Fork subwatershed as discussed earlier, all other karst drainage appears to be confined to the overall watershed. However, additional refinement of the resulting loading allocations may require a more in-depth karst analysis for particular catchments.

Figure 1.4 Generalized Hydrogeologic Sensitivity and Karst Development



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Vectorized Geologic Quadrangle Data DVGQ-906. Adapted from Kepferle, R.C., Wigley, P.B., and Hawke, B.R., 1971, Geologic map of the Anchorage quadrangle, Jefferson and Oldham Counties, Kentucky: U.S. Geological Survey Geologic Quadrangle Map GQ-906, scale 1:24,000.

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Nelson, H.L., Jr., 2002c, Spatial database of the Jeffersonville, New Albany, and Charlestown quadrangles, Kentucky-Indiana: Kentucky Geological Survey, ser. 12, Digitally Vectorized Geologic Quadrangle Data DVGQ-1211. Adapted from Kepferle, R.C., 1974, Geologic map of the Jeffersonville, New Albany, and Charlestown quadrangles, Kentucky-Indiana: U.S. Geological Survey Geologic Quadrangle Map GQ-1211, scale 1:24,000.

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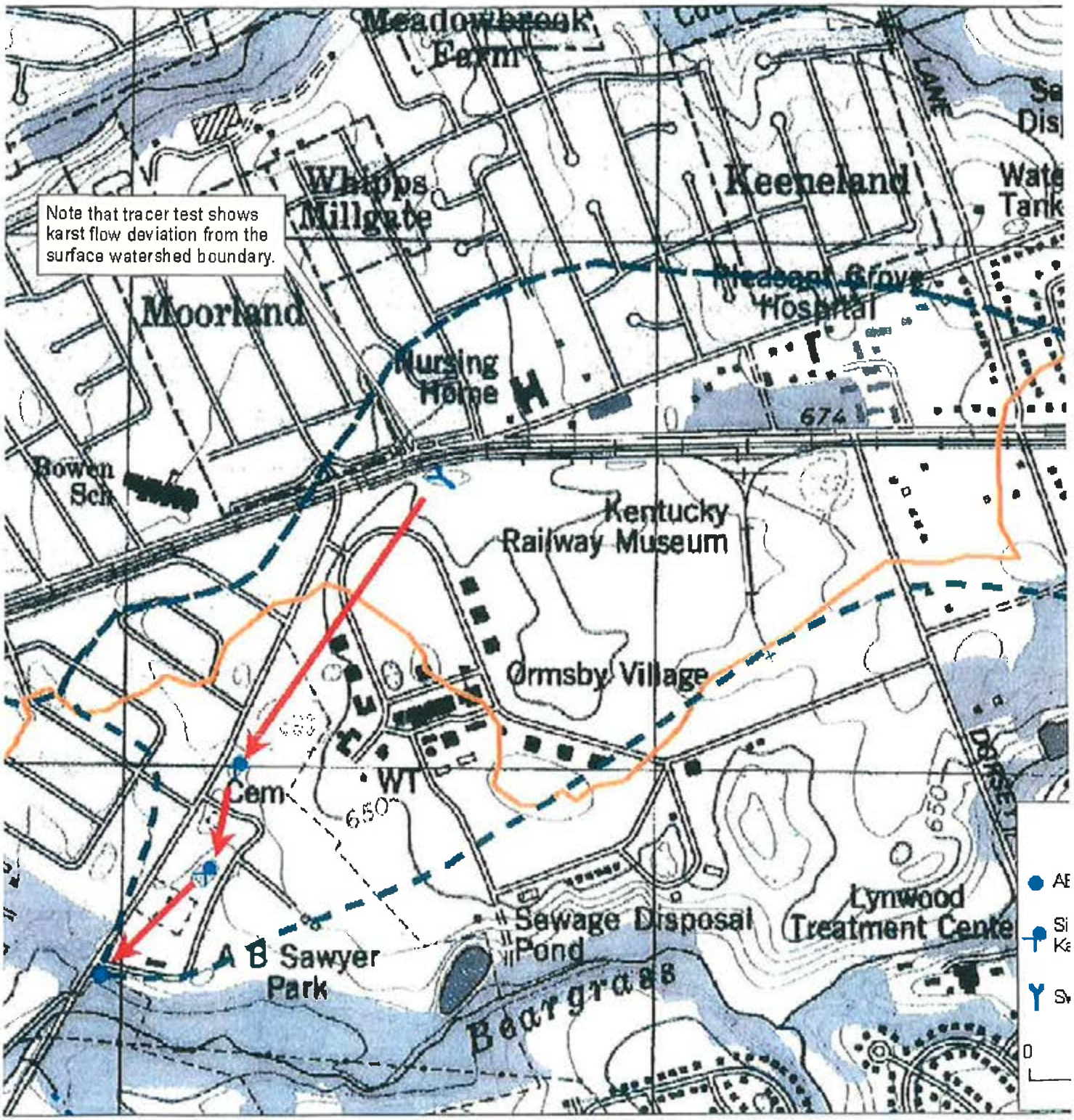

Note that tracer test shows karst flow deviation from the surface watershed boundary.
Meadowbrook Farm
Whipps Millgate
Keeneland
Moorland
Nursing Home
Hospital
674
Bowen Sch
Kentucky Railway Museum
Ormsby Village
Cem
WT
650
Sewage Disposal Pond
Lynwood Treatment Cente
A B Sawyer Park
Beargrass

Kentucky Geologic Map Information Service
Kentucky Geological Survey

Note: please disable popup blocking software for full functionality.

KGS Home > Maps, Pubs, & Data > Geologic Map Service

What's a karst potential map? | Geologic maps and geologic issues in Kentucky: a citizen's guide (pdf: 25 MB / djvu: 2 MB) | metadata

Coordinates from the "zoom to a location" tool are available:

☑ display the point (pink crosspoint) ☐ label the point with single zone coordinates **refresh map**

Attention! Most of the functionality found here is now available on the faster and more stable **Geologic Map Service (http://kgs.uky.edu/kgsmap/kgsgeoserver)**

Tools **Legend** **Layers** **Geologic Info**

- View geologic descriptions, images, or data for the map extent
- Large areas may yield slow response times

Descriptions

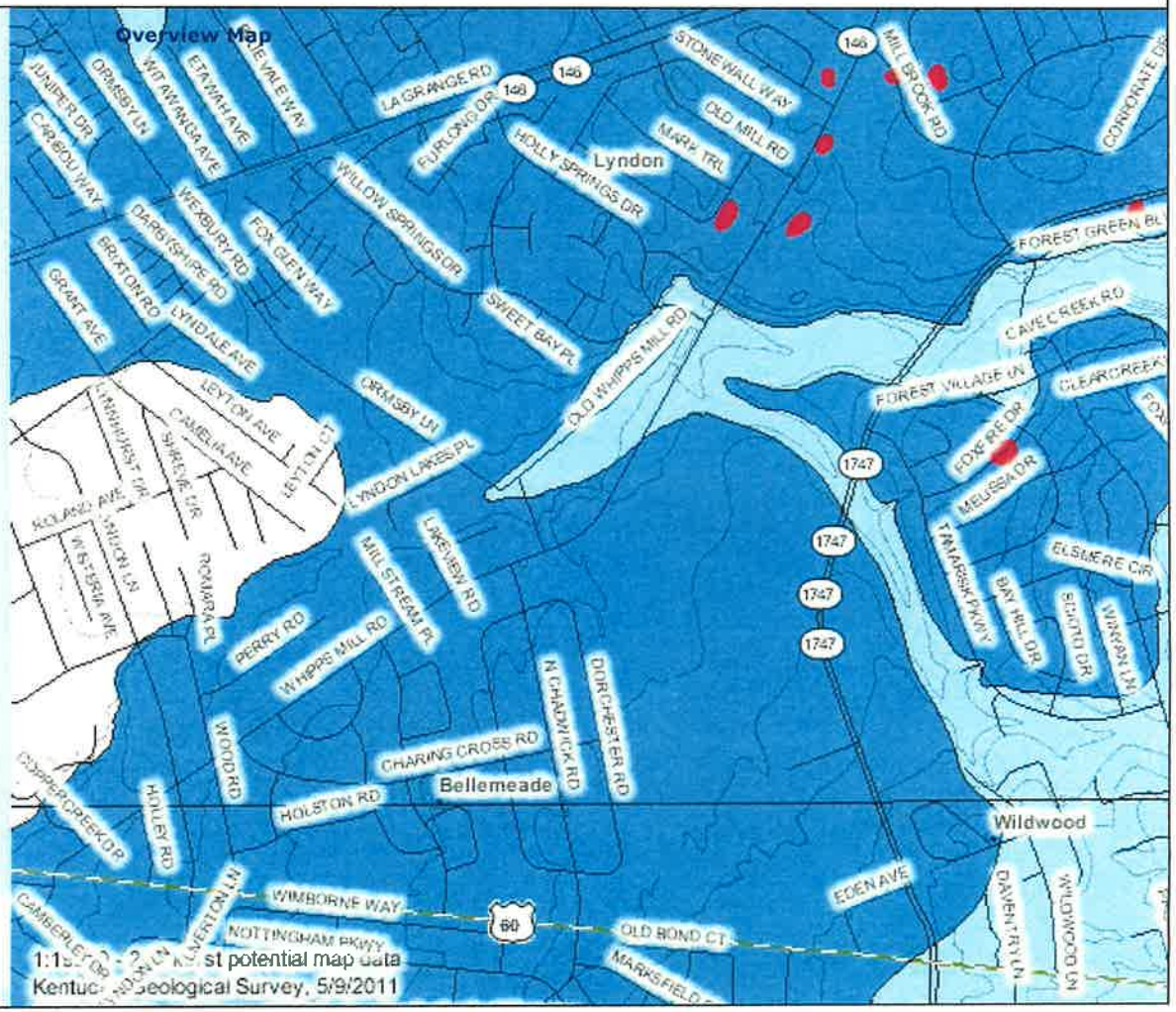
- Lithology
- Economic (Coal)
- Economic (Limestone)
- Economic (Mineral)
- Economic (Petroleum)
- Economic (Sedimentary)
- Archeology
- Fossils
- Geophysical
- Geotechnical
- Hydrology
- Landforms
- Landuse
- Structural

Images

- Outcrops
- Photos
- Cross Sections
- Schematic Diagrams
- Supplementary Maps
- Fossil Charts
- Stratigraphic Columns

Data

- Oil & Gas Wells
- Coal Boreholes
- Coal Thickness
- Coal Quality
- Water Wells
- Springs
- Publications (Published Reports)



-DRAFT-

CULTURAL RESOURCES ASSESSMENT REPORT FOR A. B. SAWYER PARK, JEFFERSON COUNTY, KENTUCKY

OSA Project No. FY11-6872
KHC Project No. FY11-1066

Prepared for:
A. B. Sawyer Park Master Plan 2011

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Project No. PR11012
Cultural Resources Report No. TR11016

_____
(Signature)

Anne Tobbe Bader, RPA
Principal Investigator

August 5, 2011

Abstract

Between March and July, 2011 Corn Island Archaeology, LLC was retained by Gresham Smith and Partners to provide cultural resources services related to the preparation of a Master Plan for A. B. Sawyer Park in eastern Jefferson County, Kentucky. Gresham Smith and Partners is developing the Master Plan at the request of Louisville Metro Parks. Currently, there is no such plan to provide for future development of the park. As part of this overall effort, Corn Island Archaeology was tasked with researching existing conditions relative to cultural resources, including historic structures, archaeological sites, and cemeteries. Specifically, Corn Island Archaeology prepared an inventory of known (recorded) cultural resources within the park; assessed the potential for intact, unknown archaeological sites to be present; and developed archaeological and historical contexts to allow informed interpretation of these resources. This information will allow Metro Parks to make informed decisions relative to cultural resources compliance laws and regulations as they design and implement plans for future development. The project area of potential effects encompassed the 47.25 acres (19.21 ha) of the park.

State-level, county-level, and city-level public records included those found at the Office of State Archaeology, Louisville Metro Parks, Jefferson County archives, University of Louisville Digital Archives, and Louisville Metro Planning Commission. Private collections include those housed at the Filson Historical Society and in-house references. Most importantly, personal experiences and knowledge of community members provided unique perspectives other records could not provide.

As a result of this research, it was learned that two professional archaeological surveys have been conducted within the park boundaries. However, no archaeological survey has been completed for the entire park property, but a walkover of the property identified a number of concrete and stone foundation remnants. These included one house and springhouse location that may have been related to the Whips family (early nineteenth century), Hamilton Ormsby family (1858 Bergman map), Keefe family (1879 map) and Winchester family (1913).

Six cultural-historic investigations have been completed in the vicinity of the park. These include three cultural-historic surveys, one multiple property listing, and two contexts. Unrecorded cultural-historic sites include the Whipps Millgate Subdivision, the University of Louisville campus, and A. B. Sawyer Park. Two historic structures have been previously documented within a 2-km radius of the park; one has been demolished and one has been listed in the NRHP. One cemetery, the Whips Cemetery, lies within the park property. One stone was documented that may have belonged to Sarah Leland Whips. No traditional cultural properties have been identified within the park.

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1
INTRODUCTION

In March 2011, Corn Island Archaeology, LLC (CIA) was retained by Gresham Smith and Partners to provide cultural resources services related to the preparation of a Master Plan for A. B. Sawyer Park in eastern Jefferson County, Kentucky (**Figure 1**). Gresham Smith and Partners is developing the Master Plan at the request of Louisville Metro Parks. Currently, there is no such plan to provide for future development of the park. As part of this overall effort, CIA was tasked with researching existing conditions relative to cultural resources, including historic structures, archaeological sites, and cemeteries. Specifically, CIA prepared an inventory of known (recorded) cultural resources within the park; assessed the potential for intact, unknown archaeological sites to be present; and developed archaeological and historical contexts to allow informed interpretation of these resources. This information will allow Metro Parks to make informed decisions relative to cultural resources compliance laws and regulations as they design and implement plans for future development. The project area of potential effects (APE) encompassed 47.25 acres (19.21 ha).

Figure 1. Location of Jefferson County, Kentucky.

Project Location

A. B. Sawyer Park is located at 9300 Whipps Mill Road in central Jefferson County. The property is located on the USGS 7.5' *Louisville East* topographic quadrangle (**Figure 2**) as well as many historic maps such as the 1858 Bergman map and the 1879 Beers and Lanagan map. The property is surrounded by residential, commercial, recreational, and research facilities. Population within the 40242 zip code was 10,349 as of the 2000 U.S. census. Demographically, the surrounding poulation was 90 percent White, 5.7 percent African American, 2.0 percent Hispanic or Latino, and 1.8 percent Asian. Other census groups were represented below 1.5 percent. Physiographically, the property is located on a karstic uplands along the Middle Fork of Beargrass Creek. A number of sinkholes exist within the property; these lie along Whipps Mill Road. Rockshelters, caves, and additional sinks have been recorded south and east of the park. Today, the landscape of the majority of the park has been greatly altered during the construction of ball diamonds, football fields, and associated facilities.

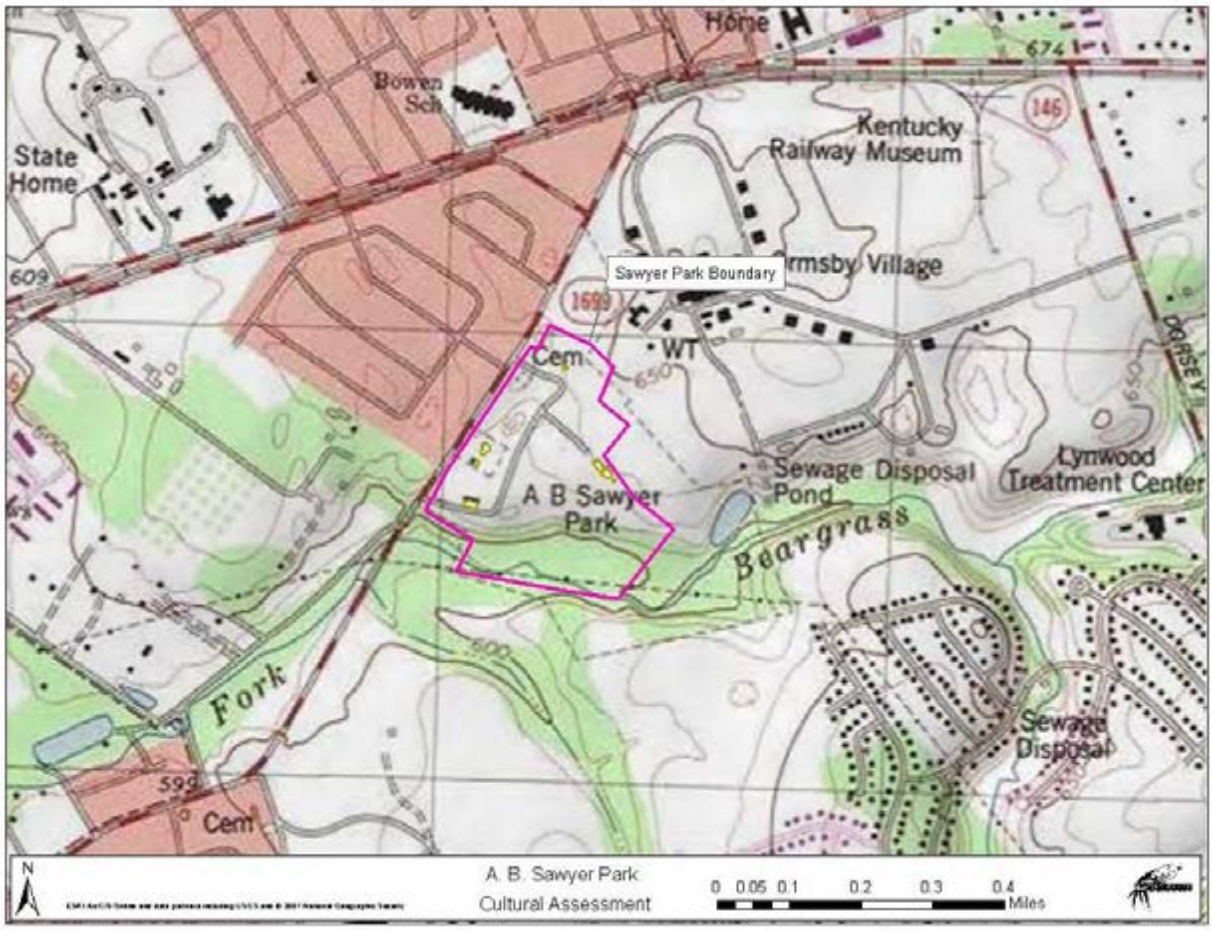


Figure 2. Segment of USGS 7.5' *Louisville East, KY* topographic quadrangle showing park boundaries.

Project Statement of Work

This cultural resources study entailed the following tasks:

- Conduct a records check at relevant state and local agencies to compile an inventory of known or recorded cultural resources, both archaeological and historic, within the project area;
- Review drawings, aerials, historical maps, documents, and local histories for information on potential archaeological site locations;
- Conduct site visits to perform simple visual inspections of the project areas to assess the degree of historic disturbances and the potential for encountering intact archaeological remains;
- Prepare prehistoric and historic contexts specific to the project areas within central Jefferson County;
- Provide management recommendations relevant to the need for future archaeological and historic field studies, if any; and
- Identify potential avenues for public interpretation of the cultural resources of the property.

In addition to providing narrative in summary form for the Master Plans, CIA prepared this expanded report detailing the cultural history of the project area. The report provides photo documentation of the project area and complete mapping of all known archaeological sites, previously surveyed areas, historic properties, and potentially sensitive archaeological areas. Information regarding the specific locations of archaeological sites must be withheld from versions of this report intended for public consumption.

Findings

As a result of this research, it was learned that two professional archaeological surveys have been conducted within the park boundaries. No subsurface archaeological survey has been completed for the entire park property, but a walkover of the property identified a number of concrete and stone foundation remnants. These included one house, stone wall and springhouse location that may have been related to the Whips family (early nineteenth century), Hamilton Ormsby family (1858 Bergman map), Keefe family (1879 map) and Winchester family (1913). Six cultural-historic investigations have been completed in the vicinity of the park. These include three cultural-historic surveys, one multiple property listing, and two contexts. Two historic structures have been previously documented within a 2-km radius of the park; one has been demolished and one has been listed in the NRHP. One cemetery, the Whips Cemetery, lies within the park property. One stone was documented that may have belonged to Sarah Leland Whips. No traditional cultural properties have been identified within the park.

Project Scheduling and Staffing

The project staff meets the requirements for professional archaeologists and architectural historians as detailed in the Secretary of the Interior's *Standards and Guidelines for Archaeology and Historic Preservation* (*Federal Register*, Vol. 48, No. 190, 1983). Ms. Anne Tobbe Bader, MA RPA served as the Principal Investigator for the project. Mr. William G. Hill, MA RPA, conducted fieldwork and contributed to the site discussion. Ms. Melinda King Wetzel, MA RPA, Ms. Anna Maas, MUEP, Ms. Kathryn McGrath, MA RPA, and Ms. Christina Pfau, MHP conducted background research and prepared the report. Ms. Wetzel also prepared the graphics.

Curation

As no cultural material was recovered during this investigation, no curation was necessary.

2
BACKGROUND RESEARCH

To accomplish the project objectives, background research was conducted. This included local histories, archived records, and internet data such as census data, deed records, genealogical and family data, historic industries, place names, and – to the extent possible – oral histories from local informants. This background research was informative in ascertaining the potential for significant historic archaeological remains to be present in the vicinity of the proposed project. It was also an important step towards developing an expanded context that will prove to be useful for interpreting the historic significance of the project area. The following sources were researched, among others:

- Office of State Archaeology (OSA)
- Kentucky Heritage Council (KHC)
- Kentucky Historic Farms documentation
- Louisville Metro Archives (LMA)
- Louisville Metro Parks (LMP) Archives
- Louisville Metro Planning Commission (LMPC)
- Louisville Free Public Library (LFPL)
- Jefferson County Public School Archives and Records Center (JCPS-ARC)
- The Filson Historical Society
- *The Courier-Journal*
- Other local newspaper articles
- *The Encyclopedia of Louisville*
- Kentuckiana Digital Library (KDL)
- Published books and journal articles
- Internet sources
- Historic maps
- USGS topographic maps
- Aerial photographs
- Census records
- Genealogical data
- Personal interviews
- Old photographs

Archaeological Records Check and Literature Review

The archaeological records housed at the Office of State Archaeology (OSA) were examined to identify any previous professionally performed archaeological studies within the park boundaries as well as the presence of recorded archaeological sites within the park. The purpose of this was to identify those areas that may yet require survey in relation to any planned future development. Archaeological reports detailing nearby previous studies in the park vicinity were researched for information on landuse, soil, and environmental data that would facilitate an informed assessment of the potential for archaeological sites to be discovered within the park itself and to determine, to the degree possible, specific areas that are likely to be archaeologically sensitive.

The results of the background research conducted at the Kentucky OSA are presented in this section. The background research consisted of a records check and a review of gray literature documenting previous cultural resources management investigations in the project vicinity.

The results of a records search request were received from the Kentucky OSA on June 14, 2011. A literature review was then performed to determine the presence, density, and environmental settings of recorded archaeological sites in and nearby the current project APE as well as archaeological surveys that have been conducted within a 2-kilometer (km) radius.

Previous Archaeological Investigations

The project lies within the Salt River Management Area and the Louisville section of the Ohio Valley Urban Centers Cultural Landscape. Management areas have been defined to classify the geographic distribution of prehistoric archaeological sites of the state, while Cultural Landscapes are used to deal with historic resources (Pollack 2008). The Salt River Management Area, which, despite being one of the smallest in the state, contains nearly 3,000 archaeological sites--higher than all other management areas except the Upper Kentucky/Licking area (Pollack 2008). Open habitation sites without mounds were the most common site type (72.7 percent) followed by historic farmstead sites (15.5 percent).

Webb and Funkhouser's 1928 edition of *Ancient Life in Kentucky* documents only four archaeological sites in Jefferson County, three of which were described as being located in downtown Louisville, with the fourth being described as a "burial ground six miles from Louisville on the Bardstown Pike". The 1932 edition of the state survey (Funkhouser and Webb 1932) adds an additional five sites. The descriptions provided imply none of these would be located in the present area of A. B. Sawyer Park.

Modern Archaeological Investigations within 2-kilometer Radius of AB Sawyer Park

Data received from OSA record that sixteen archaeological surveys have been conducted within a 2-km radius of the project area; two of which intersect with portions of A. B. Sawyer Park (**Table 1** and **Figure 3**). Four archaeological sites have been reported as a result of these surveys that are located within a 2-km radius of the current APE, although none fall within the A. B. Sawyer Park's boundaries.

Table 1. Previous Archaeological Surveys

SURV ID SHPO ID	YEAR	AUTHORS	TITLE
Within A. B. Sawyer Park Boundary			
584283 056-254	1998	Evans, Martin C.	Phase I Archaeological Reconnaissance of the Whipps Mill Road Flood Control Facility, Jefferson County, Kentucky
586038 056-335	2009	Wetzel, Melinda and Anne Tobbe Bader	Phase I Archaeological Survey for the Proposed Whipps Mill Bike and Pedestrian Improvements at A. B. Sawyer Park Jefferson County, Kentucky
Outside A. B. Sawyer Park but within 2-km			
575654 056-048	1977	McHugh, William P.	An Archaeological Investigation of the City of Briarwood, Jefferson County, Kentucky Park Addition
577780 056-088	1988	McGraw, Betty J.	Archaeological Reconnaissance Survey of the Proposed KY 146/Whipps Mill Road Intersection Project in Anchorage, Jefferson County, Ky
578052 056-098	1989	Henderson, A. Gwynn	Cultural Resource Assessment of a Proposed Six Acre Retirement Development in Louisville, Jefferson County, Kentucky
579348 056-132	1991	Bader, Anne Tobbe and Edgar E. Hardesty	A Phase I Archaeological Reconnaissance of Three Segments of the North County Sewer System in Jefferson County, Kentucky
584229 056-257	1992	McGraw, Betty	Phase I Archeological Survey of the Hurstbourne Lane Extension at E.P. "Tom" Sawyer State Park Jefferson County, Kentucky
580164 056-160	1995	Ross-Stallings, Nancy and Richard Stallings	A Phase I Cultural Resource Survey of the Proposed Improvement of Westport Road, Jefferson County, Kentucky
580213 056-162	1995	Stokes, B. Jo	A Phase I Archaeological Survey of a Proposed Model Airplane Landing Strip and Parking Area in E.P. Tom Sawyer State Park, Jefferson County, Kentucky
580763 056-176	1998	Stottman, M. Jay	Archaeological Excavations to Locate Cemeteries at E. P. “Tom” Sawyer State Park and Central Sate Hospital
581433 056-184	1999	Stallings, Richard and Nancy Ross-Stallings	A Phase I Archaeological Survey of a Portion of the Proposed Improvements of Westport Road, Jefferson County, Kentucky
583487 056-227	2004	Allgood, Kenneth A., Ann D’Ambruoso and Paul Bundy	An Archaeological Survey of the Proposed Widening of Hurstbourne Lane (KY 1747) from Linn Station Road to North of Shelbyville Road (U.S. 60) in Jefferson County, Kentucky
585717 056-267	2004	Stottman, M. Jay	Archaeological investigations at the Romara Place Site (15JF709), Lyndon, Jefferson County, Kentucky
584415 056-272	2006	Finney, Fred	Phase I Archaeological Survey of a Proposed Modification to a Telecommunications Tower at Bellemeade Site in Lyndon, Jefferson County, Kentucky
584423 056-273	2006	DelCastello, Brian	An Archaeological Survey of the Proposed Construction of the Center for Predictive Medicine, University of Louisville, Jefferson County, Kentucky
584130 056-240	2006	Niemel, Karen S.	Abbreviated Phase I Archaeology Report for the Navajo Cellular Tower, 8509 Westport Road, Louisville, Jefferson County, Kentucky

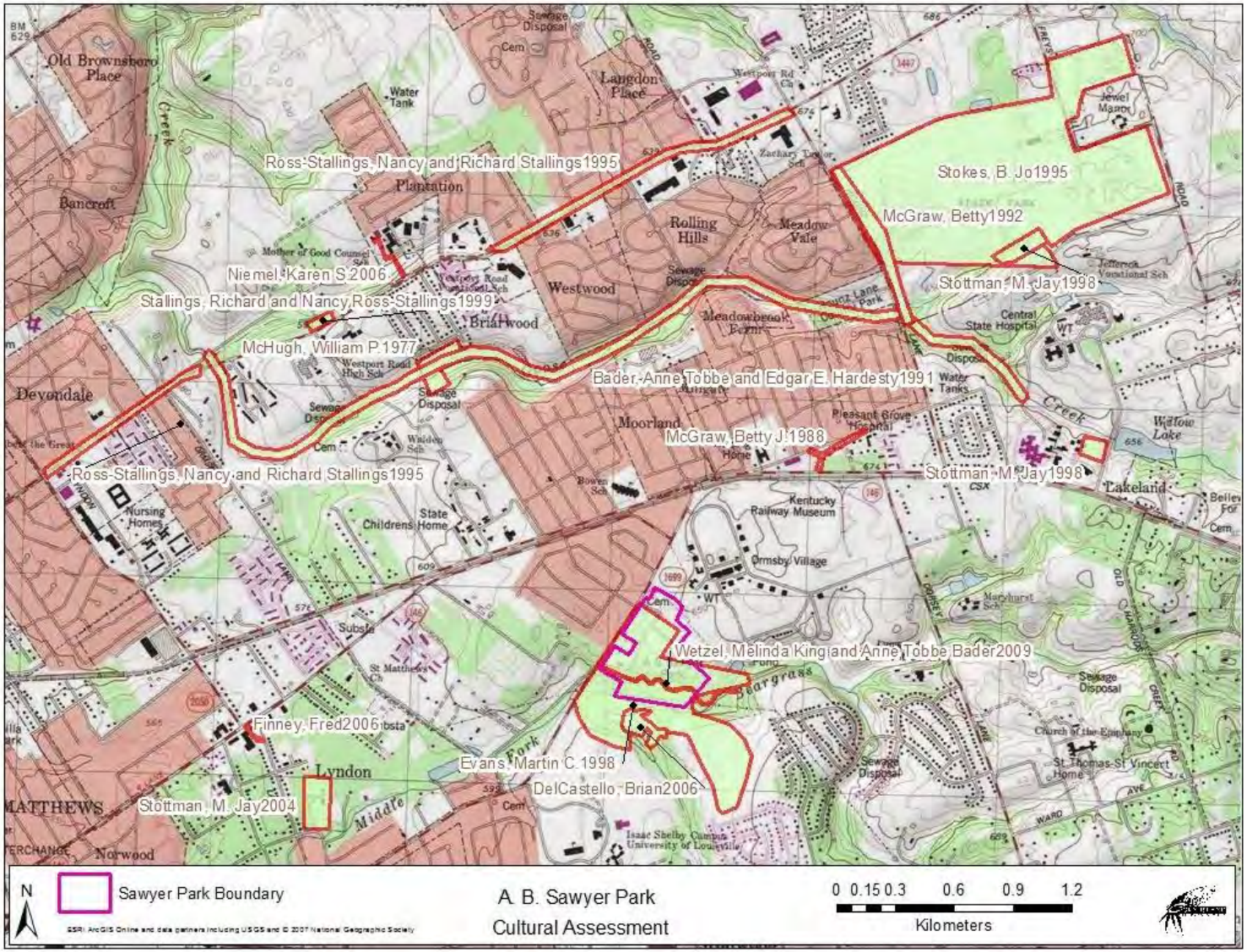


Figure 3. Archaeological surveys within 2-km of the current project APE.

Within A. B. Sawyer Park Boundary

In 1988, a Metropolitan Sewer District project spurred an archaeological investigation within A. B. Sawyer Park. The proposed project was for a proposed flood control facility to consist of an earthen embankment and outlet structure with a dry reservoir. The embankment was estimated to cover approximately 5.5 acres with an additional 8.5 acres for staging and borrow. The entire 14-acre parcel was subjected to Phase I archaeological survey, with no archaeological sites being recorded (Evans 1998).

In 2009, Corn Island Archaeology conducted a Phase I archaeological survey for proposed improvements along the Whipps Mill Pedestrian and Bike Trail in the park. The project area extended roughly east to west through the park along the Middle Fork of Beargrass Creek. No cultural resources were identified as a result of the survey, and no further work was recommended.

Within 2-km Boundary and Outside A. B. Sawyer Park

The earliest survey was conducted in 1977 for a proposed extension of City of Briarwood's park. The City of Briarwood is located east of Louisville along state highway KY-1447. The park addition consisted of 2.1 acres located along and on the south side of Goose Creek. No cultural resources were documented during the Phase I level archaeological survey (McHugh 1977).

Ms. Betty McGraw of the Division of Environmental Analysis conducted a Phase I archaeological survey for the proposed KY-146/Whipps Mill Road intersection project in 1988. The project area consisted of a 120-ft wide by 1200-ft long corridor encompassing approximately 3.3 acres (McGraw 1988). No archaeological sites were documented as a result of the survey.

The University of Kentucky conducted a Phase I archaeological survey of a 6-acre parcel of land near Oxmoor Mall in 1989. The area was proposed for construction of a retirement residence development. According to OSA data, site 15JF158, an open habitation without mounds prehistoric site initially reported by an unknown identity in 1978, was recorded as being located within their survey area. No evidence of the site or other cultural resource was recorded as a result the 1989 survey, and no further work was recommended (Henderson 1989).

Proposed improvements to the Metropolitan Sewer District's (MSD) wastewater facilities in northeastern Jefferson County spurred an archaeological survey of three segments of sewer and drain easements. Separate segments comprised 9.5 miles that ranged from 20 to 55 ft wide (Bader and Hardesty 1991). The Phase I archaeological survey reported no archaeological resources.

In 1992, Betty McGraw of the Kentucky Transportation Cabinet conducted a pedestrian survey and shovel test probe excavation of a proposed extension of Hurstbourne Lane at E. P. "Tom" Sawyer Park. The 224-foot wide project area was located on Hounz Lane and extended 3000 ft northwest from Old Whipps Mill Road. No archaeological sites were documented as a result of the survey, and no further work was recommended.

Cultural Horizons, Inc. conducted a Phase I archaeological survey of approximately 2.64 miles along Westport Road in 1995. The project was conducted for proposed improvements along Westport Road and was found to be highly disturbed by modern development (Stallings and Ross-Stallings 1995). No archaeological sites were identified, and no further work was recommended. However, a small portion of the proposed project area was unavailable to be surveyed due to the landowner's denial of access.

The Kentucky Department of Parks requested a Phase I archaeological survey of a 200-x-300-m parcel within E. P. “Tom” Sawyer Park for a proposed model airplane landing strip and parking lot. The survey was conducted by the Kentucky Archaeological Survey and resulted in identification of one previously unreported archaeological site: site 15JF642. The project area was investigated by ground surface inspection and excavation of shovel test probes. Twenty-five artifacts were recovered, including 24 debitage and one prehistoric ceramic sherd, indicating a Woodland period occupation (Stokes 1995). Avoidance of the site or further archaeological evaluation was recommended.

The Kentucky Finance and Administration Cabinet requested a survey at E. P. “Tom” Sawyer State Park and Central State Hospital property. The investigation was spurred by reports from local genealogists and former employees of Central State Hospital suggesting cemeteries once used by Central State Hospital other than the one documented in 1991 by the University of Louisville Program for Archaeology (DiBlasi 1991) are present in the area. In the 1880s, Central State Hospital encompassed 375 acres of land, including the area of E. P. “Tom” Sawyer Park where the cemetery identified by the University of Louisville in 1991 is located. Questions regarding other hospital cemeteries in the area arose when headstones and headstone fragments were discovered in a nearby tributary of Goose Creek in 1997. The Kentucky Archaeological Survey monitored backhoe trenching near the identified cemetery at E. P. “Tom” Sawyer State Park as well as within a smaller tract of land on the Central State Hospital campus. A total of 13 trenches were excavated, ten around the previously identified cemetery and three on the Central State Hospital parcel. As a result of the investigation, the boundaries of site 15JF576 (a prehistoric site and historic cemetery identified by DiBlasi in 1991) were expanded to include a newly discovered cemetery. Site 15JF576 now consists of two historic components (the cemetery identified by DiBlasi in 1991 and the expansion of the cemetery identified by KAS in 1998); a brick vault structure; and a possible Paleoindian component (Stottman 1998). Site 15JF659, the Central State Site, was also recorded during this investigation. This site lies immediately adjacent to site 15JF576 and appears to be a small historic dump site used by the hospital from the mid-nineteenth century to the mid-twentieth century (Stottman 1998).

As a continuation of their 1995 survey along Westport Road, Cultural Horizons completed a survey of a one-acre parcel that had previously been unavailable. The project was conducted for proposed improvements along Westport Road in 1999 (Stallings and Ross-Stallings 1999). Ten shovel test probes were excavated, none showing evidence of intact archaeological deposits. No archaeological sites were identified, and no further work was recommended.

A Phase I archaeological survey was conducted for the proposed widening of Hurstbourne Lane from Linn Station Road to north of Shelbyville Road in 2004 (KYTC Item No. 5-344.00). The survey area consisted of a total of approximately 46.6 acres with a corridor measuring 2.6 km (1.6 mi) by 30.5 m (100 ft) (Allgood et al. 2004). One previously undocumented historic cemetery (site 15JF700) was documented during the survey; however, it was located outside proposed project right-of-way boundaries and was not to be impacted by the proposed road construction. No other cultural resources were reported as a result of the survey.

Archaeological investigations were conducted at the Romara Place Site (15JF709) in 2004. The City of Lyndon requested the survey to ensure that any archaeological resources present at the site would not be inadvertently impacted by development of the property. Potentially significant archaeological deposits were documented in the north half of the property. An historic component associated with the mid-nineteenth to late twentieth century occupation of the property, as well as a small prehistoric component of unknown temporal affiliation, was documented following excavation of 420 shovel test probes and two test units. The historic component consisted of a late twentieth

century pool and deck area, a mid- to late twentieth century shed and barn, a small nineteenth century stone building, a garage/carriage house constructed of recycled stone from other buildings on the property, and a nineteenth century brick domestic outbuilding renovated in the mid-twentieth century as a residence (Stottman 2004). Historic artifacts recovered ranged in date from the early nineteenth to late twentieth century. Prehistoric artifacts consisted primarily of lithic debitage, with no diagnostic artifacts being recovered.

A Phase I archaeological survey was conducted for a proposed telecommunications tower near the Lyndon Fire Station south of New LaGrange Road and east of Lyndon Road at 520 Lynhurst Drive in 2006. The survey area consisted of approximately 0.12 acre (Finney 2006). No archaeological resources were documented during the survey.

A previous survey very near the park's southern boundary was conducted by Brian DelCastello in 2006 for the proposed construction of the University of Louisville's Center for Predictive Medicine. The survey area was located approximately 0.9 km southwest of Ormsby Village and 0.3 km east of Route 199, just west of the Hurstbourne Lane and Tamarisk Parkway intersection (DelCastello 2006). The survey area consisted of approximately 4.2 acres, and no archaeological sites were found.

A small parcel (0.04 acre) proposed for a cellular tower was surveyed in 2006. The project area is located at 8509 Westport Road and consisted of spots of cut grass and an asphalt parking lot at the time of survey (Niemel 2006). No archaeological sites were identified, and no further work was recommended.

Previously Reported Archaeological Sites within 2-km

Data received from KY OSA records eight previously reported archaeological sites within a 2-km radius of A. B. Sawyer Park; however, none are located within the park's boundaries. The sites range from prehistoric lithic scatters of unknown cultural affiliation to historic cemeteries (**Table** 2 and **Appendix A**).

Data on record for site 15JF301 appears to be slightly contradictory. The archaeological site survey form on file at KY OSA, dated 1975, records the site as a prehistoric campsite located within an agricultural field. Recovered artifacts are listed as 4 projectile points, 5 bifaces, flakes, cores, a spokeshave, and fire-cracked rock, although no temporal affiliation was assigned. Appended to this site form is an older form of unknown date, recording the site as "Ormsby Village"; a cave site "disturbed by collectors". OSA GIS data lists the site as a cave and has it located just to the south of A. B. Sawyer Park.

No site form is on file at KY OSA for site 15JF398, also known as Eight Mile House. However, a Kentucky Historic Resources Inventory form was found. The single-page form was completed by KHC in 1978 and records the site as only a "house" with "various historic materials". NRHP status is recorded as listed in the National Register as of March 26, 1976.

Site 15JF576, the Central State Cemetery, was reported initially by the University of Louisville in 1991, although revisions were made by KAS in 1998. The site consists of the historic cemetery as well as a prehistoric Paleoindian component based on a fragment of a Clovis projectile point recovered during the 1991 investigation. The cemetery consists of an earlier section that was identified by KAS in 1998. This section was likely used from the 1880s to the early 1900s. A newer section was identified by the University of Louisville in 1991. This section was used between the early 1900s and the late 1950s. A brick vault structure is also present. Very few *in*

situ headstones remain at the cemetery. Some are piled in the middle of the newer section. Stottman suggests the cemetery still contains hundreds of graves of former hospital patients, many of which remain unmarked and unknown (Stottman 1998).

As mentioned above, site 15JF642 was reported in 1995 by the KAS (Stokes 1995). The site, termed "Liar's Folley" is classified as a prehistoric open habitation without mounds site and was identified by sixteen positive shovel probes spread across 8000 square meters on an open ridge in E. P. "Tom" Sawyer State Park. Twenty-five artifacts were recovered, including 24 debitage and one prehistoric ceramic sherd, indicating a Woodland period occupation (Stokes 1995). No midden was observed during the investigation, although the investigators noted soil differences between the positive and negative probes, suggesting potential for intact deposits to be present at the site (Stokes 1995). Avoidance of the site or further archaeological evaluation was recommended.

Site 15JF659 is the Central State Site located in E. P. "Tom" Sawyer State Park, immediately adjacent to site 15JF576. The site form classifies the site as an historic farm, hospital, and cemetery with a small prehistoric component. However, no mention of graves at site 15JF659 was made in the description of the site on the site form or in the report prepared by KAS in 1998. Fragments of whiteware, semi-porcelain, clear glass, white granite, window glass, and drain pipe were recovered from the site, and brick was noted but not collected. Collected prehistoric material included 11 lithic debitage. This area was likely used as a dump for hospital trash and is considered an important data source for understanding late nineteenth and early twentieth century mental institutions (Stottman 1998).

Ormsby Cave (site 15JF664), is located along Beargrass Creek to the east of A. B. Sawyer Park. The site was recorded in 1998 by the KAS and was described as "one of the only caves in Jefferson County with prehistoric remains" (OSA State Archaeological Site Survey Form completed by M. Jay Stottman 1998). No material was collected during visitation to the site, although more than 10 chert flakes and numerous fragments of chert scatter were noted both within the stream running out of the cave and scattered within the compact soil within the cave's interior (Stottman 1998). At the time of the KAS site visit in 1998, no evidence of looting was observed.

15JF709 was also recorded by the KAS. As discussed above, site 15JF709 (Romara Place), is a historic farm/residence with a prehistoric component of unknown temporal affiliation. The site covers an estimated 8 acres of land along the Middle Fork of Beargrass Creek. The historic component consists of a nineteenth century brick domestic outbuilding that has been modified into a modern house during the early twentieth century; a stone building that has been modified into a garage; a stone smokehouse or meat house; an early twentieth century garage; and a swimming pool that dates from between 1801 and 1950. Archival research indicates the main house that once stood at the property burned in the 1930s. Subsurface investigations by KAS consisted of the excavation of 427 shovel probes and three test units. A total of 1507 artifacts were recovered including machine-cut nails, window glass, ceramic sherds, and bottle glass. Two features were documented--a builder's trench and a brick foundation. Although the site's NRHP eligibility was not assessed, the site was recommended for protection and avoidance due to its potential to contribute to the understanding of the history of Lyndon and issues related to socioeconomic status, plantation landscapes, slavery, tenancy, consumerism, diet, and health (Stottman 2004).

Table 2. Summary of Previously Reported Archaeological Sites within 2-km

Site	Reference	Summary	NRHP Recommendation
15JF158	Henderson (1989)	open habitation w/o mounds; Archaic	not recorded
15JF301	1975 site form	cave	not recorded
15JF398 Eight Mile House	**1978 site form**	**historic farm/residence**	**National Register Property**
15JF576 Central State Cemetery	DiBlasi (1991) Stottman 1998	historic cemetery/prehistoric open habitation w/out mounds	not assessed
15JF642 Liar's Folly	Stokes (1995)	open habitation w/o mounds	not recorded
15JF659 Central State Site	Stottman (1998)	historic farm/residence	not assessed
15JF664 Ormsby Cave	Stottman (1998)	cave	not assessed
15JF709 Romara Place	Stottman (2004)	historic farm/residence	not assessed

Cultural-Historic Records Check and Literature Review

Previous Cultural-Historic Investigations

The files at LMPC and KHC were reviewed to obtain information on cultural resources such as buildings, structures (bridges or stone fences), objects (art or monuments), cemeteries, and districts, present in the vicinity of the A. B. Sawyer Park project area. Such research is directed at determining the presence and ages of historic buildings that may be historically significant and eligible for or listed in the National Register of Historic Places (NRHP).

CIA received the results of a record check at KHC on June 16, 2011. Available records include KHC previously inventoried resources, NRHP-listed resources, and cultural-historic surveys and compliance reports. Few resources, including the site of the L. L. Dorsey Sr. House (JF432), Bellevoir (JF436), and cemeteries, have been documented near the APE; and none within it (**Table 3** and **Figure 4**). Bellevoir (JF436) is an Italianate house that is listed in the NRHP under Criterion C for its architectural significance. It was built by Hamilton Ormsby, grandson of an early pioneer, in the late nineteenth century after an early brick house burned on the property. In the 1910s, it became the center piece for Ormsby Village, a home for children until the 1970s. The house survives amid late twentieth century development.

CIA also reviewed the cultural-historic reports listed in **Table 4**. The previous survey related to A. B. Sawyer Park (Maas 2009) contributed to the development of the historic context herein.

Table 3. Previously Recorded Cultural-Historic Resources.

KHC No.	Name	Location	NRHP Eligibility
JF432	Site of L. L. Dorsey [Sr.] House	8600 LaGrange Rd.	demolished
JF436	Bellevoir-Ormsby Village	LaGrange Road at Whipps Mill Road	listed

Table 4. Previous Cultural-Historic Investigations.

Date	Report Title	Author
2009	Cultural Historic Survey of the Proposed A. B. Sawyer Greenway Whipps Mill Bike and Pedestrian Improvements, Louisville, Jefferson County, Kentucky	Maas
2004	Cultural Historic Survey for the Proposed Widening of Hurstbourne Lane (KY1747) from Linn Station Road to North of Shelbyville Road (U.S. 60), in Louisville, Jefferson County, Kentucky (5-344.00).	Spurlock
2001	Cultural Historic Survey for the Proposed Improvement and Reconstruction of the I-64/Hurstbourne Lane Interchange in Jefferson County, Kentucky (5-52.00). Prepared by Cultural Resource Analysts, Inc., Lexington, KY.	Baynard and Kirkwood
2006	Prefabricated Housing in the Jackson Purchase Cultural Landscape Region, 1900 to 1960.	Johnson
1990	Agriculture in Louisville and Jefferson County, Kentucky, 1800-1930, Multiple Property Listing.	Thames
1988	Suburban Development in Louisville and Jefferson County, 1868-1940.	Keyes et al.

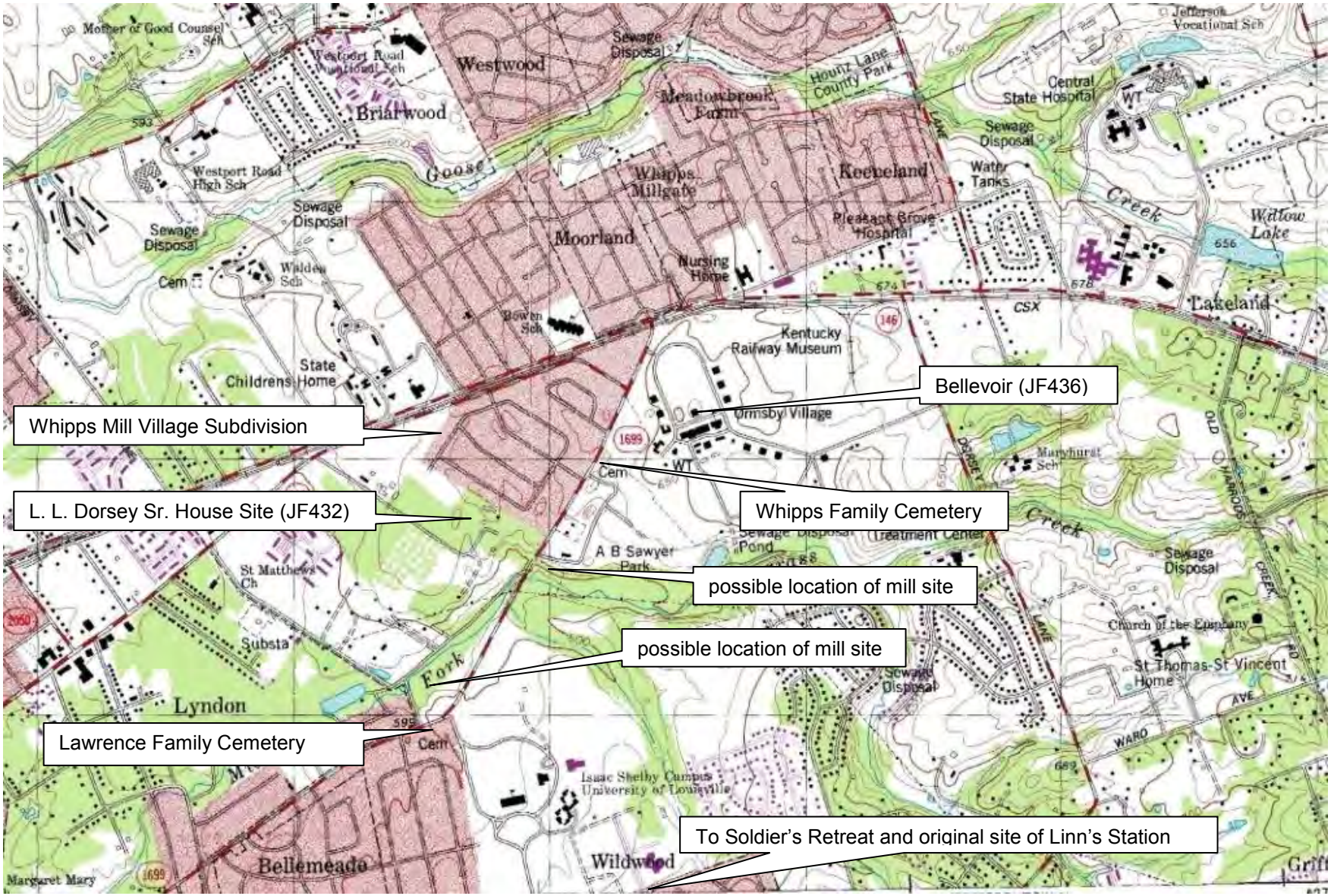


Figure 4. Cultural-historic properties and cemeteries within and near A. B. Sawyer Park.

Previously Unrecorded Cultural-Historic Resources

Previously unrecorded, the Whipps Mill Subdivision was built on the site of the L. L. Dorsey Sr. farmstead in 1953 and 1954. Richard Jett of the LMPC office indicated that this subdivision has not been surveyed but is likely eligible for listing in the NRHP because the developer used Gunnison prefabricated houses on its nearly 200 lots. Gunnison Magic Homes was founded by Foster Gunnison, a lighting engineering in Brooklyn, who illuminated the Empire State Building and the Waldorf Astoria. In the early 1930s, he worked with architects, engineers, and plywood experts to do for houses what Henry Ford did for cars as reported by *Forbes*. In 1935, he opened a factory in New Albany, Indiana that produced "the first commercially successful mass-produced home in the United States," according to the New York Times in his 1961 obituary. In 1944, the U.S. Steel Corporation purchased a controlling interest at which point Le Corbusier, famed Modernist architect and prefabrication proponent, approached the company about designing for them. It is uncertain what became of this offer, while Gunnison continued to oversee production. After his retirement in 1953, U.S. Steel bought his remaining shares and named the company United States Steel Homes Inc. The year of the purchase is the year Whipps Mill was developed. The company went on to produce an untold number of houses until the plant closed in 1974 (Lowry 2007). Whipps Mill Subdivision may be eligible under Criterion A and fits into an existing context on file at KHC “Prefabricated Housing in the Jackson Purchase Cultural Landscape Region, 1900 to 1960” (Johnson 2006).

Directly to the south of the APE, the University of Louisville, Shelby Campus, may be eligible for listing in the NRHP under Criterion C for its architecture. Such a determination requires further investigation of the mid-century Modern campus, which was first built to serve the Kentucky Southern College, a Baptist undergraduate liberal arts college. The school was among the first major modern non-residential developments near the project area built the same year the park was acquired. By 1969, it failed under financial strain and the University of Louisville took over (University of Louisville 2009).

Sawyer Park itself could be considered a cultural-historic resource as a landscaped site that is 50 years of age; however, it would likely not be recommended eligible for NRHP listing.

Cemeteries Records Check, and Literature Review

One cemetery lies within the park boundaries and two cemeteries lie within a 2-kilometer (km) radius. The Whips Cemetery lies within the park boundaries within the parking lot on Whipps Mill Road. This cemetery was visited during the site visit and discussed in **Section 5**. Cemeteries within the 2-km radius include the Lawrence Cemetery, located on the University of Louisville property and the Central State Cemetery, discussed below in **Section 2**.

Maps and Aerial Review

A series of historic maps and aerials were reviewed in relation to this project. The purpose of this research was to identify any former buildings, structures, roads, land use changes, and other relevant ethnic, social, and economic changes in the vicinity of the park. It should be noted that the maps presented below are for representative purposes only. The location of the project APE and scale are approximations and are based upon the location of main thoroughfares and waterways on the historic maps. It was not always possible to exactly align these courses, either due to poor resolution or scaling of the historic maps.

Table 5. Maps and Aerials Reviewed.

Date	Name	Publisher
1793	*Map of Kentucky, drawn from actual observations by John Filson.*	John Stockdal
1858	*Map of Jefferson County, Kentucky*	G. T. Bergmann, Surveyor
1879	*Atlas of Jefferson and Oldham Counties, Kentucky, from new and actual surveys*	D. G. Beers and J. Lanagan
1912 (reprinted 1920, 1941)	*Prospect Quadrangle, Kentucky: 15 Minute Series*	USGS
1913	*Louisville Title Company's (Incorporated) New Map of Louisville and Jefferson County, Kentucky, compiled from actual surveys, and official records.*	Louisville Title Company
1928	*Anchorage, Jefferson County, Kentucky: Including Lakeland-Ormsby Village, Military Park & Marcia.*	Sanborn Map Co.
1953-1954	*Whipps Mill Subdivision Plat Maps*	Rudy & Keel Civil Engineers (County Clerk)
1951, 1955, 1960, 1965, 1971, 1981, and 1987	*Anchorage Quadrangle, Kentucky: 7.5 Minute Series*	USGS
1997, 1998, 2000, 2003, 2006, and 2009	Aerial Photography, Jefferson County, Kentucky	LOJIC

John Filson's 1793 map of the county displayed the fledgling cities and early landowners in Kentucky and Indiana as well as it waterways and topography in a stylized manner. The project area was unsettled with the nearest outpost to the south at Linn's Station, a fortified camp.

Figure 5. Section of John Filson's 1793 map of Kentucky, showing the Falls region and stations along Beargrass Creek the last of which is Linn's.

Bergmann's 1858 map of Jefferson County depicts primary buildings, such as a business or residence, property boundaries and owners, roads, and waterways. By this time, the present-day park was surrounded by well-established farmsteads, run by gentlemen farmers dealing in livestock and show horses. Farms depicted immediately around the park include those of Leaven L. Dorsey [Sr.], Hamilton Ormsby, and Leaven Dorsey Jr. (nephew of the senior). The area lay within the Middletown Precinct and was serviced by that town located to the southeast. Shelbyville Road is identified as the Louisville and Lexington Turnpike and a rail line runs to the north.

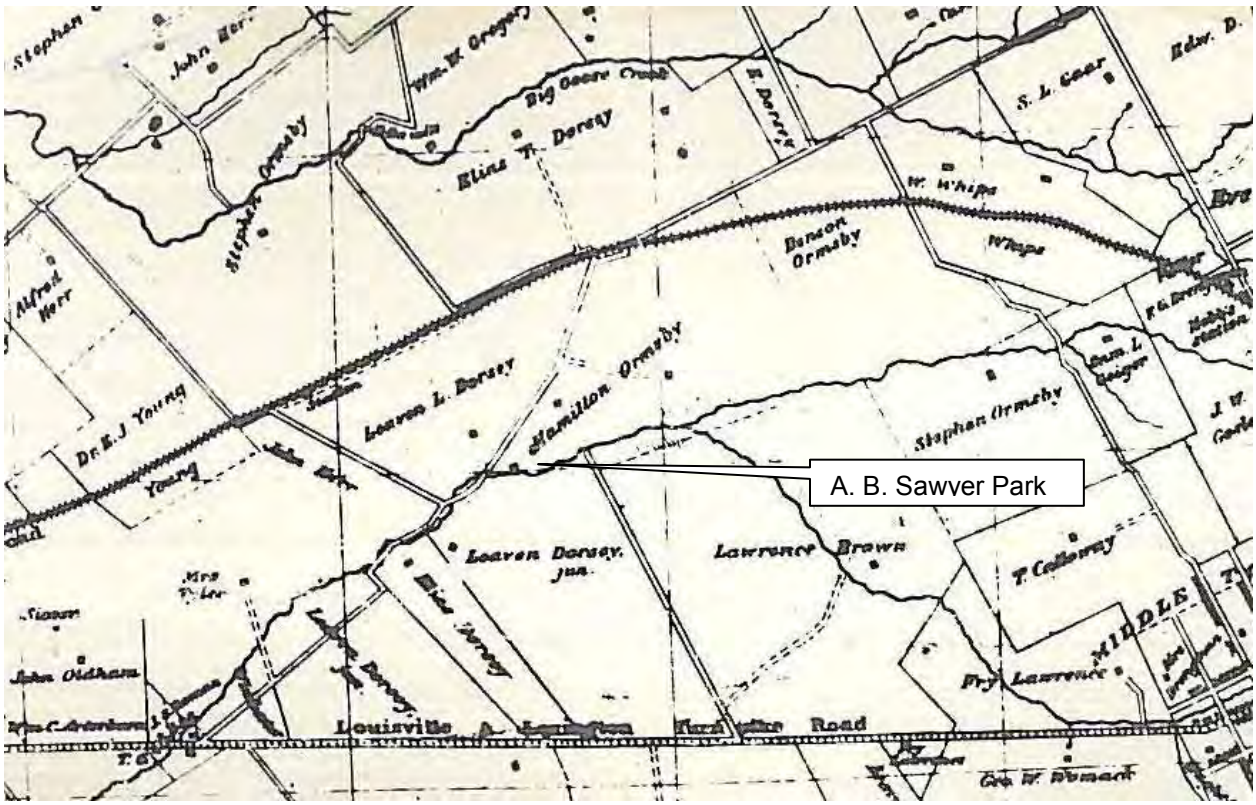


Figure 6. Section from G. T. Bergmann's 1858 map of Jefferson County, showing Ormsby and Dorsey land holdings near project area.

The 1879 atlas of the county depicts primary buildings, such as a business or residence, property owners but not boundaries, roads, and waterways. The area directly around the park at this time had changed little since mapping in 1858. The Ormsby and Dorsey families remain predominant; however, the name Keefe appears by a house on Ormsby property; no information regarding a Keefe family in the area appears in the 1880 census. The Louisville, Cincinnati, and Lexington Railroad follows the pre-existing tracks and Shelbyville Road is still operated as the Louisville and Lexington Turnpike. At the house of Hamilton Ormsby, several ponds are depicted near the present-day park. Their omission from the earlier map may have been an oversight or they may have been manmade for landscaping around his new mansion which replaced an older house. By this time, residents would have taken advantage of new conveniences in the recently established towns of Lyndon and Anchorage.

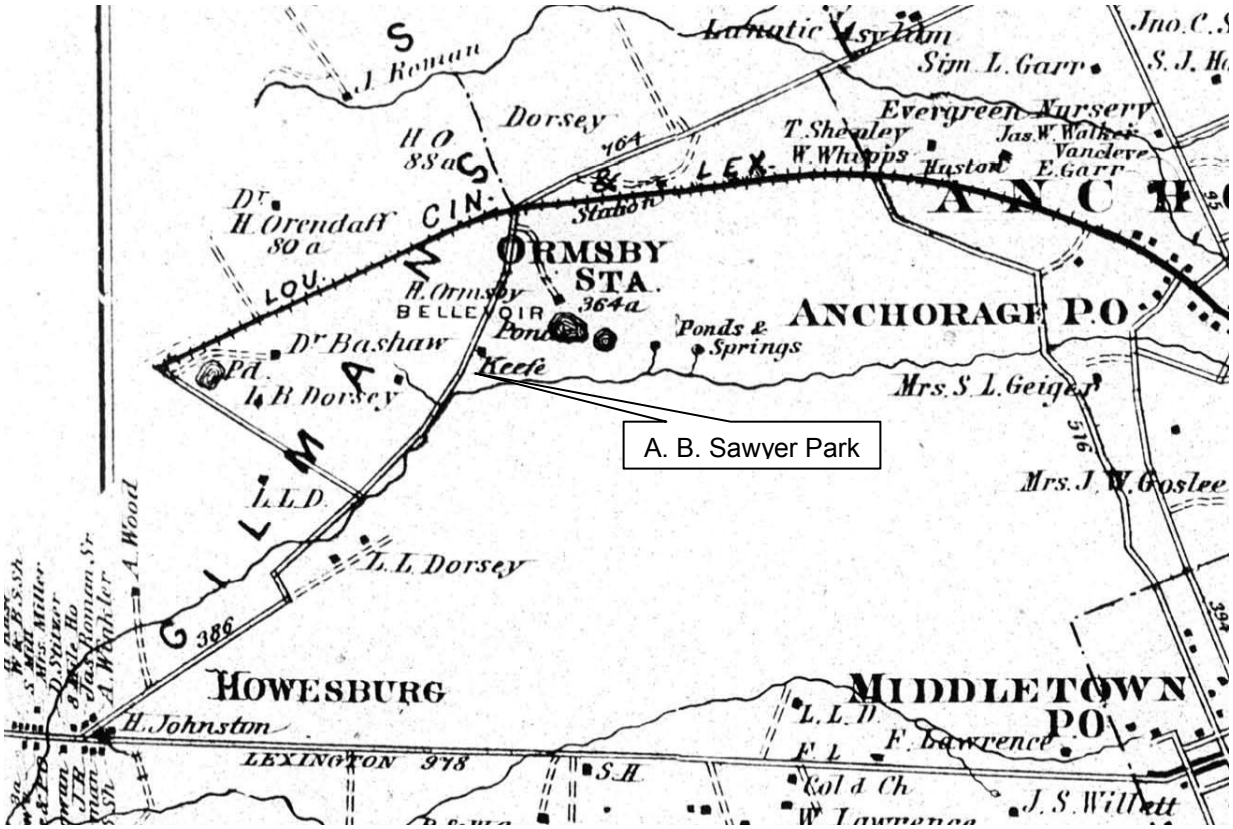


Figure 7. 1879 Beers and Lanagan atlas.

The 1913 atlas continues to show property owners but not buildings. It also shows boundaries, waterways and roadways, yet no topography. The strongholds of the nineteenth century appear to have moved on other than a few Dorsey members who maintained their successful horse farm.

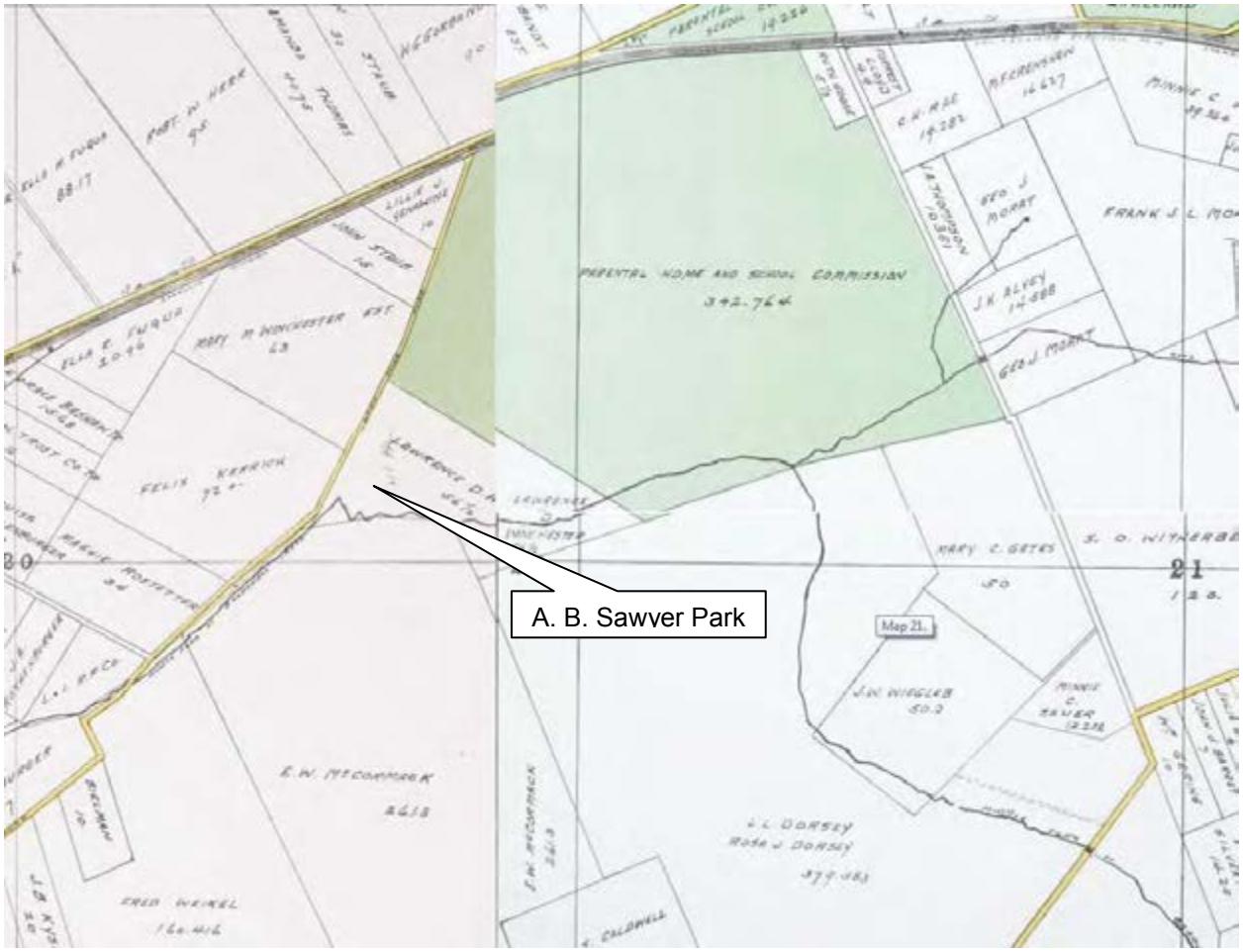


Figure 8. 1913 Louisville Title Company Map.

As populations climbed, mapping agencies were unable to continue depicting property owners easily, however, twentieth-century maps shows numerous other features, including improved topography lines and support buildings in addition to primary ones. Viewed in succession, USGS maps periodically updated between 1912 and 1987 (**Figure 9** through **Figure 15**) and aerial photography 1997 through 2009 (**Figure 16** and **Figure 17**) show dramatic rapid change from the agrarian society that dominated until the early to mid-twentieth century to the suburban one that grew out of post-World War II development.

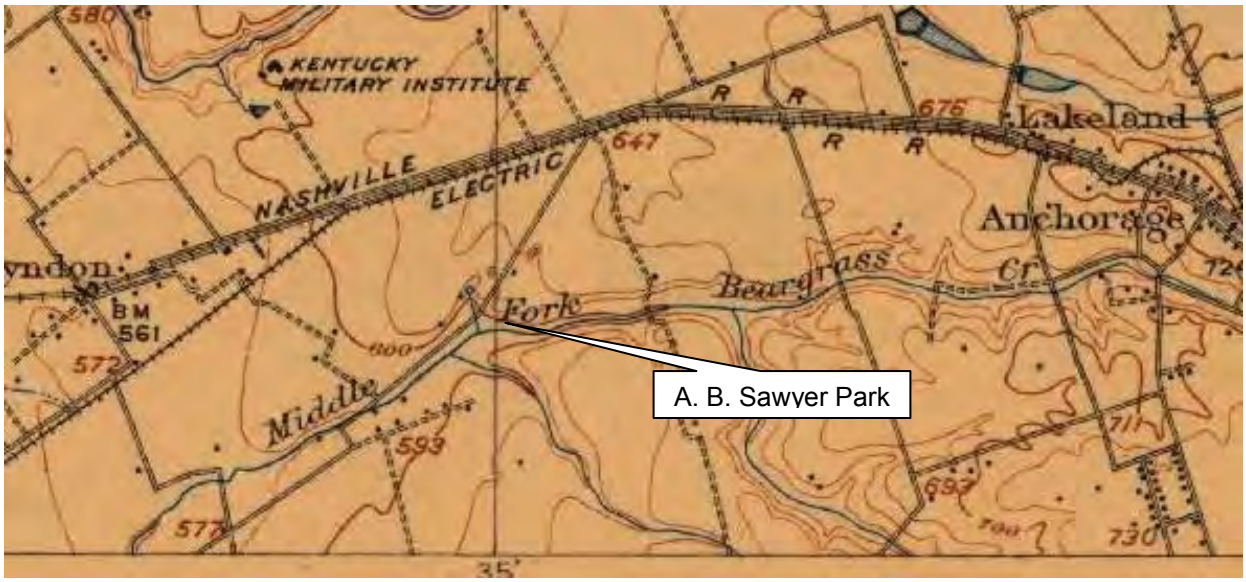


Figure 9. 1912 USGS 15' *Prospect* topographic quadrangle.

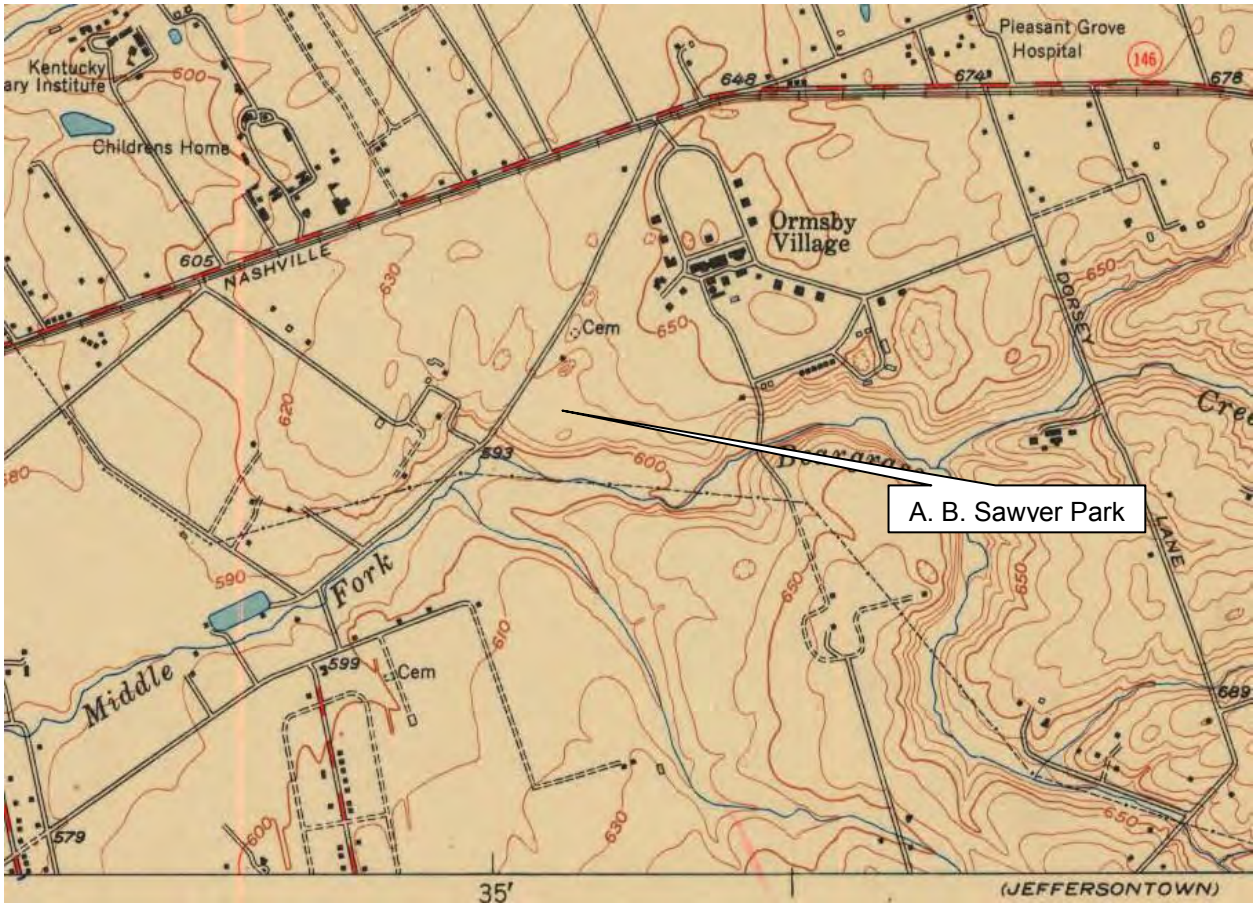


Figure 10. 1951 USGS 7.5' Anchorage topographic quadrangle.

Figure 11. 1955 USGS 7.5' *Anchorage* topographic quadrangle.

Figure 12. 1960 USGS 7.5' *Anchorage* topographic quadrangle.

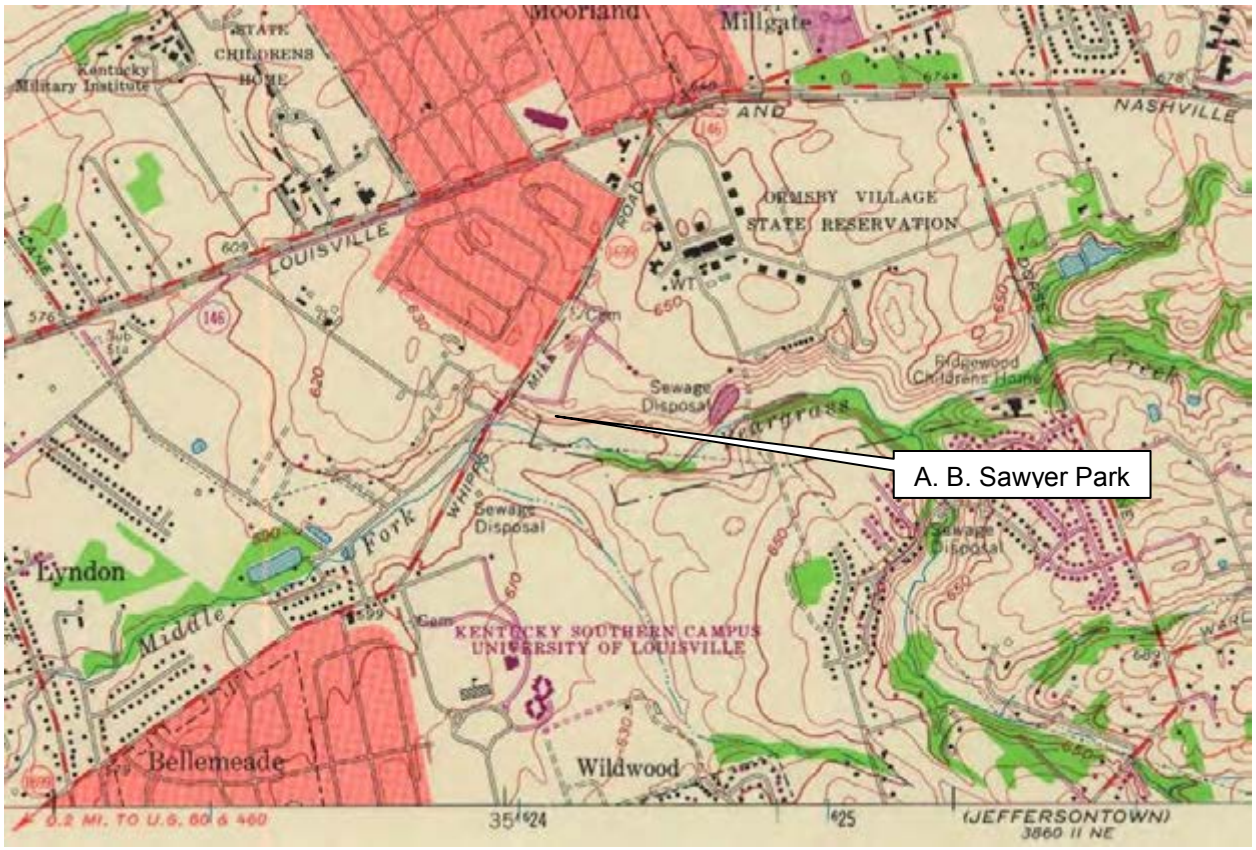


Figure 13. 1971 USGS 7.5' *Anchorage* topographic quadrangle.

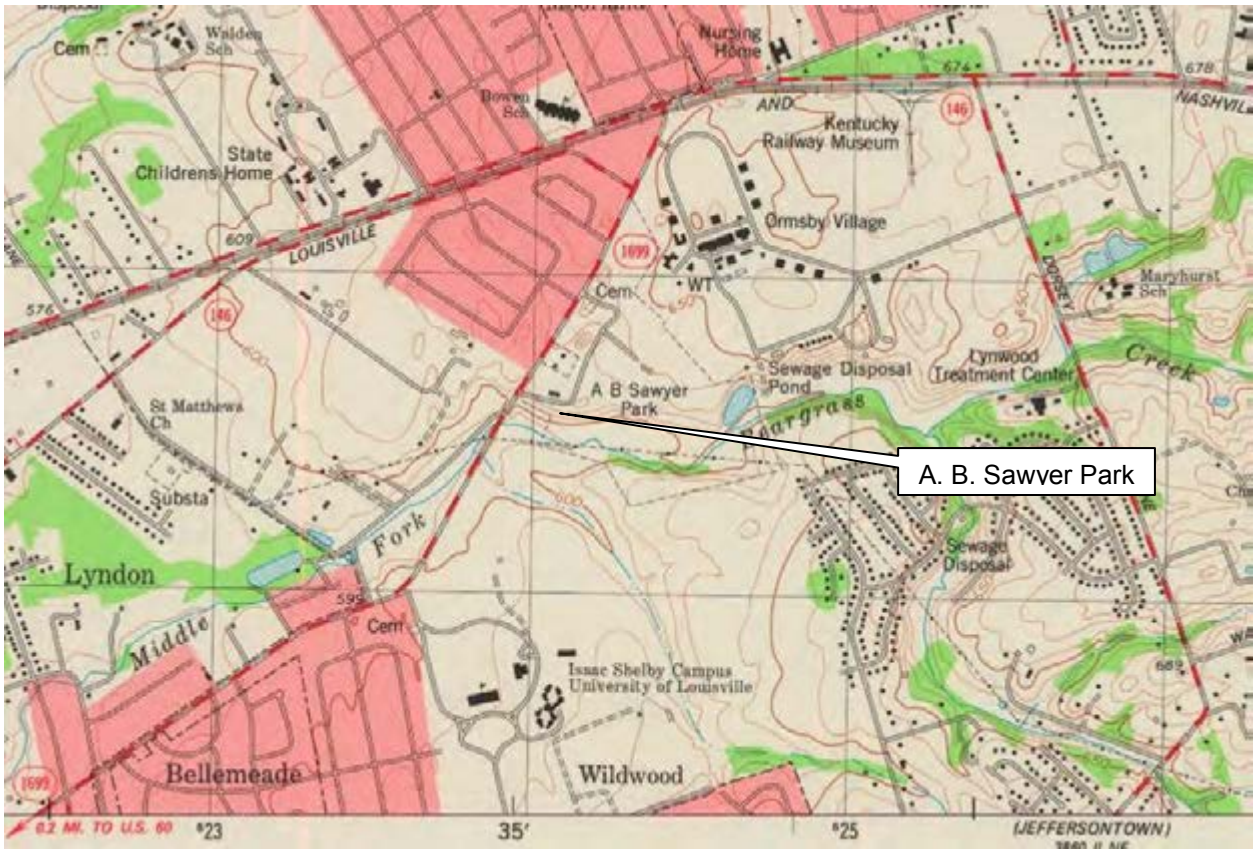


Figure 14. 1981 USGS 7.5' *Anchorage* topographic quadrangle.

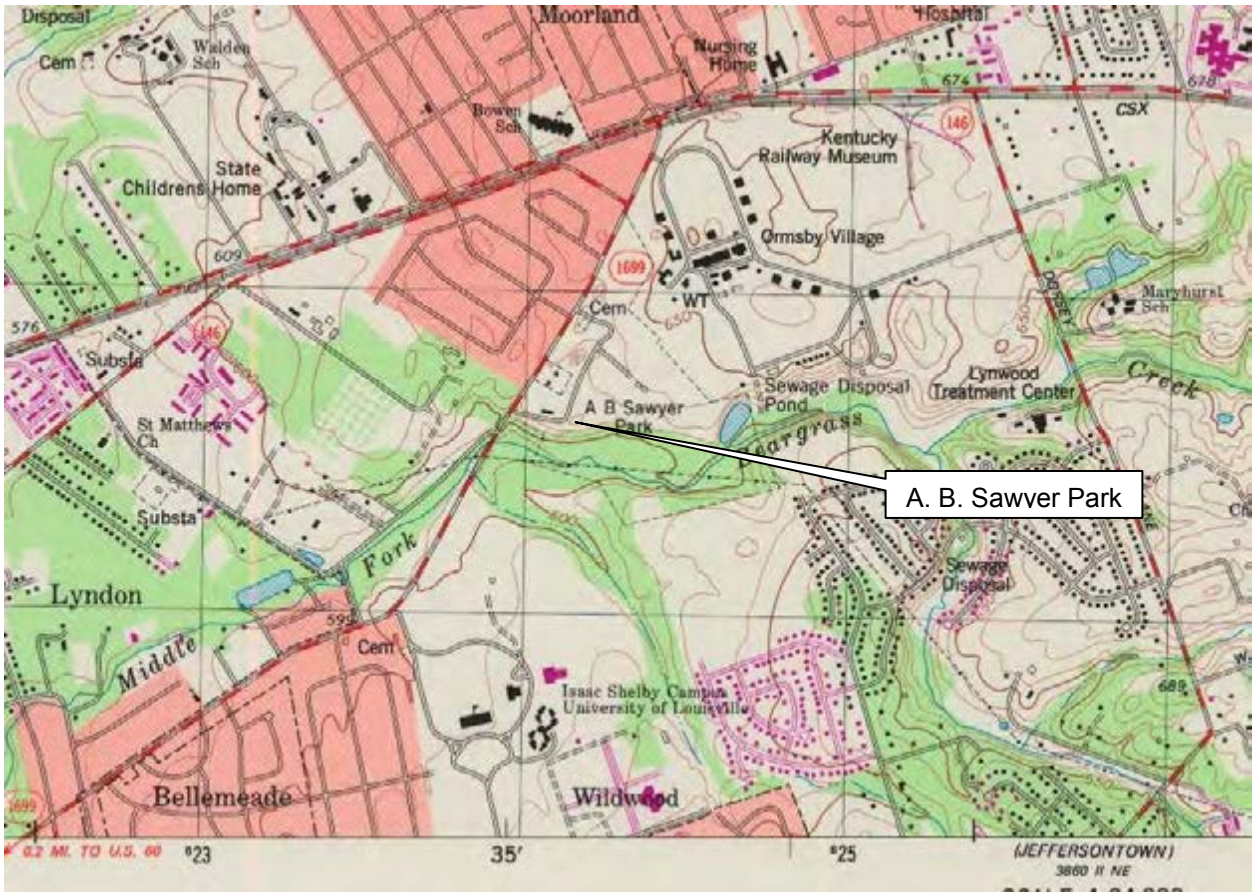


Figure 15. 1987 USGS 7.5' *Anchorage* topographic quadrangle.

Figure 16. 1997 LOJIC aerial photography, Jefferson County, Kentucky.

Figure 17. 2009 LOJIC aerial photography, Jefferson County, Kentucky.

3
ENVIRONMENTAL and CULTURAL CONTEXTS

The study of prehistoric and historic cultures extends beyond the study of the actual material remains of a society to provide an understanding of the ways in which that society interacted with its environment. Throughout time, the natural landscape has influenced human use, and was in turn affected by that use. This interrelationship is reflected in both the natural and cultural resources of the area.

The cultural landscape approach provides a framework for understanding the entire landuse history of a property. It is the foundation for establishing a broader context for evaluating the significance of cultural resources, because the significance of any given cultural resource is not determined in isolation. Rather, it is achieved by examining the entire context of the landscape and interrelationships among its constituent components.

The cultural landscape approach attempts to identify linkages between cultural and natural resources. It is based on the analysis of the spatial relationships between natural and human features on the landscape. By looking at the distributions of cultural resources and their correlation with environmental factors such as landform, vegetation, drainage, etc., patterns in the locations of these resources can sometimes be defined. These patterns can then provide for more efficient management of cultural resources by better predicting where such resources are likely to occur.

Environmental Context

The physical environment is one of many factors that influenced the cultural development of an area. An awareness of the natural setting and available resources of an area allows informed interpretations of cultural issues such as settlement patterns and sedentism as well as resource utilization and exploitation. The following environmental context provides data on regional ecological patterns such as floral distributions and communities, regional geomorphology, soils, and hydrology. The discussion is aimed at identifying those aspects of the natural environment that may have influenced the cultural development of the past landuse of the property.

Physiography

A. B. Sawyer Park lies in the Outer Bluegrass Physiographic province in southern Jefferson County (**Figure 18**). The park exhibits a karst topography and includes a series of sinkholes identified as cover-collapse sinkholes (Blair 2011). These extend along Whipps Mill Road on the northwestern border of the park. Elevations within the park ranged from 594 ft AMSL in the southeast corner to 649 ft AMSL in the northwest corner. In the northern and northwestern sections of the park, relief is characterized as level with some modifications to the topography through landscaping activities for the construction of ball fields and recreation facilities. Towards the south and southeast, there is a drop in elevation along a wooded slope down to the level floodplain of the Middle Fork of Beargrass Creek. The Middle Fork of Beargrass Creek, flowing east, defines the southern boundary of the park along an east-west axis. The drainage divide between the Beargrass Creek and Goose Creek watersheds lies to the north along the railroad.

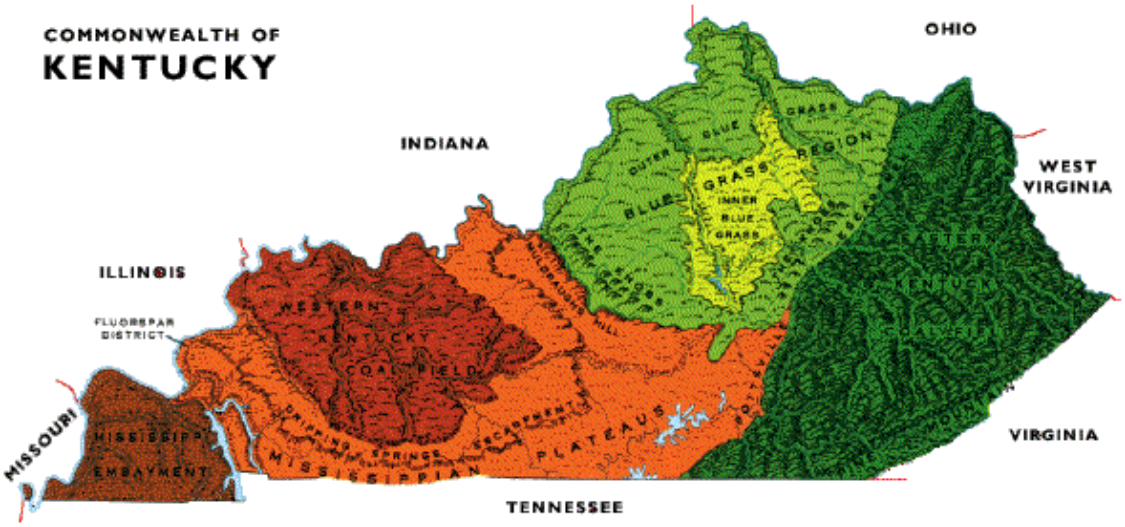


Figure 18. Physiographic regions of Kentucky.

The subsurface drainage basin underlying the park has been documented to be part of the A'Sturgus Station Spring basin, which extends southward near Oxmoor Mall. However, although the surficial watershed of the park is within the Beargrass Creek drainage, a study of the karst topography and stream flow within the Beargrass Creek drainage documented that subsurface drainage extends between the surficial watersheds (Blair 2011). This subsurface drainage divide appears to lie north of the railroad tracks.

One sinkhole within the park is large, approximately 30-x-50 m in diameter and situated between 612 and 628 ft AMSL, contains at its base a spring that emerges, travels approximately 25 m to the southwest, and then submerges within the sinkhole. This large sinkhole contains a smaller sink at its base that is steep sided, approximately 220-x-60 cm in size, 2.6 m deep, and contains a small cave at its base. In addition to this large sinkhole, an additional smaller sinkhole located approximately 126 m to the southeast is within the park boundary.

Connections between the sinks at A.B. Sawyer and areas surrounding the park would be significant to understanding historic and prehistoric landuse. Contemplating this possibility, contacts were made with a local family that has explored much of the subterranean network between a cave at E. P. "Tom" Sawyer Park to the northeast and further north. Mr. Henry Stambaugh, who had owned land at the location of the Springhurst development north of the park, had explored a vast network within a cave system linking Springhurst and E. P. "Tom" Sawyer Park. The network extends south and west of E. P. "Tom" Sawyer Park, but no connection to the A'Sturgus Station Spring basin could be verified.

Geological Resources

Identification of the underlying geological resources can provide information on past, present, and future landuse issues as well as the resources available to historic and prehistoric populations. In general, the geology of the park exhibits karst typography that has been termed well-developed (Blair 2011). Mapping for the area documents Devonian-aged Sellersburg and Jeffersonville Limestone as underlying the majority of the park (**Figure 19**). In the southern portion of the park, Silurian-aged Louisville Limestone extends along the Middle Fork of Beargrass Creek drainage. A number of sinkholes (in red) are noted throughout the area.

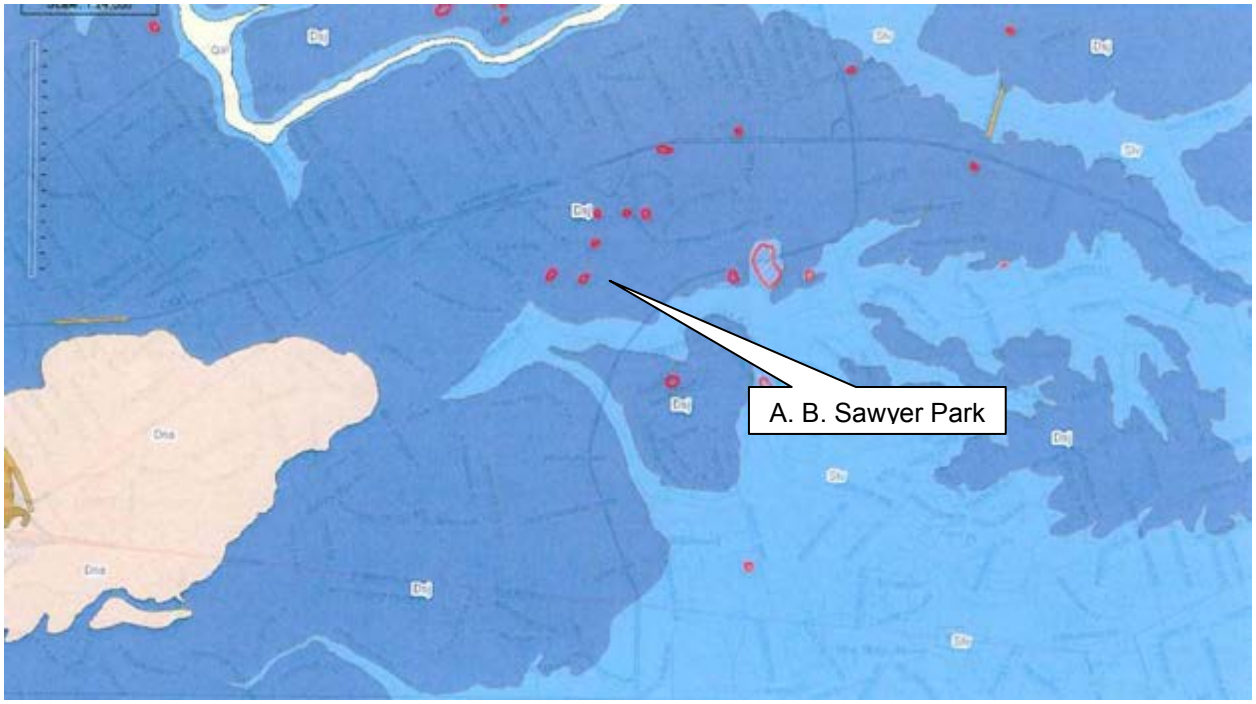


Figure 19. Geology surrounding A.B. Sawyer Park.

These beds provide a number of resources. Rockshelters along streams provide valued domestic sites. The karst topography provides many sinks with springs, which provided reliable water supply for historic and prehistoric populations. Many--A'Sturgus and, possibly, those at A. B. Sawyer Park—were preferred settlement locations throughout much of these periods. During modern times, however, these sites can be disadvantageous as well as advantageous locations. Sinkholes are deemed obstacles to development that must be filled. Often they are chosen as a spot into which refuse might be discarded. This and other events make sinkholes conduits for pollution. With regard to those sinks at A. B. Sawyer Park, the water may be contaminated from park activities or north across the railroad tracks. Safety also is an issue, particularly for a park environment.

Climate

Jefferson County lies within Udic moisture regimes, defined as 90 consecutive days of moist conditions within the soil profile (Buol et al. 1989; USDA-NRCS 2009). Within recorded history, average annual precipitation for the county is 113 centimeters (44.41 inches); 59 percent of this falls between April and October. The greatest one-day rainfall on record (7.22 inches) occurred in March of 1997. In the summer, the average temperature is 75.9°F. The daily average temperature is 85.9° F, however, and extremes can be as high as the 106°F that occurred in July of 1999. In the winter, the average temperature is 34.8°F, the average daily minimum is 26.1°F, and the most extreme temperature on record is -22°F, which occurred in January of 1994. The average snowfall is 17.4 inches. The greatest one-day snowfall on record is 15.5 inches, which occurred in January of 1997, and the greatest depth overall (19 inches) occurred in January of 1978. As the greatest one-day snowfall and the greatest one-day rainfall both

occurred in the early months of 1997, extensive flooding occurred in the first week of March 1997.

Climate fluctuations have varied from these ranges throughout history. From glaciation to the extended cold periods of the Little Ice Age (1350 to 1900 AD), to warm periods of the Hypsithermal (6200 to 2500 B.C.) and Medieval Warm Period (AD 800 to 1300), the levels of precipitation and temperature have been both higher and lower than today's average (American Geophysical Union 1995). Patterns are affected by variation between air masses, particulate matter in the air, and variations in the Earth's orbit (Riedel 2008; Selby 1985; Zielinski et al. 1994).

Soils

The Jefferson County Soil Survey report was reviewed for soils present within the project APE (**Figure 20**). The project location lies within the broad Crider-Caneyville-Nicholson soil associations, which would have been the soil series to naturally develop within the project APE (USDA-NRCS 2011). These develop from limestone and dolomite residuum and in the overlying loess. As presented in **Table 6**, however, approximately 75 percent of the APE consists of the Urban land-Udorthents complex. These are soils that have been altered during construction or development activities. Although altered, it is not certain to what extent natural soils—and any archaeological deposits that may exist within them--have been compromised.

Figure 20. Soils mapped for project location (USDA-NRCS 2011).

Table 6 . Soils within the Project APE

Soil Symbol	Name	Approximate Percent of APE
UahC	Urban land-Udorthents complex, 0 to 12 percent slopes	74.2
UagB	Urban land-Udarents complex, wet substratum, 0 to 6 percent slopes, rarely flooded	16.4
CcF2	Caneyville-Rock outcrop complex, 12 to 60 percent slopes, eroded	9.4
CrB	Crider silt loam, 2 to 6 percent slopes	0
UakF	Urban land-Udorthents complex, smoothed, 0 to 50 percent slopes	0
UmC	Urban land-Alfic Udarents complex-Crider complex 0 to 12 percent slopes	0

Flora and Fauna

As the glaciers retreated farther north, average temperatures rose and the mixed hardwood forests in south central Kentucky were gradually replaced by Oak-Hickory forests. By 5,000 years ago, the transition was complete (Delcourt and Delcourt 1981).Oak-Hickory Forests would have been found in warm exposed areas; and Beech-Maple Forests would have occurred in cool, moist shaded areas; and along streams and river valleys, Northern Riverine Forests would have been present (Kricher 1988:72).

Oak-Hickory Forests commonly contain a wide variety of flora and fauna. The trees that may have been present prehistorically include oaks, hickories, American chestnut, dogwood, sassafras, hop hornbeam, and hackberry. Tulip trees, elm, sweetgum, shagbark hickory, and red maple also may have been present, especially in moist areas. The understory may have contained mountain laurel, a variety of blueberries, and deer berry among other plants. Herbs may have included wintergreen, wild sarsaparilla, wood-sorrel, mayapple, rue-anemone, jack-in-the-pulpit, and trout lilies to name a few (Kricher 1988:57). The American chestnut, a common species during prehistoric times as a canopy tree, has been reduced to an understory tree by a blight introduced into North America in historic times (Kricher 1988:58).

According to conclusions made by Delcourt and Delcourt (1997) and Lorimer (2001), however, the present and predicted forest types may not have existed during prehistoric times due to intentional management practices by Native Americans. Fire was used to clear bottomland for agriculture, to create habitat for meadow or edge-dwelling species, and to clear the underbrush surrounding a settlement. Another activity practiced by native groups was the tending of patch resources such as river cane (*Arundinaria gigantea*). As proposed by Delcourt (2002), stands of river cane today could be a relic community of cane tended by Native American groups. In addition to river cane, Delcourt (2002) suggests Native Americans may have tended stands of mast resources as well. These resources might have included hickory, walnuts, butternuts, and acorns.

Grasses and sedges would have been important to Native American groups for use as cordage, nets, baskets, and mats. Other perennials such as smartweed, goosefoot, and amaranth are found today in areas that are not farmed. Many of these species also were present prehistorically and were utilized to various degrees as food, construction material, fuel, and cordage. Some of the most important botanical materials to native populations were these weedy plants that grew in the disturbed soil surrounding their camps. These were gathered for many years and, as a result, became domesticated. They are summarized in **Table 7**.

Table 7. Indigenous Plants that Became Domesticated by Prehistoric Native Americans

Plant	Early Date	Site	Source
marshelder/sumpweed (*Iva annua*)	4000 BP	Napoleon Hollow, IL	Smith 1989
Sunflower (*Helianthus annuus*)	3500 BP	Higgs, TN	Smith 1989
Chenopodium (*Chenopodium berlandieri*)	3500 BP	Cloudsplitter, KY	Riley et al. 1990
Squash (*Cucurbita pepo ssp ovifera*)	2850 BP	Cloudsplitter, KY	Smith 1989

Other species important to native groups were species that were domesticated elsewhere—such as Mexico or Peru. These include bottle gourds (*Lagenaria siceraria*), pumpkins (*Cucurbita pepo ssp pepo*), maize (*Zea mays*), and beans (*Phaseolus vulgaris*).

A wide variety of fauna would also have been present from the early Holocene to early historic times. Mammals that thrived in the forested environment may have included the gray squirrel, fox squirrel, whitetail deer, raccoon, beaver, woodchuck, and a variety of mice, striped skunks, mink, otter, fox, black bear, and bobcats. Bird species would likely have included red-tailed hawks, ruffed grouse, great horned and eastern screech owl, pileated woodpecker, wild turkeys, and blue jay among others (Kricher 1988:12). A variety of ducks and geese also could have been present during the Fall and Spring migrations. Archaeological data has demonstrated that the faunal species most important to native populations as food sources included mastodonts during the early Paleoindian period; fish and shellfish during the Archaic period; white-tailed deer and wild turkey during numerous periods; and raccoon during the later periods. Studies of various Indiana and Kentucky shell mounds have yielded remains suggesting that major fish populations used prehistorically were the drumfish (*Applodinotus gruniens*) and catfish (*Ictalurus sp.)*, which fed upon the mussel populations.

The local fauna today, as well as in the past, is expected to include such small mammals as the red fox, groundhog, cottontail rabbit, opossum, raccoon, and squirrels as well as many species of birds, including turkey and waterfowl. Other fauna that are now gone from the area included the black bear, bobcat, elk, wolf, passenger pigeon, and buffalo. Williams (1882:67) purports early accounts put the number of buffalo at area salt licks at 7,000 to 8,000. The populations of mink, fox, beaver, otter and most other animals have been reduced, due to the loss of habitat and hunting. The decimation of the beaver and otter populations occurred as early as 1819, only 27 years after statehood (Williams 1882:67-68).

Prehistoric Context

Cultural change is a slow and continual process; therefore, archaeologists typically divide the long period of human history into regionally distinct cultural periods. As discussed below, archaeologists recognize four broadly defined prehistoric periods for the Eastern Woodlands. The sections below review the prehistoric cultural groups that may have been present in the project APE over the past 12,000 years. Each group occurred during specific periods of time and generally ranged across the Eastern North American woodlands. The temporal and regional variants within the Falls region, however, must still be discovered, analyzed and interpreted. Data recovered during the present project will aid these investigations. Overall, trends evident from the earliest (Paleoindian) to the latest (Mississippian) period include an increase in sedentism, increase in social complexity, and increase in dependence on agriculture.

Paleoindian Period (10,000 to 8000 B.C.)

Although the lithic material associated with Paleoindians is the earliest dated material recovered from humans in North America, it is also one of the most impressive. As with many cultural adaptations, the technology and the Paleoindians themselves had a long history of evolution in the Old World before migrating to the New World. Artifacts found in both Old World and New World assemblages include fluted points, polyhedral cores, prismatic blades, and the *piéces esquillèe*. Additional artifacts associated with the Clovis culture include an extensive unifacial toolkit that included scrapers, gravers, and *limacés* (slug-shaped unifaces) (Dragoo 1973).

As the wealth of data from Paleoindian sites have accumulated, it has become apparent that groups prior to Clovis lived in North American. From Cactus Hill in Virginia, Meadowcroft Rockshelter in Pennsylvania, and Pendejo Cave in the Southwest, dates prior to 10,000 B.C. have been documented. With regard to the Falls of the Ohio region, however, no conclusive evidence for pre-Clovis populations has been documented so researchers follow the Paleoindian subperiods defined by Tankersley (1996): Early Paleoindian, Middle Paleoindian, and Late Paleoindian. Evidence for pre-Clovis occupations may lie within the 20,000 year old Tazewell deposits along the Ohio River or along the Salt River drainage.

Early Paleoindian (9500 to 9000 B.C.). The Early Paleoindian period is represented by magnificent Clovis spear points, polyhedral cores, and prismatic blades. Subsistence included megafauna such as the mammoth within prairie habitats and mastodons within forested habitats. Although there is scant archaeological evidence of Paleoindian social complexity, following arguments by Wright (2000), subsistence strategies that included procuring quantities of meat larger than one or two families could use quickly suggest higher levels of group cohesion and social complexity. Within Jefferson County, mammoth and mastodon remains have been found in Wisconsinan gravel deposits at depths between three and eight meters (Granger and DiBlasi 1976:20). The earliest Paleoindian occupation may likely lie therein.

Middle Paleoindian (9000 to 8500 B.C.). The Middle Paleoindian period is represented in the Southeast by Cumberland, Beaver Lake, Quad, and Suwannee projectile point/knives (PPK). During this subperiod, local raw materials were chosen more often. Perhaps related to this expanded use of material type, reduction strategies included bipolar reduction. Artifact types associated with the Middle Paleoindian include *limacés*, and scrapers and gravers exhibiting a spur or protrusion. Longworth-Gick (15JF243) is one site within Jefferson County that contained evidence of Middle Paleoindian occupation (Boisvert et al. 1979).

Late Paleoindian (8500 to 8000 B.C.). The Late Paleoindian Period is represented by side-notched points such as Dalton. It is during this subperiod that the greatest change in mobility and diet occurred. During this subperiod, diet appears to have become even more varied as the climate became more temperate. Although some rockshelter sites contain evidence of Early Paleoindian Clovis occupations such as at Miles Rockshelter Site 15JF671 (Bader et al. n.d.) and Wolfe Shelter Site 15CU21 (Lane et al. 1995), the Dalton culture is often reported to be the first to routinely take advantage of rockshelters (Tankersley 1996; Walthall 1998).

Many items that were found in later prehistoric periods have not been recovered from Paleoindian contexts due to preservation. Cultural traits represented by that material culture were also assumed to be absent from the Paleoindian repertoire. Artifacts of botanical remains and bone or ivory ornamentation are some examples. Paleoindian material recovered from sites with better preservation such as rockshelters, bogs, and springs, however, changed the picture of Paleoindian cultural adaptations.

Subsistence strategies of the Paleoindian populations have also become more complex as more data have been analyzed. Although often portrayed as relying predominantly on megafauna such as the mastodonts (some evidence comes from Loy and Dixon 1998), data from sites with optimal preservation reveals a more complex story. From the earliest sites such as Cactus Hill, the exploitation of game such as rabbit, bear, deer, and elk was documented by blood residue analysis (NPS 2007a). Data from Meadowcroft Rockshelter suggest possible botanical resources used by Paleoindians included hickory, walnut, and hackberry (Carr, Adovasio, and Pedler 2001). As noted previously, as rockshelters were chosen as habitation

sites more often during the Late Paleoindian time, data revealed a greater variety of patch resources were exploited than previously realized, particularly non-migratory forest-dwelling species such as squirrel and turkey or edge-dwelling deer (Walthall 1998).

The 2008 Preservation Plan reports 73 Paleoindian sites have been documented for the Salt River Management Area; 45 more than reported in the previous version (1990) and now the second highest in the state (Maggard and Stackelbeck 2008). Many of these were reported by Ray in 2003 during an intensive investigation which focused on Paleoindian information Central Kentucky. As a result, the densest concentrations of Paleoindian sites in the Salt River Management Area are located along the Upper Rolling Fork and Beech Fork Rivers. Site types represented by the Paleoindian sites in the Salt River Management Area include open habitation sites such as Longworth-Gick (15JF243) and rockshelters such as Miles Rockshelter (15JF671), Howe Valley Rockshelter (15HD12), and 15ME32 (**Table 8**). Based on this data, Paleoindian sites may be encountered in area rockshelters or buried in floodplain deposits, although sinkholes have been noted for Paleoindian site location.

Table 8. Sites with Paleoindian Evidence within the Salt River Management Area

Site	Site Type	Watershed	Diagnostics	Reference
Longworth-Gick (15JF243)	open habitation	Ohio River	Cumberland PPK	Boisvert et al. 1979:282
15MD402	open habitation w/mound	Salt River	Clovis	Bader 2001
Howe Valley Rockshelter (15HD12)	rockshelter			Tankersley 1990
15ME32	rockshelter			Tankersley 1990
Miles Rockshelter (15JF671)	rockshelter	Cedar Creek, tributary to Floyd's Fork	Clovis PPK	Bader et al. n.d.

Archaic Period (8000 to 900 B.C.)

Over the course of the Archaic period, populations developed new cultural traits and adaptations, including the use of pottery and use of seed and grain crops. A more sedentary lifestyle can be interpreted from the use of heavy stone bowls and storage pits during this period. Three subperiods have been defined for the Archaic Period: Early Archaic (8000 B.C. to 6000 B.C.), Middle Archaic (6000 B.C. to 3000 B.C.), and Late Archaic (3000 B.C. to 900 B.C.).

Early Archaic (8000 to 6000 B.C.). A number of new styles of projectile points suggest regional cultural growth during the Early Archaic. Diagnostic projectile point types include Kirk Corner-notched, Charleston Corner-notched, and LeCroy Bifurcate. Beveling along blade edges, grinding along basal edges, and serrations along margins are common. Material types might include high-quality Galconda/Harrison County chert for Charleston Corner-notched projectile point/knives (Bader et al. n.d.) or Muldraugh/Knobs chert for the Kirk Corner-notched projectile point/knives (Bader 2001).

Hunting gear included the atlatl. Although the portions made of antler and wood deteriorate too rapidly to recover from most archaeological deposits, the lithic bannerstones do not. Having had much labor and energy put into their manufacture, these items also were often items of trade or tribute. In addition, from sites such as Windover, Florida where preservation was exceptional, the Early Archaic assemblages had also included bone projectile points, the antler atlatl hooks, and wooden canoes (NPS 2007b). The Early Archaic component at the Ashworth Rockshelter (15BU236) in Bullitt County yielded bone needles as well as an antler pressure flaker (Jefferies 1990).

A number of sites in the region provide comparative data for Early Archaic movements (**Table 9**). According to Fenton and Huser (1994), Early Archaic sites in southwestern Jefferson County are most likely deeply buried along Ohio River terraces with elevations ranging from 440 to 445 ft AMSL. In southern Jefferson County, Early Archaic deposits might be found within large floodplains of Floyds Fork or within rockshelters. Human remains may be encountered within these deposits.

Table 9. Sites with Early Archaic Components in the Region

Site	Site Type	Watershed	Diagnostics	Reference
15JF138	open habitation		Kirk CN	Granger and DiBlasi 1975
Ashworth Rockshelter (15BU236)	rockshelter	Floyd's Fork	Ashworth CN	DiBlasi 1981
McNeeley Lake (15JF200)	rockshelter	Pennsylvania Run, tributary of Floyd's Fork	Charleston CN Kirk	Granger 1985
Durrett Cave (15JF201)	rockshelter -cave	Pennsylvania Run, tributary of Floyd's Fork	Charleston CN Kirk	Granger 1985
Cooper Cave (15JF537)	rockshelter -cave	Pennsylvania Run, tributary of Floyd's Fork	Charleston CN Kirk CN	Bader et al. n.d.
Miles Rockshelter (15JF671)	rockshelter	Cedar Creek, tributary of Floyd's Fork	MacCorkle Thebes	Bader et al. n.d.
Longworth-Gick (15JF243)	open habitation	Ohio River	Kirk LeCroy Kanawha	Boisvert et al. 1979:282 Collins and Driskell 1979

CN=Corner-notched

Middle Archaic (6000 to 3000 B.C.). During the Middle Archaic period, the climate became warmer and drier than today. Known as the Hypsithermal, this climate change led to vast changes in ecological conditions. Species that may have held on since glaciation or that had expanded into riskier microhabitats would have died out. Prairie ecosystems would have expanded eastward into a larger portion of Kentucky; relic communities from the expansion of prairie habitats during the Hypsithermal still exist. Most pertinent to the current project location, areas surrounding sinkholes may have attracted more settlement during the Middle Archaic.

Due to this environmental change, the natural resources available to the Middle Archaic people changed, leading to a marked change in residency and subsistence from the Early Archaic. This period of restricted natural resources gave rise to more permanent settlements, one indication of which is the presence of storage pits. Parry and Kelly (1987, in Andrefsky 2005) propose other clues in the lithic assemblage that indicate increased sedentism: less reliance on formal tools, and greater use of retouch and expedient-use tools. Middle Archaic lithic assemblages fit this model.

Subsistence patterns also changed during this period of climate change. Across the Eastern North American Woodlands, Middle Archaic populations can be identified by their extensive exploitation of shellfish. Shell mounds and shell-laden horizons, in addition to the appearance of netsinkers and fishhooks in the Middle Archaic toolkit, document this change to riverine resources. In addition, mortars and pestles document the processing of mast resources such as walnuts and hickory.

Diagnostic projectile point types of the Middle Archaic period include Kirk Stemmed, White Springs, Stanly, Matanzas, and Morrow Mountain. Additional items in a Middle Archaic assemblage might include woven fabrics, atlatls, bone and antler tools, awls, red ocher, marine

shell, and copper. Burials of canine companions have been documented (Lewis and Kneberg 1958).

Rockshelters and lowlands near streams are expected Middle Archaic site locations within the area. According to Fenton and Huser (1994), Middle Archaic sites also occur in surficial deposits along ridgetops as well. Based on evidence from tributaries of Floyd's Fork, a clustering of occupations within the same drainage is also expected. Sites in the area containing a Middle Archaic component are listed in **Table 10**.

Table 10. Sites with Middle Archaic Component in Southern Jefferson County, Kentucky

Site	Site Type	Watershed	Diagnostics	Reference
15JF143	open habitation	Pond Creek	Big Sandy	Granger and DiBlasi 1975
15JF214	open habitation	Pond Creek	Big Sandy	Granger and DiBlasi 1975
Miles Rockshelter (15JF671)	rockshelter	Cedar Creek	Matanzas Big Sandy II	Bader et al. n.d.
McNeeley Lake (15JF200)	rockshelter	Pennsylvania Run	Big Sandy Merom Brewerton Salt River SN	Granger 1985
Durrett Cave (15JF201)	rockshelter	Pennsylvania Run	Salt River SN Big Sandy	Granger 1985
Rosenberger (15JF18)	open habitation	Ohio River		Collins and Driskell 1979
Villiers (15JF110)	open habitation	Ohio River		Collins and Driskell 1979
Spadie (15JF14)	open habitation	Ohio River		Collins and Driskell 1979

Late Archaic (3000 to 900 B.C.). During this period, populations increased, maintained even more permanent settlements, and developed new technologies. In the Southeastern United States, the first evidence of pottery, a fiber-tempered ware, can be attributed to Late Archaic groups. In the Falls of the Ohio region, diagnostic projectile point/knives include McWhinney, Karnak, Merom, Bottleneck, and Ledbetter. Raw materials used for these were usually poor-quality, local materials. A variety of groundstone tools have been recovered, including three-quarter grooved axes. Bone and antler tools are well represented from Late Archaic sites, and include atlatl hooks, fishhooks, awls, pins, and antler projectile points. The extensive trade/tribute networks that were maintained as evidenced by the recovery of steatite, copper, and marine shell at Late Archaic sites suggest stronger leadership. Social stratification is also suggested by more extensive mortuary practices, such as found at the KYANG Site (15JF267).

Subsistence during the Late Archaic included oily and starchy seed crops such as lambsquarters (*Chenopodium berlandieri* Moq. ssp. *jonesianum*), sunflower (*Helianthus annuus* var. *macrocarpus*), and ragweed (*Ambrosia trifida*) (Crites 1993; Gremillion 1995; Riley et al. 1990). Squash (*Cucurbita pepo* ssp *ovifera*) also became domesticated. Within the Falls of the

Ohio region, archaeological evidence for the diet of Late Archaic peoples has come from sites such as Lone Hill (15JF562/15JF10), Arrowhead Farm (15JF237), and Old Clarksville (12CL1). Floral resources included mast resources such as black walnut, butternut, and hickory. Freshwater resources included *Rangia sp*, an introduced snail species from the lower Mississippi Valley, drumfish (*Applodinotus grunniens*), and catfish (*Ictalarus sp.*) (Janzen 1971).

Late Archaic sites include a diverse range of types, including shallow, upland, lithic scatters; hillside rockshelter/cave sites; and deep middens along the major rivers (**Table 11**). Janzen (1977) proposed a settlement pattern of seasonal migrations between ecosystems. Granger (1988) follows this out and proposes that groups timed their migrations to be near the Ohio River for spring fish runs, used sites such as Lone Hill, KYANG, and Minor's Lane during the summer and fall, and, in southwestern Jefferson County, made forays into the Knobs to acquire fresh supplies of Muldraugh/Knobs chert. Janzen (1977) also proposes that Late Archaic subsistence strategies were scheduled in such a way as to enable the exploitation of several microenvironments, which thereby reduced the need for seasonal movement and led to increased sedentism. In addition to the storage pits typical of the Middle Archaic period, Late Archaic sites included features such as rock hearths and dark middens--further evidence of the decline in mobility.

Table 11. Selected Sites with Late Archaic Components in Jefferson County, Kentucky

Site	Site Type	Watershed	Diagnostics	Reference
Miles Rockshelter (15JF671)	rockshelter	Cedar Creek	McWhinney Turkey-tail	Bader et al. n.d.
McNeeley Lake (15JF200)	rockshelter	Pennsylvania Run	McWhinney (Rowlett, KYANG Stemmed) (n=26)	Granger 1985
Durrett Cave (15JF201)	rockshelter	Pennsylvania Run	McWhinney (Rowlett)	Granger 1985
Minor's Lane	open habitation	Pond Creek		Granger 1988:168; Janzen 2008
KYANG (15JF267)	open habitation	Pond Creek	McWhinney (Rowlett)	Bader and Granger 1989; Granger 1988:168
Lone Hill (15JF562/15JF10)	open habitation	Pond Creek	McWhinney	Bader 2007; Janzen 1977, 2008
15JF674	open habitation	Pond Creek		Kreinbrink 2005
Arrowhead Farm (15JF237)	open habitation	Ohio River		Mocas 1976
Rosenberger (15JF18)	open habitation	Ohio River	McWhinney, Merom-Trimble, and Brewerton-like	Collins and Driskell 1979; Jefferies 1990
Villiers (15JF110)	open habitation	Ohio River	Merom-Trimble	Collins and Driskell 1979; Jefferies 1990
Spadie (15JF14)	open habitation	Ohio River	Lamoka Brewerton-like	Collins and Driskell 1979; Jefferies 1990
Hornung (15JF60)	open habitation	Ohio River		Janzen 1977, 2008; Jefferies 1990

Woodland Period (900 B.C. to A.D. 900)

Trends established in the Late Archaic, such as increased social complexity and inequality, coupled with sophisticated mortuary practices, continued during the Woodland and culminated in the Adena and Hopewell cultural traditions. In some ways, the Woodland lifestyle was a continuation of earlier Later Archaic, and some cultural traditions spanned the Late Archaic and Early Woodland periods. Technological innovations serve to differentiate the Woodland from the Archaic as a developmental stage. Among these is the manufacture and use of ceramics. The ungrooved celt replaced the Archaic grooved axe, and bone beamers took the place of endscrapers (Railey 1990).

The period is also noted by the appearance of social or ritual spaces aside from the domestic dwellings, including earthen enclosures and burial mounds. Upstream from the Falls of the Ohio, a complex social system labeled Adena appeared in the late Early Woodland around 500 B.C. and continued into the early Middle Woodland when it intensified into the Hopewell Tradition. The Woodland period is divided into Early (1000 - 200 B.C.), Middle (200 B.C. - A.D. 500), and Late (A.D. 500 - 1000).

Early Woodland (1000 B.C. to 200 B.C.). Differences between Woodland sub-periods are largely distinguished by changes in ceramic styles. Early Woodland pottery was generally thick and grit-tempered; vessel exteriors exhibited cordmarking, fabric impressions, or were plain. In the Falls of the Ohio region, the grit-tempered cordmarked Fayette Thick is representative of Early Woodland ceramic assemblages (Mocas 1995). Early Woodland projectile points include a variety of stemmed and notched types, including Kramer, Wade, Adena, Gary, and Turkey-tail, as well as Cogswell Stemmed (Justice 1987). Early Woodland sites in the Outer Bluegrass regions are found primarily along the region's rolling ridgetops particularly near springs and other critical resources (Railey 1996:85). Domestic structures varied in shape between oval, circular, square, and rectangular. To the east in the mountain regions of the state, these groups exploited rockshelters and occupied many for long periods of time.

Although the emphasis of subsistence practices during this period remained on hunting and gathering, the continued development of the horticulture of weedy annuals marks a divergence from the earlier period (Railey 1990:250). Plant species in the Eastern Agricultural Complex (EAC) tended for their seeds included goosefoot (*Chenopodium berlandieri* var. *jonesianum*), erect knotweed (*Polygonum erectum*), little barley (*Hordeum pusillum*), maygrass (*Phalaris caroliniana*), sumpweed (*Iva annua* var. *macrocarpa*), and sunflower (*Helianthus annuus*). Species propagated for their fruit include cucurbit (*Cucurbita sp.*). In addition, maize has been reported from a few Early Woodland sites in Ohio and West Virginia (Wymer 1992) as well as Kentucky at the Hornung Site (15JF60).

The regional phase identified for the Early Woodland period is the Riverwood Phase. Sites in Bullitt and Jefferson counties containing an Early Woodland component are summarized in **Table 12**.

Table 12. Sites with Early Woodland Components in the Region

Site	Site Type	Watershed	Diagnostics	Reference
Riverwood/KOA (15BU33)	rockshelter	Salt River		Janzen 1977; Bader 2007
Hornung (15JF60)	open habitation	Salt River/Ohio River	Salt River plain (grit-tempered, thick, undecorated)	Janzen 1977
15JF214	open habitation	Pond Creek	Adena and Motley PPK's	Granger and DiBlasi 1975
15JF311 15JF316 15JF322 15JF325	open habitation	Ohio River	Adena or Motley PPK's	Granger, DiBlasi, and Braunbeck 1976
Arrowhead Farm (15JF237)	open habitation	Ohio River		Mocas 1976
Rosenberger (15JF18)	open habitation	Ohio River		Collins and Driskell 1979
Miles Rockshelter (15JF671)	rockshelter	Cedar Creek	contracting stemmed	Bader et al. n.d.

Middle Woodland (B.C. 200 to 500). The Middle Woodland period is largely marked by changes in ceramic style. While Early Woodland pottery was thick and crude, some Middle Woodland ceramics were designed for ritual or ceremonial use and exhibited thin walls and elaborate decorations (Muller 1986:84-85). Middle Woodland ceramics include conoidal and barrel-shaped jars with flat, rounded, or pointed bottoms, with plain, cordmarked, dowel-impressed, or fabric-impressed surfaces. In the Falls of the Ohio region, the grit-tempered, cordmarked Fayette Thick ceramics became less numerous and limestone-tempered Falls Plain become more prevalent (Mocas 1995). Decoration in the form of nodes, zoned incised punctuation, or incised dentate stamping have been recovered from sites of this period (Railey 1990:251, 1996:89). Projectile points typical of the period include expanded-stem points and shallow-notched points, including Snyders, Steuben, Lowe Flared Base, Chesser, and Bakers Creek (Railey 1990:252). Middle Woodland peoples continued to rely on hunting, gathering, and an intensified form of horticulture that emphasized the native plant species of the EAC. Wymer (1992) found that the Middle Woodland populations relied more on these seed crops than later groups. In addition, maize has been recovered and dated from the Harness Mound in Ohio (Wymer 1992). These additions to the diet may have had repercussion throughout the social, political, and economic spheres, changes that are discussed below.

Settlement patterns appear to change through time, with small, scattered settlements occurring early in the period, and an increase in nucleation associated with larger base camps later. Ritual spaces, including Adena tradition burial mounds and later Hopewell tradition earthen enclosures are associated with Middle Woodland sites (Railey 1990:251-252, 1996). Large-scale mound construction is indicative of significant community effort and politically complex, ranked societies. Social stratification also is evident by the burials, which were becoming increasingly more elaborate. Although Clay (1992) had argued Adena political systems were not controlled by chiefs or "Big Men", Wright's (2000) interpretation of the role of Big Men to solidify intra-group identity and inter-group détente appears to apply to the Adena. The logic of non-zero sum games found in Wright (2000) are actually foreshadowed by Clay's conclusions of Adena manifestations in the Ohio Valley:

> . . . it is suggested that cooperative mortuary ritual in Adena, most importantly the construction of burial mounds, reflects just this tendency for dispersed social groups in the time period ca. 400 B.C.-1 A.D. to buffer local shortages in goods within a larger social environment becoming more densely populated and competitive. Through alliances with other groups, patterns of potential economic reciprocity were established and access to dispersed environmental resources…was assured, cemented…. Finally, the grave goods represent items of exchange, payoffs preserving symmetry in reciprocity between exchanging groups. (Clay 1992:80.

These alliances are visible in the archaeological record by the exotic materials found on Adena and Hopewell sites. Characteristic artifacts include the following: gorgets, incised stone and clay tablets; platform pipes; barite and galena bars; copper earspools, bracelets, and beads; and bone and shell beads (Webb and Snow 1974).

The temporal division between Adena and Hopewell earthworks is not as well defined in the Bluegrass as it is farther north along the Ohio River. Researchers have increasingly treated Adena and Hopewell sites in Kentucky as a single ceremonial tradition (Railey 1996:97-101) or as an organization type (Clay 1991). Within the Falls of the Ohio region, the Middle Woodland Adena/Hopewell manifestation is identified as the Zorn Phase. Sites containing Middle Woodland components are summarized in **Table 13.**

Table 13. Sites with Middle Woodland Components in Jefferson County, Kentucky

Site	Site Type	Watershed	Diagnostics	Reference
Arrowhead Farm (15JF237)	open habitation	Ohio River	Crab Orchard ceramics	Mocas 1976
Hunting Creek (15JF268)	open habitation	Harrods Creek	prismatic flake blades, dentate stamped sherd, Falls Plain ceramics, and Snyders PPK's	Bader 2007 Mocas 1992
Zorn Avenue (15JF250)	open habitation	Ohio River	"Hopewellian elements" Falls Plain ceramics Snyders PPK's	Bader 2007 Mocas 1992 Janzen 2008

Late Woodland (AD 500 to 900). The transition between the Middle and Late Woodland periods is poorly understood. The Late Woodland period is generally perceived to be a period of decline in the importance of the ritual that characterized the Middle Woodland period. Earthwork construction stopped and long-distance exchange collapsed dramatically (Railey 1996:110). Late Woodland societies apparently developed along different lines regionally, but all seem to have depended initially upon the exploitation of local wild resources and the domesticated plants of earlier times. The cultivation of maize characterized the latter portion of the period. Unlike the nucleated villages of the Newtown Phase in Ohio (Railey 1991), Late Woodland societies in the Falls of the Ohio area were small and dispersed and located in a variety of environmental settings. Sites containing a Late Woodland component in Jefferson County, Kentucky are summarized in **Table 14.**

Table 14. Selected Sites with Late Woodland Components in Jefferson County, Kentucky

Site	Site Type	Watershed	Diagnostics	Reference
Arrowhead Farm (15JF237)	open habitation	Ohio River	shell-tempered ceramics triangular ppks	Mocas 1976; Bader 2007
Hunting Creek (15JF268)	open habitation	Harrods Creek	Rowe/Bakers Creek shell-tempered ceramics	Bader 2007
McNeeley Lake Site (15JF200)	rockshelter	Pennsylvania Run	shell-tempered ceramics triangular ppks	Bader 2007
SARA Site (15JF187)	open habitation	Ohio River	Lowe Flared Base ppks; Newtown-like ceramics	Mocas 1995
Muddy Fork Site	open habitation	Beargrass Creek	Lowe Flared Base; Madison Triangular; sandstone/quartz tempered cordmarked ceramics	Janzen 2004, 2008
Miles Rockshelter (15JF671)	rockshelter	Cedar Creek	shell-tempered ceramics triangular ppks	Bader et al. n.d.
Custer Site (15JF732)	open habitation	Ohio River	limestone-siltstone tempered cordmarked ceramics; Lowe Flared Base ppks	Murphy and Bader n.d.

Late Woodland artifact assemblages do not differ significantly from those of the Middle Woodland, with the exception that there is a lack of ceramics decorated with Hopewellian motifs and other ceremonial or exotic objects (Railey 1990:256). Late Woodland ceramics are generally cordmarked jars with little decoration.

Projectile points initially consisted of expanded-stemmed points such as Lowe Flared Base. With the technological development of the bow and arrow, however, small triangular arrow points appeared. Odell (1988) proposed that experimentation with the new technology began much earlier—around A.D. 1—and that many of the first arrows were flakes. Seeman, on the other hand, suggests the first culture to use the bow and arrow was the Jack's Reef Horizon around A.D. 700. Whether this is reflected in data from the Falls of the Ohio remains to be seen.

Subsistence continued to rely predominantly on hunting and generalized gathering, but the plants comprising the EAC continued to be important. It is during this period that maize becomes more important in the diet, as does cucurbits (squash) over most of the seed crops of the EAC. Only goosefoot and sunflower continued to be propagated (Wymer 1992). In place of the starchy seeds, Late Woodland populations included "sumac, elderberry, raspberry, honey locust, and others" in their diet (Wymer 1992:66).

Mississippi (A.D. 900 to 1838)

As population densities across North America reached threshold levels and inter- and intra-village social structures became more complex, a chiefdom-level social system developed. This

social system developed as one village (and one person/group within that village) became more economically and politically influential among surrounding villages. The Mississippian chiefdom system coalesced at the confluence of the Ohio and Mississippi rivers. Its influence encompassed vast portions of North America, including the Falls of the Ohio. Significant research questions that may be addressed by new data from Jefferson County sites include the relationship between Mississippian groups living within the Falls of the Ohio area and those at the Mississippian heartland near present day St. Louis. In addition, the relationship between the local Mississippian groups and the Fort Ancient groups upstream near present day Cincinnati is another important avenue of research. Perhaps the Falls of the Ohio served as a buffer zone between the two contemporary groups; perhaps the area saw much conflict.

The Mississippi period has been divided into two sub-periods: Early Mississippi (A.D. 900-1300) and Late Mississippi (1300-1700). The following summarizes data from Lewis (1996). Artifacts diagnostic of the Mississippian culture include new lithic tools such as notched hoes that exhibit bright polishes from their use in maize agriculture and shell-tempered ceramics that were made into new forms like jars, saltpans, and hooded bottles. Ceramic decorations characteristic of this period included red filming (earlier) and incising (later).

Settlement patterns typical of the Mississippian culture consist of fortified villages with secondary hamlets in the outlying areas (Kreisa 1995). Within the primary village, a platform mound and plaza area became the center of religious and political influence. Structures within villages reflected social inequality as well as craft specialization. Mississippian houses can be identified by their rectangular rather than round footprint, trench manufacturing technique, and wattle-and-daub debris.

Subsistence practices are one of the most recognized changes occurring during this time period. It is not until the Mississippian and Fort Ancient cultures come to rely upon maize as a major staple that subsistence practices changed from hunting, gathering, and horticulture to agriculture. As mentioned previously, however, maize had been brought into the upper Ohio Valley earlier. In addition, as Yerkes (1987) emphasized, subsistence practices from previous periods continued and some technologies from the previous periods were adapted to the new practice. Plant knives used with EAC domesticates help make the leap to an agricultural-based society smoother.

The sudden collapse of Mississippian culture is attributed to the introduction of European diseases by the 1500s, with much of the demise occurring between A.D. 1500 and 1700 (Lewis 1996). Data from the Falls of the Ohio region may provide information on whether this demise happened here concurrently with villages to the west.

As at Otter Creek (Hale 1981), Mississippian houses could be encountered in floodplain settings near the park. **Table 15** summarizes sites with Mississippian components in the Falls of Ohio region.

Table 15. Sites with Mississippian Components in the Falls of the Ohio Region

Site	Site Type	Diagnostics	Reference
15JF143 15JF214	open habitation	projectile points	Granger and DiBlasi 1975
15JF306 15JF323 15JF327 15JF331	open habitation	projectile points	Granger, DiBlasi, and Braunbeck 1976
Green Street (15JF95)	mound	mound	Young 1910
Prather Site (12CL4)	mound	platform mound	Munson and McCullough 2006
Shippingport Island	open habitation	ceramics	French and Bader 2004; French et al. 2006

Historic Context

Settlement and Initial Development (1773-1820)

Linn's Station. The area currently encompassed by A. B. Sawyer Park and the community of Lyndon is an important part of the development of Kentucky as a state and the success of both Louisville and Jefferson County. After the Revolutionary War many men were granted large tracts of land west of the Appalachian Mountains in lieu of payment. Even before the war's finish, families followed General George Rogers Clark to the Falls region of the Ohio River to establish an American presence on Corn Island in defiance of British and Indian aggression (Yater 1979:2).

Once the British were no longer a threat, those veterans who did not immediately sell their grants soon began bringing their families to Kentucky either by flatboat down the Ohio River or over the mountains via the Cumberland Gap. These first settlers still had to face a significant threat from Indian raiding parties. They protected themselves by building small, fortified, clusters of houses called stations. Stations were built around springs whenever possible and could hold out against attack for many days if not longer. One of these early settlers was William Linn who originally came to Corn Island as a civilian with General Clark's expedition. Linn later joined the Illinois Regiment as a major, fighting with Clark in his western campaign (Yater 1979:5, Hammon 2001:78-79).

After the success of Clark's Illinois Campaign, discharged soldiers under Linn's command returned to the Falls where they and the Corn Island community began building a permanent town on the mainland named Louisville. By 1780, William Linn had established a station on the Middle Fork of Beargrass Creek on land including the current site of the Hurstbourne Country Club (Yater 1979:6, 15). Linn had erroneously claimed land that was part of another man's grant. For unknown reasons he did not, or could not, purchase his staked out land from the rightful owner. Later, in 1787, Colonel Richard Clough Anderson purchased the tract where he

built the stone house he named Soldier's Retreat, also located near Hurstbourne Country Club (Holmberg 2001:36-37).

Although part of Lyndon today, Linn's Station and the project area originally lay within the Middletown Precinct as Middletown with Jeffersontown was the oldest incorporated town in the county dating to 1897.

Antebellum Regionalism (1821-1865)

After statehood in 1792 Jefferson County and its fledgling communities saw a period of rapid growth. Trade grew due to the many navigable creeks in Jefferson County including Beargrass and Harrods. In the early nineteenth century the Middletown precinct (including what would become Lyndon) was a growing trade area serving eastern Jefferson County and Louisville. By the 1820s, Louisville with its prime location on the Ohio River began to eclipse Middletown (L. A. Williams and Co. 1882b:29). The area remained primarily agrarian with much of the land being held by gentlemen farmers such as those in the Whips, Dorsey, and Ormsby families.

Whips[1] Family. As the namesake of the road extending past the park, the Whip family was thought to have an important influence on the development of the area surrounding the park. Names, however, do not show up on maps surrounding the park in 1858 or 1879, although the road (albeit unnamed) does. The Whips name is also given to the cemetery within the park, with one marker being documented for Sarah Leland Whips, who died in 1826 (Rootsweb 2011). More information on the cemetery is provided in **Section 5**. According to the inscription, Sarah lived between approximately 1771 and 1826, her husband was Wesley Whips, and her father was L. O. Leland. The family name Leland, however, does not appear on maps surrounding the park.

Portraits that depict Sarah Leland Whips (**Figure 21**) and Wesley Whips (**Figure 22**) were located at the Filson Historical Society. The portraits were completed by Ruth Schulte Tarbell and were donated by Mrs. Walter Osbourne in 1976. A date for Wesley Whips was documented on the accompanying plaque: 1812-1895.

[1] The spelling of Whips varied. In this report, Whips is used for the family and cemetery, but Whipps is used for the road and mill.

Figure 21. Sarah Leland Whips. Courtesy of the Filson Historical Society.

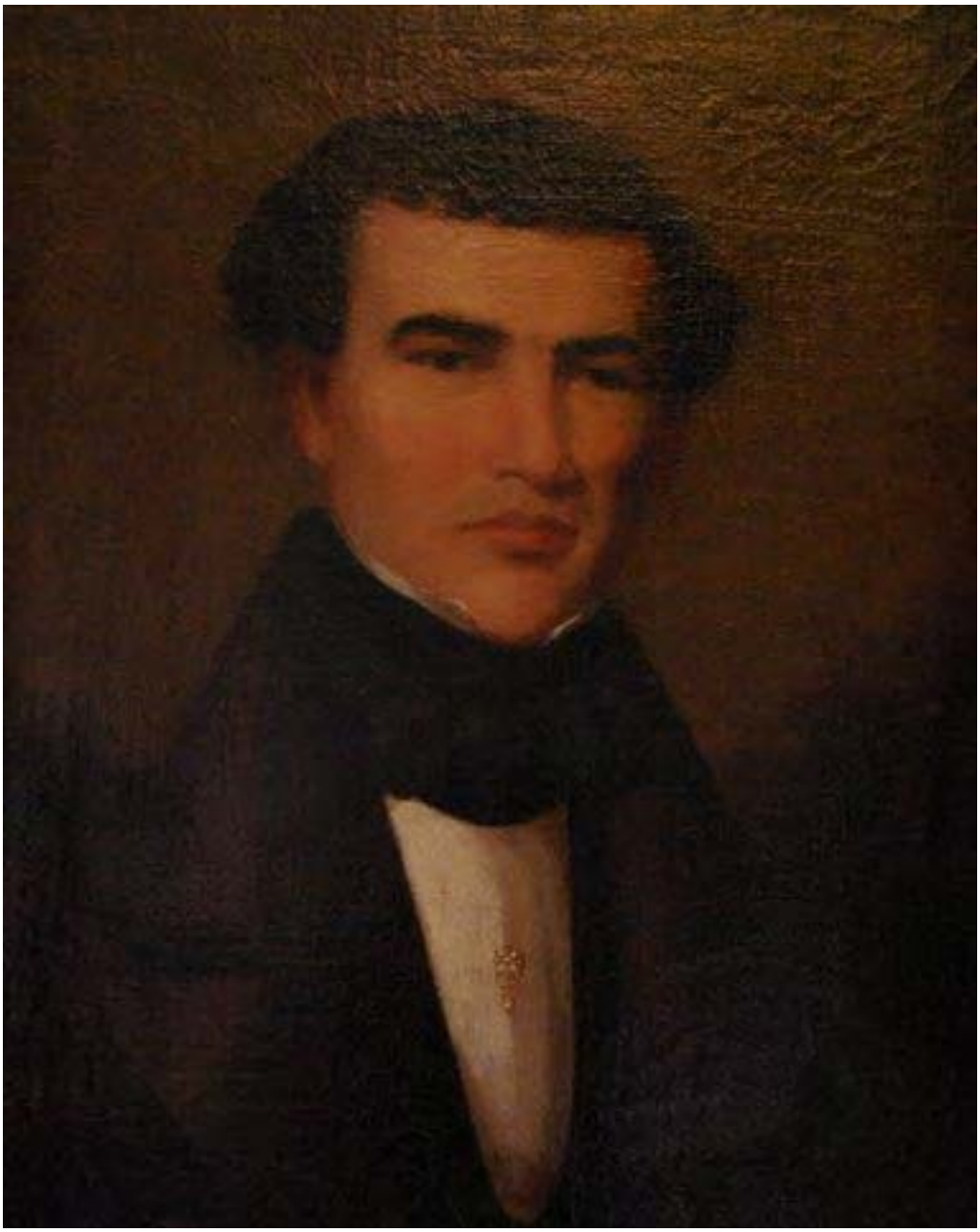


Figure 22. Portrait of Wesley Whips with the date 1812-1895. Courtesy of the Filson Historical Society.

The first documentation of a Sarah Leland and Wesley Whips is a marriage record between a Sarah Luland and Wesley Whips on November 15, 1815 in Washington D.C. (Ancestry.com). Archival records are often spelled incorrectly, so the Sarah Luland may be the correct person, but the date of the marriage would be too early for the Wesley Whips that was born in 1812, as according to the portrait date. This suggests one of the following: 1) the marriage record is not the correct couple, or 2) the man in the portrait is the son of the Sarah and Wesley that were married in Washington D.C. Corroborating evidence that this may be the correct couple include many other Whips noted in the Washington D.C. and Maryland area during this time period. In

addition, many landowners surrounding the park arrived from Maryland during the same early nineteenth century period.

The first Whips that can be placed in the vicinity of the park based on archival records is John Whips. In the 1840 census, John is listed on the same page as Elias and Levin Dorsey. As these names are documented on the 1858 Bergman map in the park vicinity, it is likely John Whips lived in the vicinity as well but was not represented on the map. John Whips traces back in the 1820 census to live in Jeffersontown and in the 1800 census (if it is the same person) to Bedford County, Pennsylvania. His household in 1840, when he lived in the vicinity of the park, was quite large. According to the census, there were 14 slaves, 13 white, and 6 free African Americans. How this individual is related to Sarah or Wesley Whips is unknown.

In 1850, Wesley Whips is a 38-year old farmer in Jefferson County. The date and age indicate this is the man in the **Figure 22** portrait. The fact that this Wesley Whips was born in Maryland, as indicated on the census record, corroborates the interpretation so far. His wife is listed as Mary E., aged 26, and born in Kentucky. As indicated by marriage records available on Ancestry.com, Wesley and Mary E. (b. November 25, 1823) were married April 30, 1844. Her parents are listed as Elijah Jeter Jr and Barbara Liter; the latter is often listed on the same census page as Wesley and Mary, as is the case with the 1850 census. In addition, an adjacent household includes Ann Whips, who was aged 62 and had been born in Pennsylvania. Overseer Jonas Lyter, aged 54 also is listed within this household as are E. L. Whips (aged 5) and G.W. Whips (aged 2). All were born in Kentucky. The slave schedule for this year records Wesley Whips as owning three slaves: one 28-year old woman and two men aged 26 and 21.

By 1858, the Wesley Whips property is shown east near the intersection of LaGrange Road and Lakeland Road. At the time of the 1860 census, his family is listed within the limits of the Middletown Post Office. Within the household are Wesley and Mary with children Edward L., George, and Mollie. Rebecca Pearce, aged 77, also is listed within the household. The family continues through the 1870 census, except Rebecca Pearce is no longer listed. By 1880, his wife, daughter, and son Edward are still within the household. Hired farm laborers include Henry and Wesley Graham, and William Geiger is boarding with the family. Most significantly, the census lists Wesley Whips' father having been born in Maryland, his mother as born in Pennsylvania, and himself as born in Washington D.C.

Whipps Mill. Identifying the location of an actual Whipps Mill has been problematic. Thomas (2004) describes the mill as being located on Beargrass Creek just after a large branch enters from Middletown. As shown on the 1858 Bergman map, the two branches—Weichert Creek and Sinking Fork--join and extend along the southern boundary of the park. Local sources identify the location of the mill site as between Old Whipps Mill and the straightened Whipps Mill Road (**Figure 23**). Debris within the Middle Fork of Beargrass Creek was shown and thought to have been part of the mill (**Figure 24**). The grinding stones are thought to have been removed previously.

This location appears to be corroborated by history presented in *Lyndon Lore*. Within this booklet, the history and location of the mill site as researched by local resident Edward L. Rochenburger is presented. Thomas (2004) substantiates this information based on deed research. The mill had belonged to Edmond Taylor. A distillery was thought to have been operated at the location as well. Frederick Geiger bought the mill in 1792. During his tenure, Rochenburger thought cornmeal and flour were ground. Thomas found reference to "Geiger's mill and distillery". This reference appears to be within the sale of the mill to George Whips in approximately 1812 (Thomas 2004). According to Rochenburger, George Whips died in 1814,

and the mill was run by his son John. John Whips continued until 1842, when he sold to William Fry.

Current research has revealed another miller: the 1850 census records Daniel Haley (or Healey) on the same page as Wesley Whips. According to the 1858 Bergman map, Wesley Whips owned a large tract of land east toward Anchorage. This included land between Lakeland Road, LaGrange Road, and Old Harrods Creek Road. Daniel's occupation is recorded as "miller". It is not known, however, if he worked or owned the mill on Whipps Mill Road or if there was another, later, mill in the eastern location.

Figure 23. Local sources indicate the mill site would be located between Old Whipps Mill Road and Whipps Mill Road.

Figure 24. Circular element within section of Middle Fork of Beargrass Creek between Old Whipps Mill Road and Whipps Mill Road.

Thomas (2004) substantiates this research given by Rochenburger and states the mill is not depicted on the 1858 Bergman map. The 1858 Bergman map, however, does document the location of a structure further north and east on Whipps Mill Road that produces questions (**Figure 25**). Located on the northeast corner of the intersection of Whipps Mill Road and the Middle Fork of Beargrass Creek, the structure is adjacent to the park near the southwest corner within boundaries of the University of Louisville. As depicted on the map, the structure is adjoining the stream, unlike any other structure on the map, indicating it may not be a residence. No further archival evidence has been acquired to inform this question, and no remnants or archaeological debris were discovered during previous archaeological surveys in this area (Evans 1998). The stream and surrounding banks have been greatly modified. All three possible mill sites are depicted in **Figure 26**.

Figure 25. Map with structure on creek (Bergman 1858).

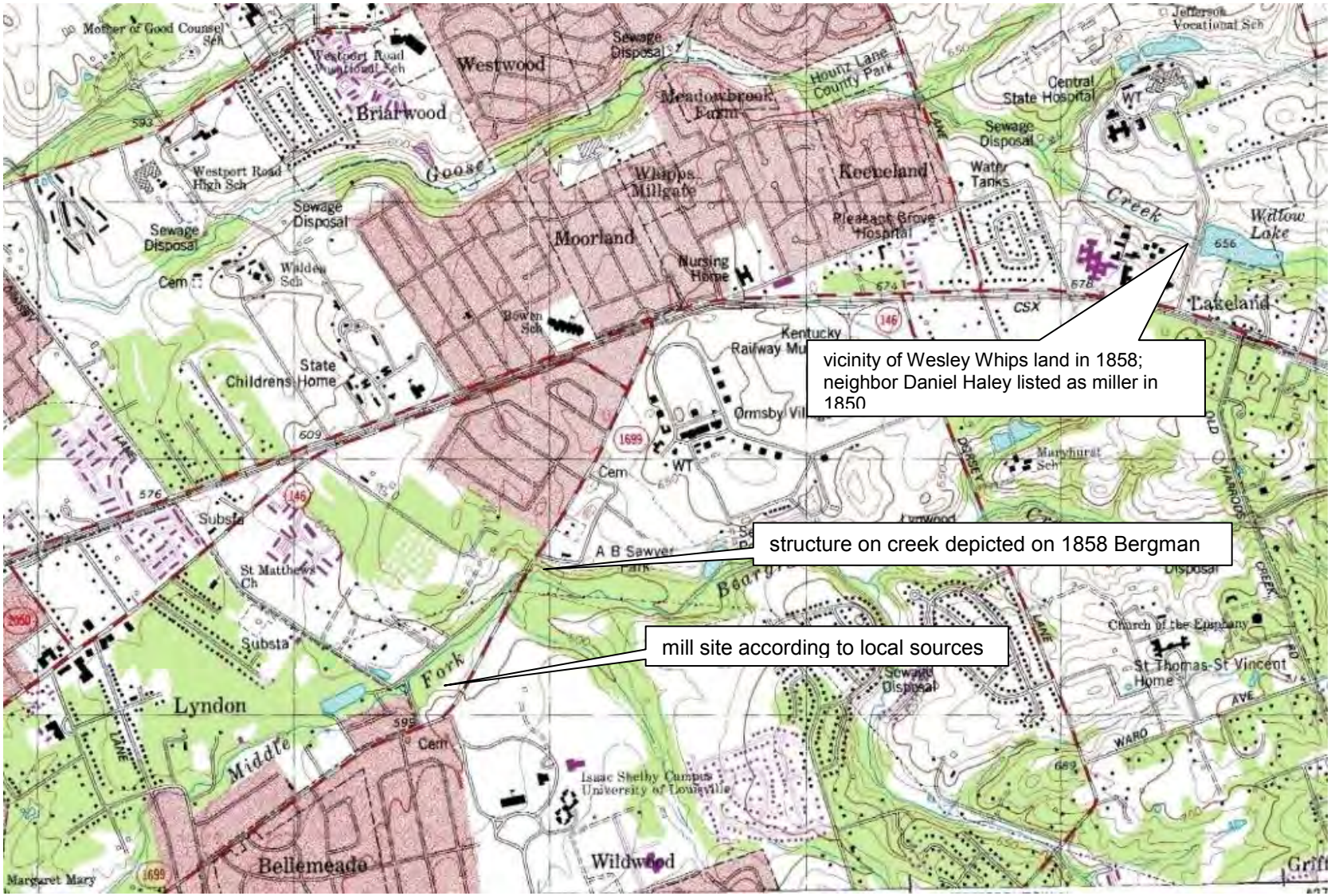


Figure 26. Possible mill sites.

Dorsey Family. Since the early to-mid nineteenth century, much of the land to the west and south of Hamilton Ormsby's land, including a portion of present-day A. B. Sawyer Park, was owned by members of the extended Dorsey family. Edward Dorsey (1762-1808) married Susannah Lawrence in Maryland in 1786 and came to what became known as O'Bannon Precinct in northeastern Jefferson County after the birth of several of their children around 1800.

Among their sons, Elias Dorsey (1796-1872) and Benjamin Lawrence Dorsey (1802-1880) married sisters, Martha (1796-1836) and Nancy (1811-1846) Booker. Another son, Leaven Lawrence Dorsey (later referred to as Senior) (1799-1882) married Susan O'Bannon (1802-1882?) (Ancestry.com 2011; Bergman 1858; Beers & Lanagan 1879; L. A. Williams and Co. 1882b; LHC 1972:23).

Elias Dorsey Family

Elias Dorsey married Martha (aka Sallie) Booker in 1815 and settled south of Beargrass Creek and the park where an uncle, Benjamin Lawrence, had established a farm (now the University of Louisville Shelbyville Campus). Under Elias's ownership, the property became known as Eden Stock Farm and included 800 acres. Of his 13 children with Sallie, Elias Jr. and Leaven Lawrence Jr. (named for his uncle) took ownership of Eden Stock and divided the land (**Figure 28**). After his death, Elias Sr. moved to Illinois. His body was returned to Louisville and buried in the family cemetery.

Figure 27. Elias Dorsey, early owner of Eden Stock Farm (now U of L Shelbyville Campus) south of Beargrass Creek and father of subsequent owners Elias Jr. and L. L. Jr (L.A.Williams & Co. 1882).

Figure 28. 1858 Bergmann map, showing property of sons of Elias Dorsey, Elias Jr. and L. L. Jr. (labeled "Elias Dorsey" and "Leaven Dorsey, jun."), who took over ownership of Eden Stock Farm south of Beargrass Creek (Bergmann 1882).

L. L. Dorsey Jr. (1819-1880) married Lydia S. Phillips (1829-1914) in 1845 and increased the reputation and size of his portion of Eden Stock Farm from 300 to 1,000 acres at one point (**Figure 29**). He became well known for his trotting and harness horses and showed them around the country. L. L. Jr. and his wife remained in the original house until they moved to a farm off of Bardstown Road around 1880. Of their six children, Rosa Johanna (1853-1933) took ownership of Eden Stock after 1880 with her husband, Levin L. Dorsey (1854-1937), who was also her first cousin and son of Richard Edward Dorsey.

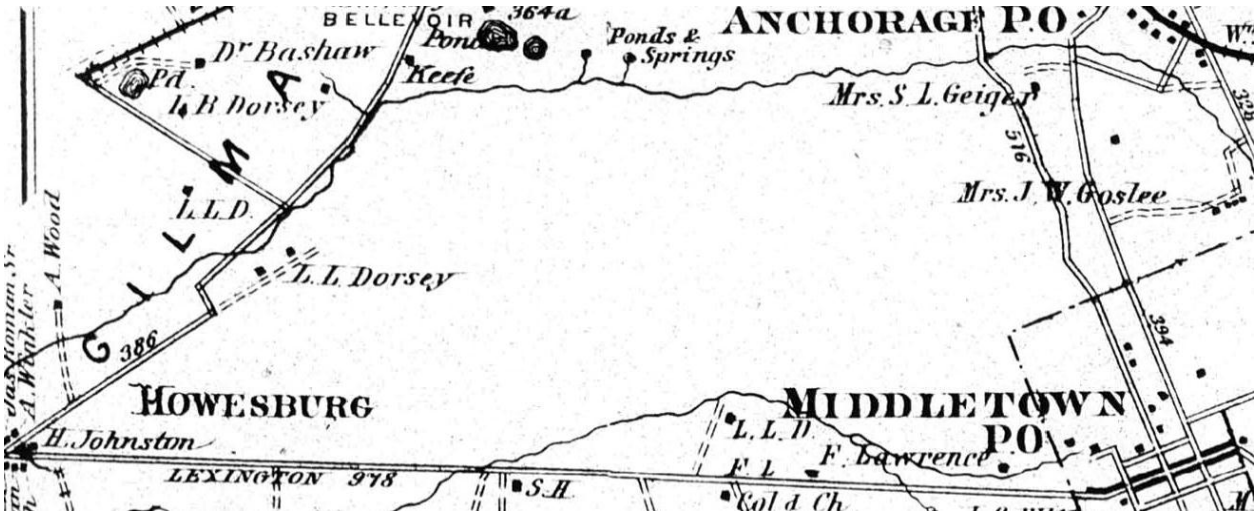


Figure 29. 1879 Beers & Lanagan map, showing the vast holdings of L. L. Dorsey Jr. (labeled "L. L. Dorsey") who bought out his brother and expanded (Beers & Lanagan 1879).

Leaven Lawrence Dorsey Sr. Family

L. L. Dorsey Sr. married Susan O'Bannon in 1820 at which time they settled on a tract of land next to their families at O'Bannon Station (**Figure 30**). She was a Virginian, who came to Kentucky as a girl, and sister of the settlers of the outpost previously known as Williamson Station. Around 1838, the Dorseys moved directly west of Eden Stock and within a mile and a half of Linn's Station where they "erected a large, elegant residence" and added to it throughout their tenure (**Figure 32**) (L. A. Williams and Co. 1882b:67). The former site of the L. L. Dorsey Sr. House (JF432) was to the west of the park entrance near where the present-day Whipps Mill Subdivision is located; it has mistakenly been identified as the house of his nephew L. L. Jr. in a past survey and publication (LHC 1972: 23, Oppel 1977).

Figure 30. Leaven Lawrence Dorsey Sr. (1799-1882) and wife Susan O'Bannon (1802-1882?) who built the Dorsey House (JF432) west of Whipps Mill Road (L.A.Williams & Co. 1882).

Figure 31. 1858 Bergmann map, showing property of L. L. Dorsey Sr. (labeled "Leaven L. Dorsey") west of Whipps Mill Road (Bergmann 1882).

Figure 32. The Dorsey House (JF432) built by L. L. Dorsey Sr. (1799-1882) and wife Susan O'Bannon (1802-1882?) west of Whipps Mill Road near present-day Whipps Mill Village (L.A.Williams & Co. 1882).

L. L. Sr. and Susan had two daughters, Eveline and Mary, and three sons. Bushrod (aka I. B. and L. B.) was the only son to grow to adulthood. He (1828-?) married Sarah (aka Sallie) E. Herndon of Henry County in 1860. They had eight children and occupied the house surveyed west of Whipps Mill Road with his father and mother, the latter of whom became an invalid. Bushrod eventually owned 220 acres of farmland and primarily dealt in grains (L.A.Williams & Co. 1882).

Figure 33. 1879 Beers & Lanagan map, showing property of Bushrod Dorsey (labeled "L. B. Dorsey"), inherited from father L. L. Dorsey Sr (Beers & Lanagan 1879).

Ormsby Family. Stephen Ormsby (1759-1844) came from Ireland by way of Philadelphia, Pennsylvania to Danville, Kentucky in 1787. Around 1791, he settled in Jefferson County. During his career, he served as deputy attorney general of the county; a colonel in the early Indian wars; a brigadier general under Gen. Josiah Harmar in the campaign of 1790; judge of the county district court; a presidential elector in 1796; judge of the circuit court; as a Republican congressman; and as first president of the Louisville branch of the Bank of the United States. In 1803, he purchased an 800-acre estate on Goose Creek, naming it Maghera Glass (Gaelic for “green meadows”) (L.A.Williams & Co. 1882; Keys and Neary 1992).

In 1830 near the end of his life, the elder colonel gave the estate to his son Stephen Ormsby Jr. (**Figure 34**), who had received a law degree in Lexington and served as a major and colonel in the Louisville Legion during the Mexican War. He built the large house (JF434) that can now be seen on the grounds of Ten Broek Hospital, the former Kentucky Military Institute (KMI) and left the law profession to live as a gentleman farmer with the assistance of slaves. He married Martha Sherley and had 12 children with her. Upon his death in 1869 at the age of 60, he left his wife with nine children still living at home. The family maintained the house until 1896 when the part of the estate that included the house was sold to the KMI.

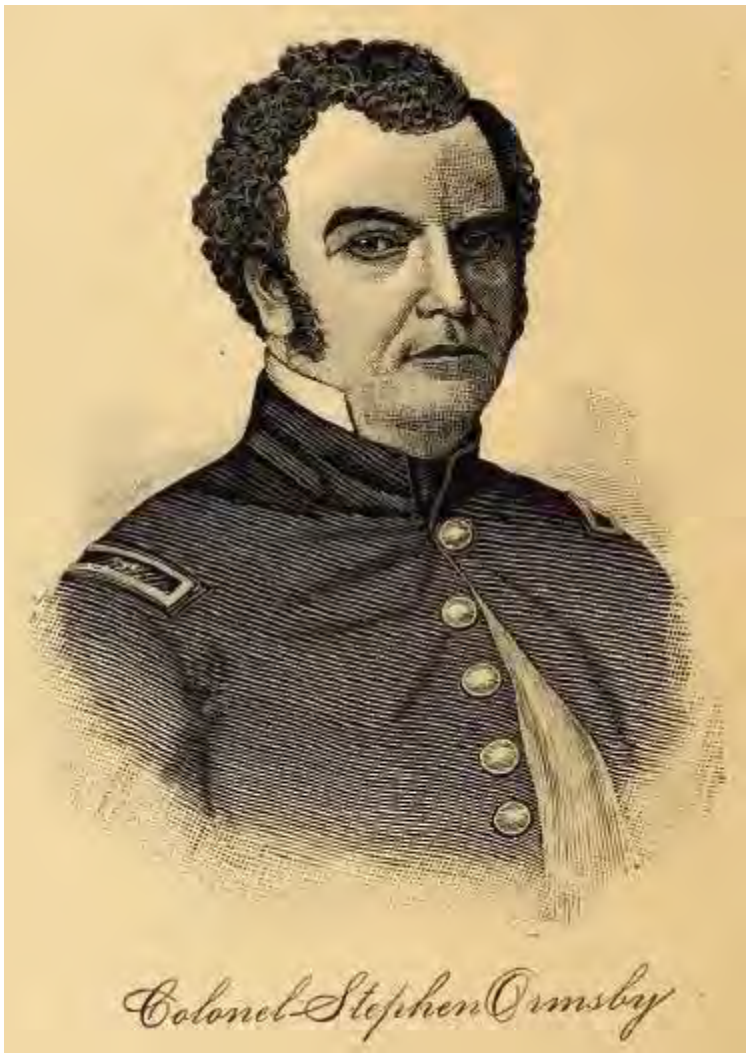


Figure 34. Colonel Stephen Ormsby, brother of Hamilton Ormsby who built Bellevoir (JF436) north of Beargrass Creek (L.A.Williams & Co. 1882).

Ormsby's eldest, Hamilton Ormsby (1832-?) inherited the family estate; however, he had already moved to the southern portion of the property north of Beargrass Creek, which included part of Sawyer Park, after his marriage to Edmonia Taylor in 1852. She was a niece of President Zachary Taylor. With her, he built a brick house and had six children (**Figure 35**). After this house burned in 1864, they built a two-and-one-half story Italianate style house (JF436) (**Figure 36 and Figure 37**). He named it Bellevoir possibly after the attractive view he had of Beargrass Creek and became prominent in the county for his show cattle and trotting horses (L.A.Williams & Co. 1882; Keys and Neary 1992; Kleber 2001; Kinsman 1979).

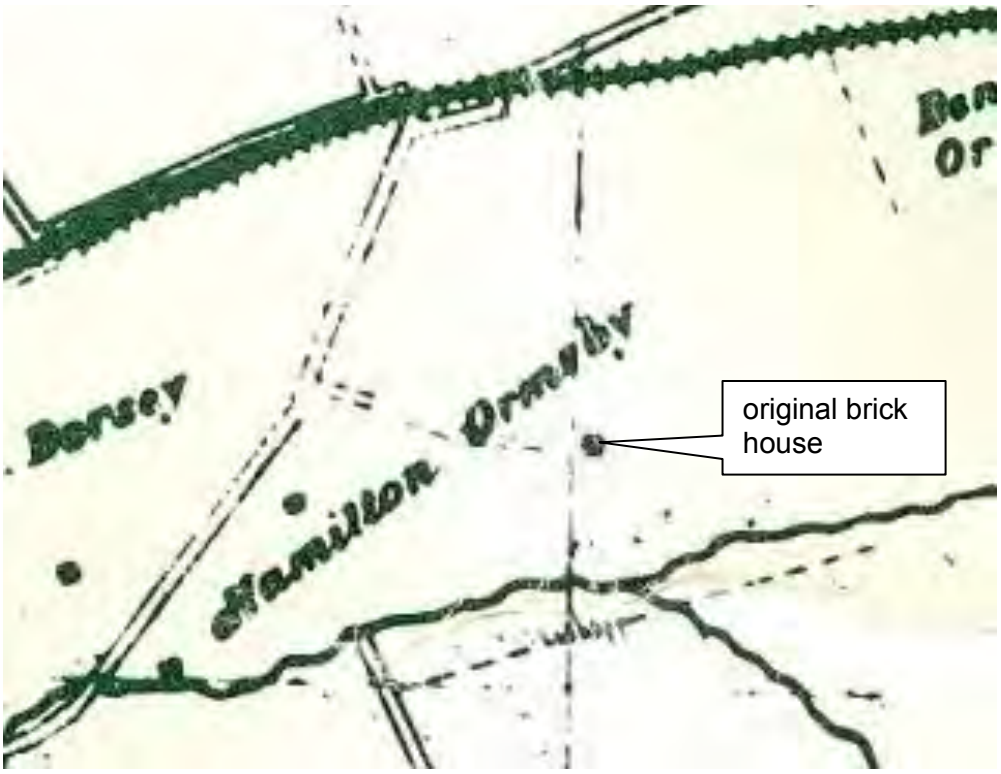


Figure 35. 1858 Bergmann map, showing the location of Hamilton Ormsby's original house, which burned in 1864, north of Beargrass Creek (Bergmann 1882).

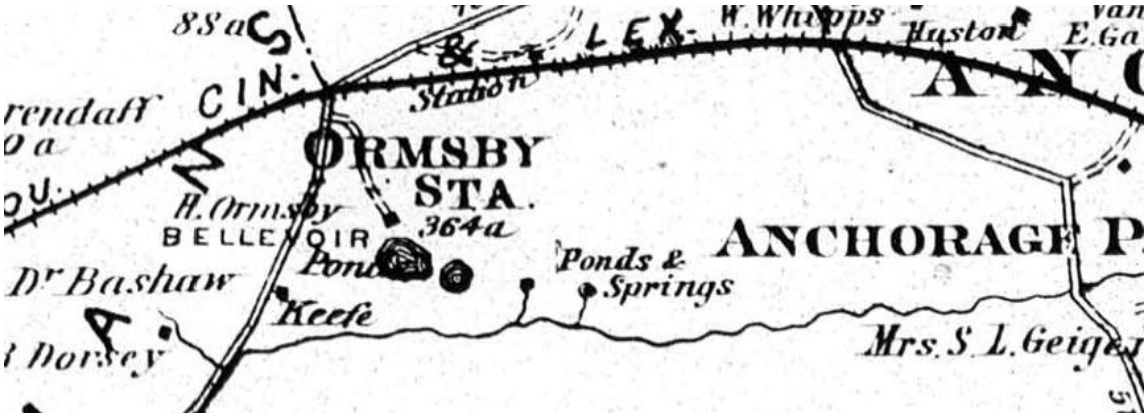


Figure 36. 1879 Beers & Lanagan map, showing the location of Hamiton Ormsby's new home, Bellevoir (JF436), north of Beargrass Creek (Beers & Lanagan 1879).

Figure 37. Bellevoir (JF436) north of Beargrass Creek.

Postbellum Industrialism (1866-1917)

Lyndon. As gentleman farming declined, the region around the project area continued to grow with smaller cash and truck farms becoming prevalent. The community of Lyndon had its start thanks to one of these later farmers. In 1871, Alvin Wood constructed a railroad station where the Louisville, Cincinnati & Lexington (LC&L) line ran through his property so that he and his neighbors would not have to travel to the stop in St. Matthews. He most likely named his station Lyndon in honor of William Linn showing that this early figure in Jefferson County's history had not been forgotten in the area he briefly called home (Strohmaier 2001: 581).

It was written in 1882, "The roads leading to various places in this precinct are in a better condition and more direct than in some of the precincts of the county. The Lyndon and Goose Creek turnpike road, put through in 1873, and the one leading from Louisville give the people good highways, and with the railroad, excellent opportunities for reaching Louisville" (L.A.Williams & Co. 1882).

Permanent middle-class neighborhoods grew at Lyndon and other stops along the LC&L and other rail lines. The first town incorporated since Jeffersontown and Middletown in 1797, Anchorage formed in 1879 around an antebellum estate on the LC&L line. Concurrently, Glenview and Prospect emerged as stops on the Louisville, Harrods Creek & Westport line. Lyndon and these communities further benefited from the arrival of the interurban rail lines which ran in and out of Louisville between 1904 and 1935. Within and around the APE, the land remained rural and undeveloped as part of larger estates (Strohmaier 2001b:334).

The Interurban Company owned and promoted a park on the south side of LaGrange Road with a pavilion, woods, and green to encourage people to ride out from the city for a picnic in

Lyndon. In addition to bringing people from the city, it took Lyndon residents downtown for shopping and trading and took youth out to Anchorage, where they attended high school. The dominance of automobiles forced the line's closure in 1934. After a time, the tracks were removed to create a trail for children walking to Lyndon school. The expansion of LaGrange Road to four lanes eliminated the path all together (LHC 1972)

Between the Wars (1918-1945)

Ormsby Village. Hamilton Ormsby died in 1905 and in 1912, the 360 acre core of his land, including the NRHP-listed Italianate mansion, Bellevoir (JF436), was sold to Jefferson County Fiscal Court to operate the newly created Parental Home and School Commission for dependent and delinquent youth. The new facility was to be operated by a county-judge-appointed bipartisan Board on 360 acres at Ormsby Station between Lyndon and Anchorage. In 1920, the agency merged with the city's Industrial School of Reform, which relocated to what became known as Ormsby Village for the white children. Ridgewood, a campus for black children, was built separately (Morgan 2001:679).

The House of Refuge

By the 1850s, a house of refuge movement occurred nationwide in response to the growing number of delinquent and dependent children. The general philosophy of creating these institutions called for a place where juvenile delinquents, primarily boys, could be housed and guarded from temptations and evil impulses while training in domestic labor. In 1859, $60,000 was appropriated to build the Louisville House of Refuge on the edge of town on land designated for a public park. Part of the parkland remained restricted, while a portion was given for the completion of the school. The first building was erected in 1861 and named for its president and future Louisville mayor, John G. Baxter. Almost immediately, the building served as a Civil War Union hospital and was surrounded by barracks for Union troops, becoming part of a larger military complex that included Brown Hospital and Fort McPherson to the northeast (Carpenter 1966; Cox and Morison 2000).

At the war's end, the institution quickly prepared for inmates and admitted the first boy--a 12 year old sentenced until he was 18 for stealing money from his mom--in July 1865. By 1873, a girl was admitted, an advanced move according to the National Conference of Charities and Corrections at the time. In 1877, the institute also began to accept African American boys. The first superintendent, Peter Caldwell, and his wife served the institute until 1910. They lived in the house with the boys and oversaw the development of a complex that came to include 16 buildings. After damaged by fire, the Baxter Building (**Figure 38**) was razed in 1925 to make way for the Speed Museum.

Figure 38. Louisville House of Refuge (reprinted in Cox and Morison 2000).

The Cottage Plan

When the city and county finally merged and fully moved operations to Ormsby Village in 1923, Bellevoir was divided into two apartments and became the home of the superintendent and staff members. A campus was constructed around it directly north of the APE. It included 14 cottages for 40 children at first, an administrative building, a central dining hall and kitchen, a service building, an industrial building, a school, a hospital, athletic fields, a gym, swimming pool, poultry yards, and a dairy (**Figure 40** through **Figure 45**). The interurban stop in Lyndon brought workers and families from the city to its scenic location (Morgan 2001:679).

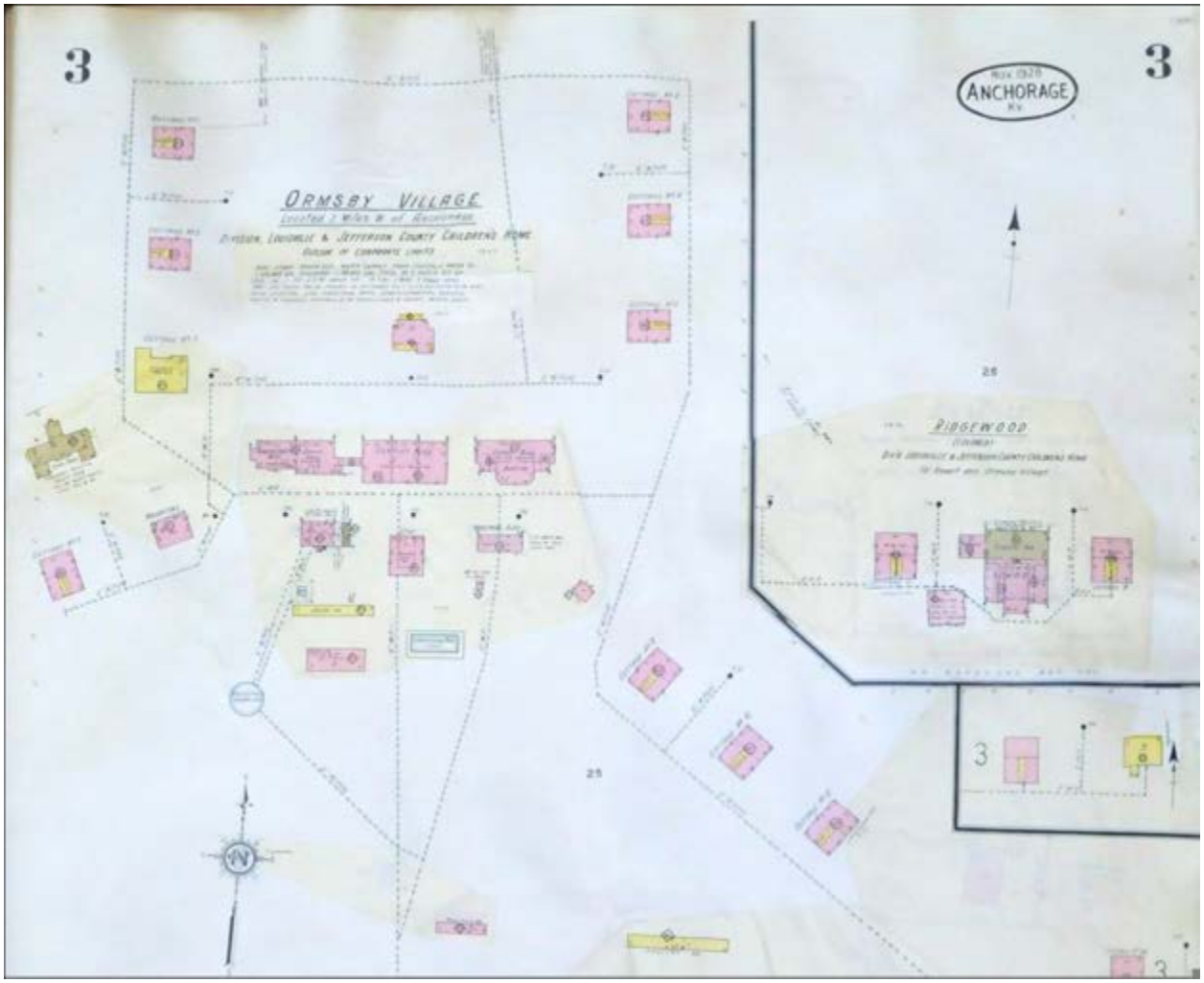


Figure 39. 1928 Sanborn Map of Ormsby Village and Ridgewood, showing plan of Bellevoir and buildings added for the school's use.

The Village as seen from the air. In the extreme left foreground the bus station and entrance to the campus are seen. Circling the loop are six of the cottages. In the center are the superintendent's home and the main buildings, among them the administration and service building and school building. At right of center are Frances Hall, Cottage 7 and the hospital. At the left toward the rear are the rest of the cottages. In the background are the farm buildings, the "woods" and part of the farm. *Picture by Courier-Journal Photographers.*

Figure 40. Ca. 1950 aerial photograph of Olmsted Village by the Courier-Journal, showing Beargrass Creek in the background. The present-day A.B. Sawyer Park lies 145 m (470 ft) to the west and right of the photo (Students of the Ormsby Village High School 1950).

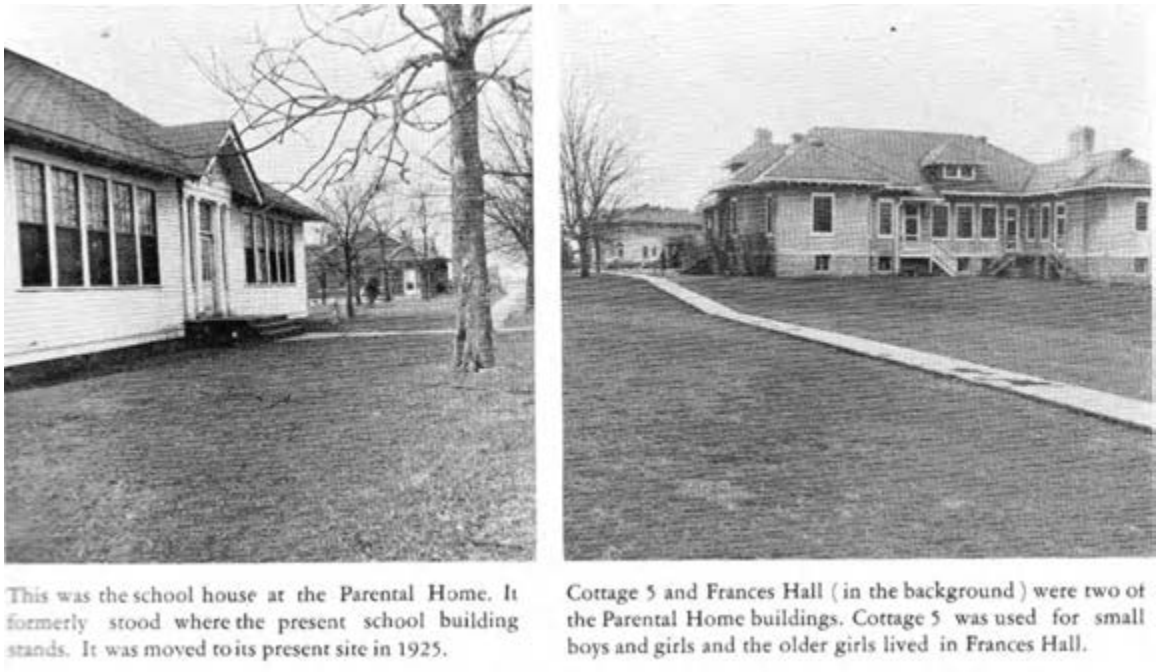
According to A. B. Sawyer in interview in 1985, "the old House of Reform... had a high board fence around it. It was just a regular prison." The cottage plan had been employed from New York, to Ohio, to Missouri in training, industrial, and reform schools and asylums as an enlightened way to deal with people whom experts of the day described as defective, deviant, insane, evil, blind, retarded, or generally unfortunate. The cottage plan brought normalcy to the lives of those who were viewed as abnormal.

> The cottage system is most necessary to meet the need of delinquent children, most of whom lack the uplifting and steadying influence of good family life. Certain virtues almost depend upon the home for their perpetuation; for the development of these virtues, home life must be restored as far as possible. … The essential features of the cottage plan are these: separate buildings for each family of children; families not exceeding 25 in number (the best results, however, cannot be achieved unless the size of the group is reduced to about 15); a house father and mother for each cottage; separate dining rooms; and a home life distinct from that of the other cottages. The personnel of each cottage should consist of varied but congenial individuals, so as to reproduce typical home conditions. The children of a family are not of like ages, neither should

> those of a cottage be, unless the different age groups are liable to contaminate each other (Mangold 1914a:401).
>
> The greater the approximation to the family ideal, the surer will be the hope of reformation. The modified cottage plan, on the other hand, is better than the old institutional type of building. With this system come pictures, decorations, and other forms of beautification, all of which serve to inspire and uplift the delinquent (Mangold 1914b:268).

The rural pastoral setting like that provided at Ormsby Village offered an alternative to the standard urban refuge houses. The choice of this "wholesome agrarian environment" came out of late-nineteenth century "anti-urban sentiments and a desire to insulate children from corrupting city influences; the practices of refuge managers to place out urban youths with rural families; the work of Charles Loring Brace and the Children's Aid Society, which systematically placed urban orphan and dependent youths with Midwestern farm families; and European 'rustification' experiments that used a 'cottage plan' to replicate a family environment to treat vagrant and criminal urban youths (Feld 1999:54).

Where many institutions failed at appropriately adopting the cottage plan, Ormsby Village succeeded and expanded to include a full-scale campus with every building needed to succeed. Educational, residential, recreational, and agricultural buildings continually were improved or added.



This was the school house at the Parental Home. It formerly stood where the present school building stands. It was moved to its present site in 1925.

Cottage 5 and Frances Hall (in the background) were two of the Parental Home buildings. Cottage 5 was used for small boys and girls and the older girls lived in Frances Hall.

Figure 41. Olmsted Village original school house and Cottage 5 (Students of the Ormsby Village High School 1950).

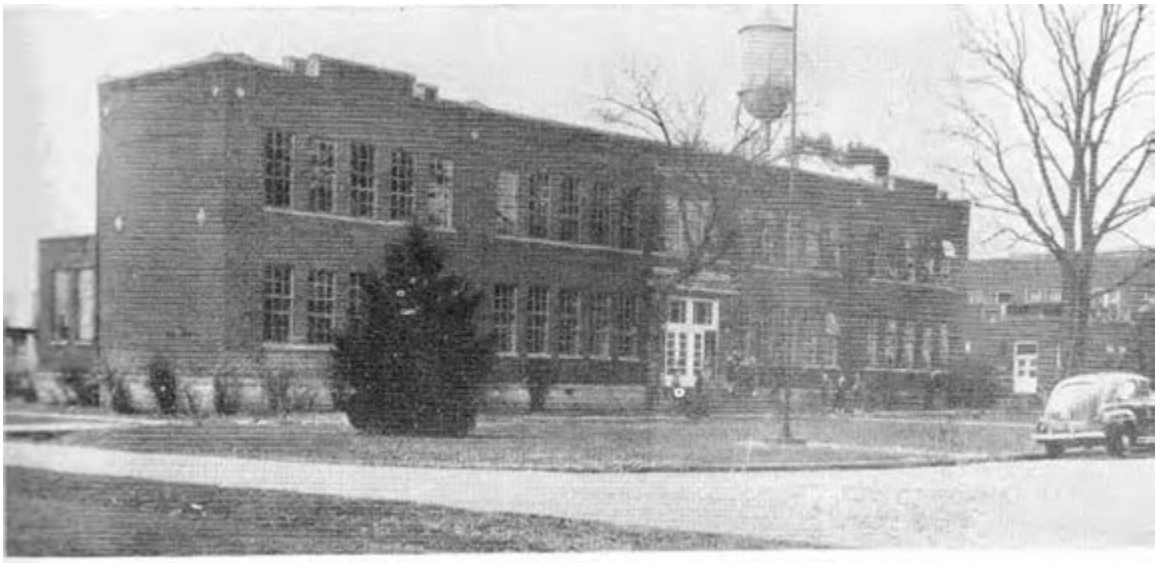
COTTAGE 10

Figure 42. Occupied by the older boys, Cottage 10 was the typical plan of an Ormsby Village living quarters (Students of the Ormsby Village High School 1950).

Left, top: Frankie Horton, Marylan Avery, Mrs. Tucker and Clara Mae Loyal in living room at Cottage 5. Bottom: Raking up the leaves is a cottage chore each fall.

Right, top: A group of Cottage 6 in the living room after supper. Some of them study while others play a game. Bottom: Miss Kays writes permits for a fourth Sunday visit.

Figure 43. Ormsby Village cottage life (Students of the Ormsby Village High School 1950).



The Ormsby Village School. Some classes are held in other buildings.

Figure 44. Ormsby Village new school and administrative building (Students of the Ormsby Village High School 1950).

THE ORMSBY VILLAGE GYM

Figure 45. Ormsby Village gym (Students of the Ormsby Village High School 1950).

Work Program

Ormsby Village operated much of the facility by hiring a lead professional, using an expert from the board, and employing the students who were over 12, the Junior Staff, in a variety of trades. Boys could work in 14 areas such as cooking, baking, store keeping, laundry, farming, carpentry, plumbing, auto mechanics, printing, poultry, school policing, and janitorial services. Girls generally worked in seven shops, serving tables, washing dishes, nursing, switchboard, beauty shop, sewing, and practical arts (**Figure 46 - Figure 49**).

The Ormsby Village board actively worked with students more so than at comparable institutions. It was comprised of men and women with a variety of skill sets, who served various committees, including those devoted to the work program. A farmer and businessmen on the board, Sawyer noted in 1985, "We're not trying to make them become farmers. We're trying to get them to take responsibility, and know what is to work and do a good job and develop that habit of doing things themselves."

Sawyer and Jim Howley worked many years to make the school's operation not only self supporting but also a viable commercial enterprise. The farm committee operated the farm and employed a manager as well as other farmhands to maintain a certain ratio with the students who assisted. They "ran the farm as though it was [their] own," Sawyer said. The school used about 200 of its acres for agriculture and rented adjoining acreage. They maintained one of the top dairy herds in the state, which included about 40 milk cows with younger herds and dry cows. They pasteurized and bottled the milk onsite and sold surplus at market. The poultry operation grew from one small building to one that housed around 10,000 chickens and a conveyor system. The surplus chickens and eggs also became a money maker. The gardens produced enough food to provide fresh vegetables for the school throughout the season and enough to can for the off season. Other students worked in canning and food preparation in the kitchen.

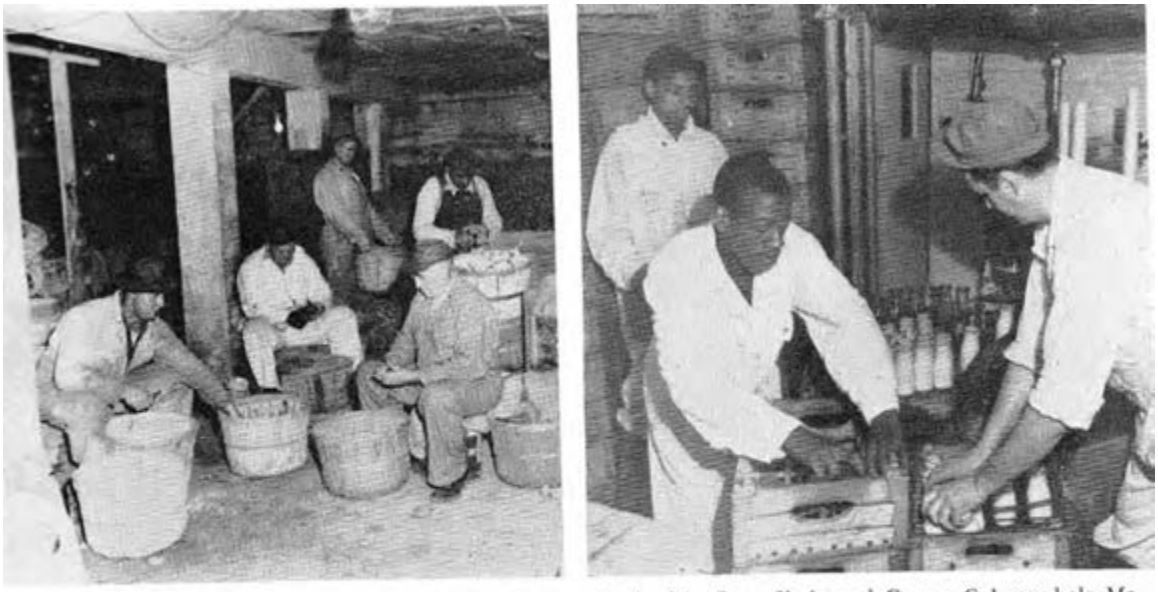
Although African American children attended school and lived at Ridgewood, they and the white children worked well together on the farm. By all accounts from students, teachers, board members, and administrators, children who lived and worked at Ormsby Village really loved the school and the Junior Staff program, working on the farm and in the cottages. However, the program and the board later came under criticism by the Child Welfare League of America to which the school belonged. The organization felt that children should not do labor that could be done by hired hands and that the board should not take as an active a part in the management and rather leave it to professionals.

Joe Harris and Mr. Beckley working on a tractor in the Village garage. Joe is in the trade class.

Figure 46. Ormsby Village Junior Staff work program on farm equipment (Students of the Ormsby Village High School 1950).

Left: Clarence Logsdon and Theodore Drury pouring peaches into the wire baskets for blanching. Top center: A group of little boys who have just returned from the bean patch after a morning picking beans for canning

Bottom center: Fred Stout, Sonny Baker and Lonnie Corbin taking time out from blanching peaches. Right: Ina Rae Fair, Edna Stout, Wanda Mitchell and Angela Burkhardt packing green bean into cans for steaming.



A group of the farm men cut potatoes for planting. From left: Everett Murphy, John Whitehead, Estel Whitehead, George Kanine, and Sam Moore. Estel Burke is farm manager. Besides the men pictured above Mr. Burke's department includes John Westerman, florist, and John Howell, truck driver.

At the dairy Leon Shultz and George Coleman help Mr. Ritter bottle the milk. John Cox is head dairyman. Other workers at the dairy are Ezra Murphy, Hubert Perry, Ralph Ritter and a group of Ridgewood boys. A picture including all farm and dairy workers will be found on page forty-two.

Figure 47. Ormsby Village and Ridgewood Junior Staff work program on the farm, in the cannery, and in the dairy (Students of the Ormsby Village High School 1950).

Mr. Crowder, the baker, looks on while Jackie Betts and Everett Waford check the breakfast rolls.

Mr. Goff, assistant chef, shows Donald Underwood how to cut up a chicken. Mr. Kohler is head chef at the Village.

Figure 48. Ormsby Village Junior Staff work program in the bakery and the kitchen (Students of the Ormsby Village High School 1950).

The print shop. Joe Staples and Melvin Mitchell in the foreground.

The beauty parlor where girls learn to shampoo, give manicures, and set hair. Mrs. Hardaway is the supervisor.

Figure 49. Ormsby Village Junior Staff work program in the print shop and beauty parlor (Students of the Ormsby Village High School 1950).

Student Life

Children who were sent to Ormsby Village generally were from broken homes, unwed mothers or involved in gangs. Once at Ormsby Village, delinquents who had committed minor offenses often submitted to positive peer pressure at the school. Because students were generally well behaved, those who proved to be a bad influence were usually sent to Greendale, a place reserved for the worst delinquents in the city. If children maintained a good behavior record, they were granted permission to go to town by themselves once a month for shopping, movies, or other activities (Sawyer 1985). Cottage life also promoted good behavior with opportunities for parties and get-togethers in a family-like setting (**Figure 50**).

Extracurricular actives included everything from marbles to field hockey against Holy Spirit Catholic School and the Collegiate School. In the summer, children participated in swimming, softball, baseball, and tennis among other activities. In the winter, they played football, basketball, hockey, skating, and boxing. Indoor activities included ping pong, pool, and shuffleboard. While basketball, swimming, and field hockey were the most popular sports, other opportunities abounded (**Figure 51** and **Figure 52**). A boxing club formed and went on to compete with other schools in Kentucky and Indiana as well as in matches at the Pendennis Club and on WAVE TV. Younger children enjoyed free play opportunities on the playground, while older students participated in the school band, worked on periodicals and printed them, and joined clubs devoted to such topics as photography (**Figure 53** and **Figure 54**).

By the 1960s, Ridgewood students became increasingly influenced by activists who found supporters in the student body, which did not receive as many resources or as much attention

as Ormsby Village did. When the schools did integrated in 1965, conflict emerged as some white and black students befriended and tried to date each other (Sawyer 1985). Yet the transition was successful enough that it was featured as an example to follow in a 1966 Child Welfare publication called Quest for Equality; the Story of How Six Institutions Opened Their Doors to Serve Negro Children and Their Families.

Mrs. H. V. Bastin arranges the table for her annual tea in honor of the senior class. This has become a tradition.

New Year's Eve at Cottage 10. In the foreground (from left) Harold Isaac, Oma Jean Mitchell, Nancy Link, Harry Hottel, Bennie James, Sonny Baker, Minnie Davis, and Roger Logsdon make merry.

New Year's Eve at Cottage 6. David Beaumont serves Mrs Bastin and some of the boys and their dates. Seated at right are Pat Linton and Clarence Kuriger. Mr. B. is peering through the doorway.

Figure 50. Ormsby Village social activities Students of the Ormsby Village High School 1950.

This crowd prefers the sliding board and see saws.

Ormsby Village plays Crestwood, Ormsby players in white are Charles King, number six at left; Harry Hottel, shooting the ball; and Russell Still at right. The game was played at Crestwood. Crestwood won 49-28.

Figure 51. Ormsby Village recreation and sports Students of the Ormsby Village High School 1950.

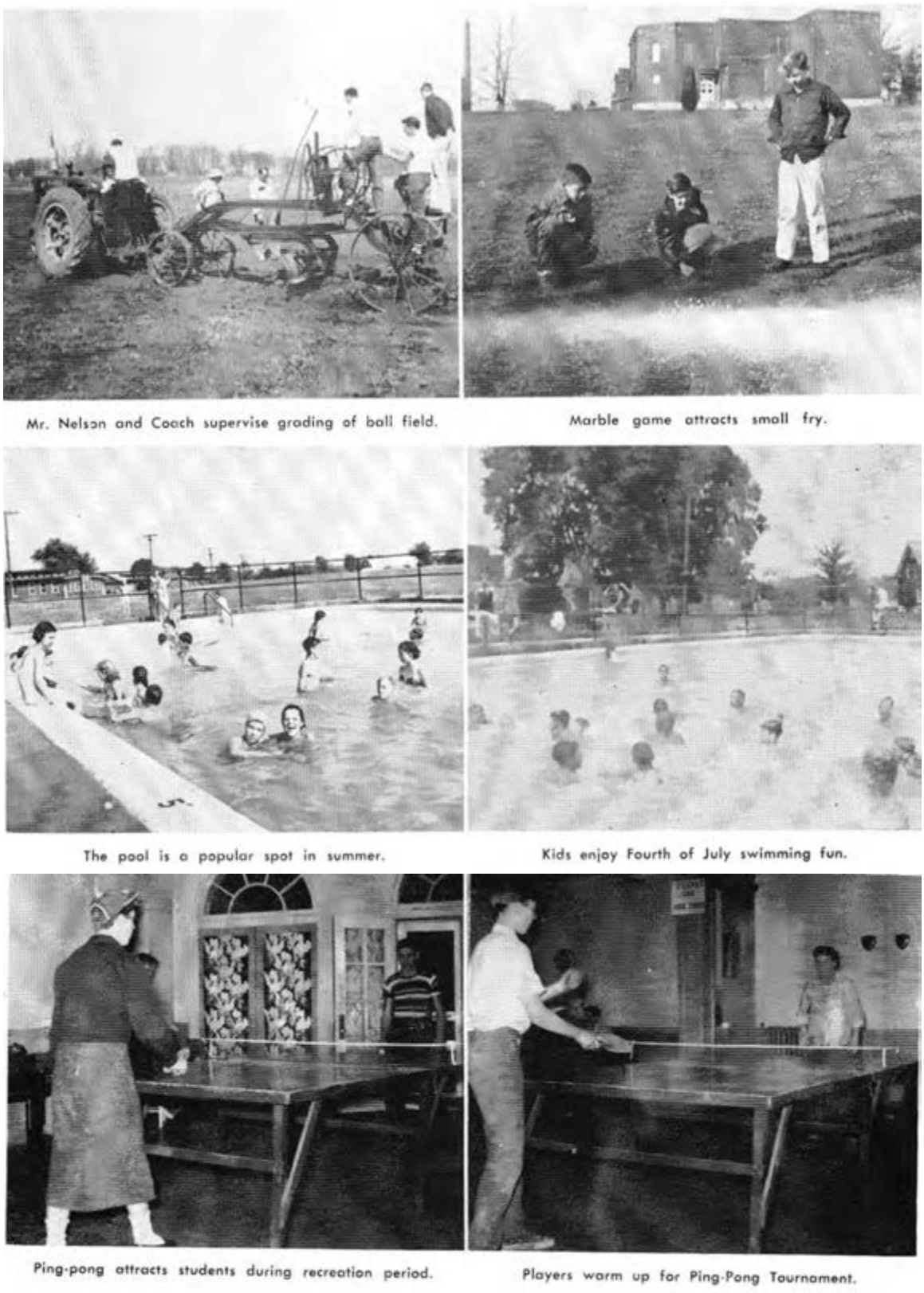


Figure 52. Ormsby Village recreation and sports Students of the Ormsby Village High School 1950.

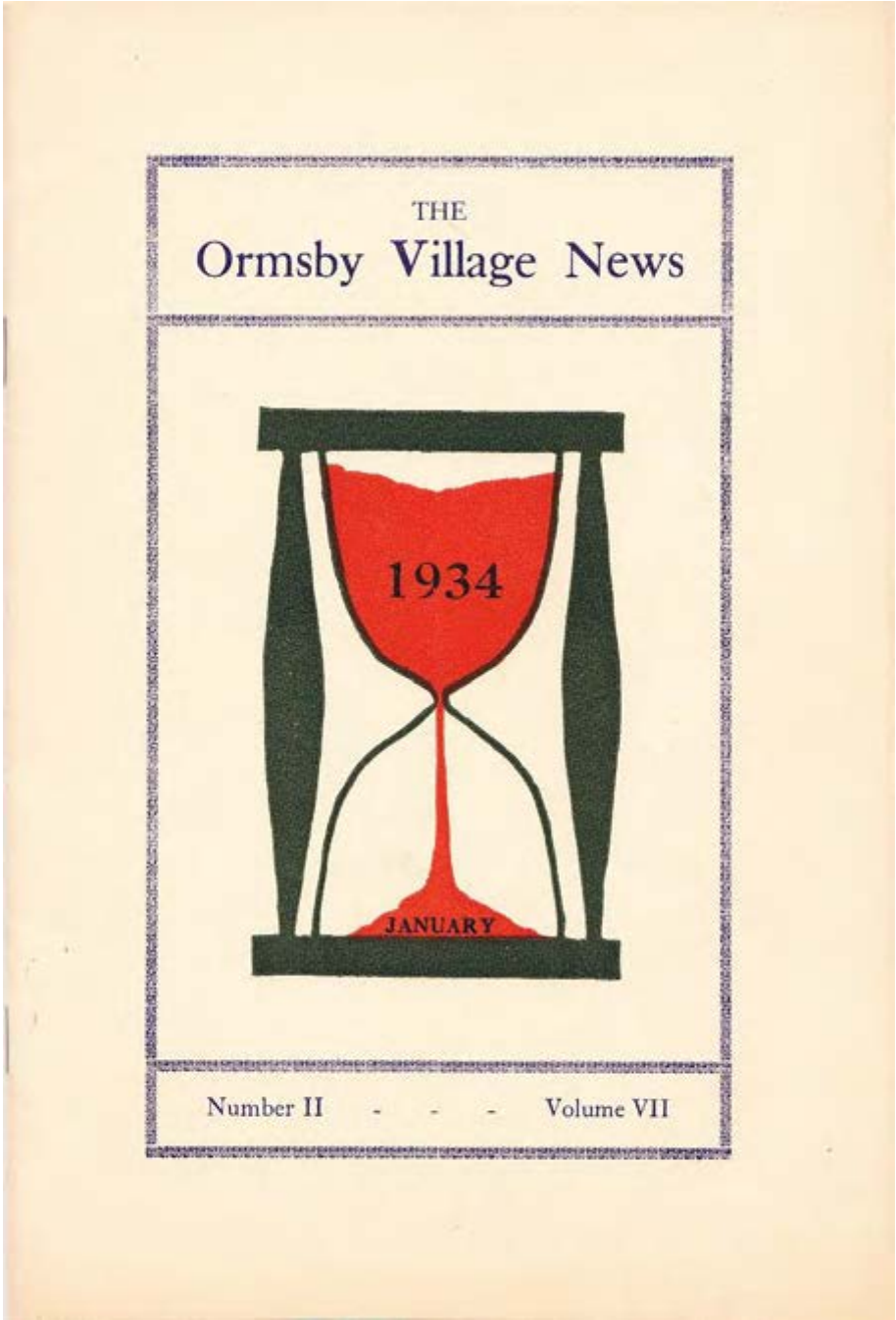


Figure 53. Edition of the Ormsby Village News prepared by students. Courtesy of Louisville Metro Archives.

Figure 54. Ormsby Village Photography Club. Courtesy of Louisville Metro Archives.

Modern Era (1946-Present)

The maturation of automobiles and improvement of roads between and following the wars lead to a major shift in residential settlement and commercial centers as commuting became viable. Land once reserved for small towns, agriculture, and farmhouses became desirable for suburban living in limited-access neighborhoods on semi-rural lots with the help of federally stimulated highways, mortgages, and gas subsidies.

Due to the automobile's dominance, the interurban rail line through Lyndon closed in 1934. This event, the Depression, and World War II stalled growth in and around the community. Literally paving the way for future growth, Hurstbourne Parkway was created only a year later in 1935 along an existing narrower lane and terminated at Shelbyville Road to the south of the project. By the 1960s, farms along this corridor became desirable for development as the Watterson Express and Interstate 64 brought more traffic to the area.

By the 1980s, the county's population exceeded the city's for the first time and nearly 100 new cities within the county were incorporated to avoid annexation though many were merely residential subdivisions; Lyndon was among them. Hurstbourne was incorporated in 1982 and all land developed by 1990 (Neary and Clay 2000, Strohmaier 2001a). In tandem with residential growth, industrial and commercial pursuits replaced agricultural ones, further erasing evidence of former farms.

Whipps Mill Village. Whipps Mill Development Corporation purchased the former land of L. L. Dorsey Sr. west of Whipps Mill Road after it had been occupied by Dorseys for over 100 years. Whipps Mill Village was developed in four parts in 1953 and 1954 and included 197 lots with one larger one at the entrance designated as a park (**Figure 55**). Its developer, W. B. Eagles was likely inspired by nationwide wartime and post-war nostalgia for colonial times and the early years of the nation, which was reflected in names, architectural styles, and suburban planning harking back to Thomas Jefferson's call for an semi-rural agrarian nation. Ignoring 100 years of ownership by the Dorseys, Eagles and his partners selected names associated with the area's beginnings with streets called Stone Wall Way, Old Mill Road, Mark Trail, Mill Race Road, and Hunter Road and the subdivision itself referring to the pioneer family who may have briefly operated a mill nearby. Subdivisions that seemingly went up overnight such as Whipps Mill Village were made possible by a number of factors including low-interesting long-term financing, new techniques in planning, and prefabricated housing like that produced by Foster Gunnison, all of which could be overseen by merchant builders.

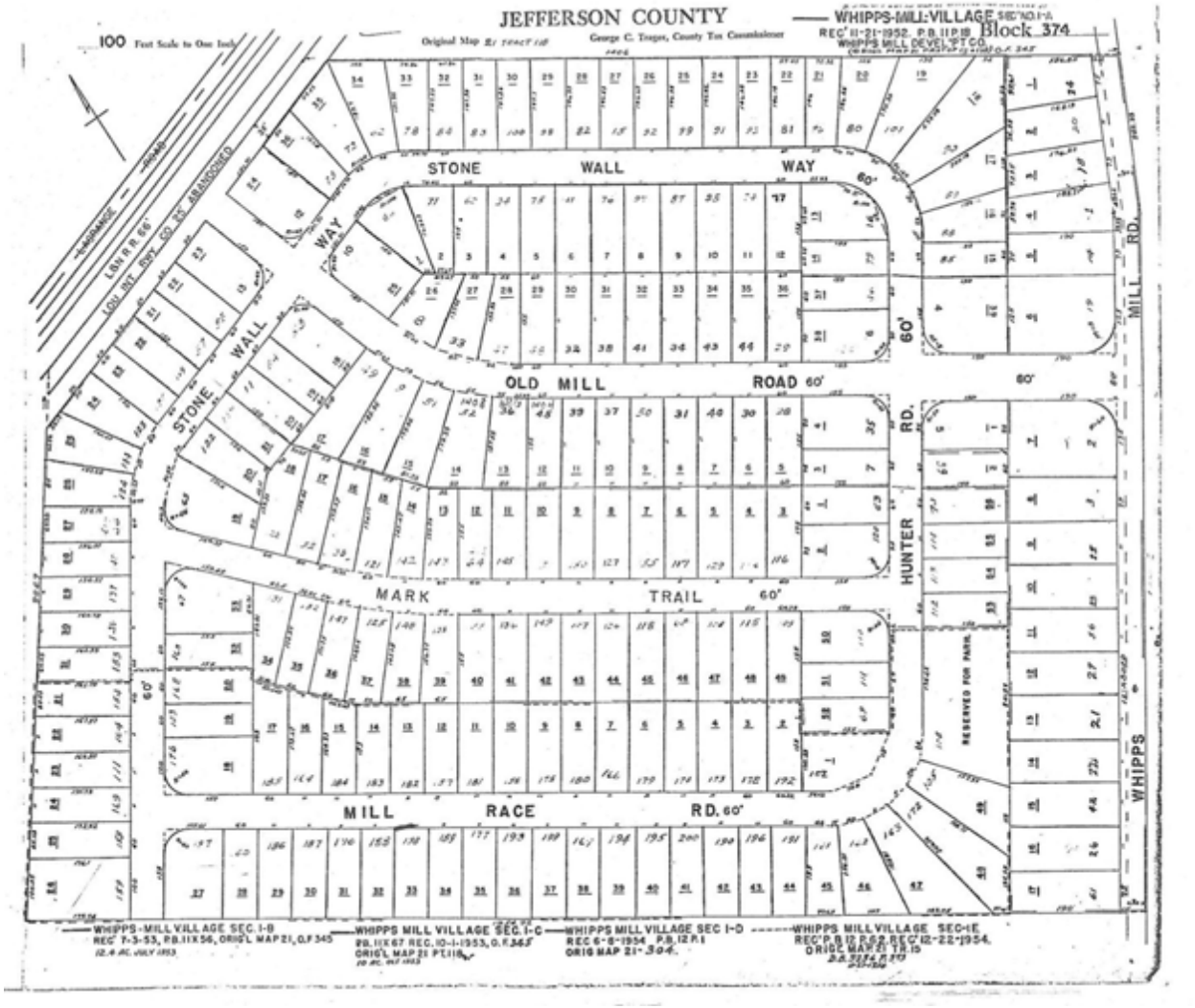


Figure 55. Whipps Mill Village was planned 1953-1954 as a curvilinear subdivision and included Gunnison prefabricated homes manufactured by United States Steel Corp.

Low-Interest Financing

In 1945, millions of veterans returned to the U.S. in need of housing for their young families. Veterans Affairs (VA) and the Federal Housing Authority (FHA) provided low-interest, long-term loans that fueled unprecedented single-family home building on the outskirts of cities.

The FHA had been created in 1934 to stimulate investment in housing, create housing and planning standards as well as real estate appraisal guidelines, and develop a program for approving subdivisions for mortgage insurance. Publications by FHA between 1936 and 1940 included *Subdivision Development, Planning Neighborhoods for Small Houses, Planning Profitable Neighborhoods,* and *Successful Subdivisions*. Publications encouraged large-scale plans directed by an operative builder who took care of everything from purchase of land to plan and house design in order to take advantage of mass production and achieve savings in overhead. Developers who had their plans approved by FHA's Land Planning Division easily secured private financing while prospective home buyers in that neighborhood became eligible for low-cost mortgages (McClelland et al. 2002).

Neighborhood Planning

The FHA standard for neighborhood planning was the curvilinear subdivision evolved over a century from "the Olmsted, City Beautiful, and Garden City models" (McClelland et al. 2002:E25). Curvilinear subdivisions such as Whipps Mill Village avoid sharp corners and side streets and incorporate wide curving roads that follow the topography and often end in cul-de-sacs. The use of the existing topography minimizes grading and accommodates large lots with private open space, yet requires substantial investment in infrastructure and total reliance on the automobile. The curvilinear subdivision plan became synonymous with the suburbs after the war through today with little challenge other than New Urbanism based on historic towns and Gridiron plats.

Suburban Architecture

The FHA standards for housing called for small minimalist houses, which were modified to the Cape Cod style in the 1940s and the Ranch style in the 1950s. The origins of the Ranch style lie on the West Coast where architects adapted the traditional housing of the Southwest, using innovative technology and Modernist aesthetics beginning in the 1920s. Builders adapted FHA-approved minimalist houses into Ranch-like houses by incorporating asymmetrical plans and features, sliding windows and doors, picture windows, broad chimneys, and exterior terraces or patios. Variation of the ranch house plan and Ranch style remained popular through the 1970s.

Prefabricated Housing

In 1944, *Time* reported, “The Twentieth Century Fund estimates that the U.S. will need an annual 1,236,000 new homes for ten years after the war… At present, the entire U.S. productive capacity is only 30,000 houses a year.” The article went on to report that the U.S. Steel Corp. under Ben Fairless purchased a controlling interest in Gunnison Housing Corp. also known as Gunnison Magic Homes based in New Albany, Indiana.

Gunnison Magic Homes was founded by Foster Gunnison, a lighting engineering from Brooklyn, who illuminated the Empire State Building and the Waldorf Astoria. In the early 1930s, he worked with architects, engineers, and plywood experts to do for houses what Henry Ford did

for cars as reported by *Forbes*. In 1935, he opened his factory in New Albany, which produced "the first commercially successful mass-produced home in the United States," according to the *New York Times* in his 1961 obituary. Before World War II, the company sold 4,500 homes.

After its purchase in 1944 by U.S. Steel, Le Corbusier, famed Modernist architect and prefabrication proponent, approached Fairless about designing for them; however, it is uncertain what became of this offer. Fairless invested in new equipment for the factory, inciting *Popular Mechanics* to report in a three-page feature in 1946 that “Every 25 minutes a home soon will be rolling off the production line in a factory at New Albany… workmen can erect this home in one day… and the place is ready to live in a week later” (**Figure 56**). Production time would decrease to 15 minutes with later improvements, and a group of seven trained men could complete a house in five days.

Gunnison continued to oversee production and expand the variety of plans and models while sticking to traditional styles such as Cape Cod, colonial, and ranch to gain consumer confidence. He marketed through catalogues available through nationwide dealers and by 1950 offered “11 sizes, from a boxy 24-by-24-foot model with kitchen, living-dining room, two bedrooms, bath and utility room to a spacious four-bedroom, 2 1/2-bath model. All had built-in bedroom closets and linen closets” (Lowry 2007) and with a partner in steel later models included a metal chimney set perpendicular to the roof ridgeline with two parallel louvers. After his retirement in 1953, U.S. Steel bought his remaining shares and named the company United States Steel Homes Inc. The company went on to produce an untold number of houses until the plant closed in 1974 (Lowry 2007).

The same year of Gunnison’s retirement, the Whipps Mill Development Corp. submitted to the county the first of four plats, which subdivided the site of the L. L. Dorsey Sr. farmstead (JF432). A merchant builder, “W. B. Eagles got his new *Whipps Mill Village* off to a rousing start last year: he built and sold 55 homes, and he developed ... United States Steel Homes, Inc. has helped make *Whipps Mill Village* a success…” (*National Real Estate and Building Journal* 1954). The overall success of Gunnison Homes was attributed to the fact that they were “moderately priced, well-built and, thanks to a variety of add-on features, could be custom-made to accommodate families of different sizes and means” (Lowry 2007).

HOMES TO FIT THE FAMILY

EVERY 25 minutes a home soon will be rolling off the production line in a factory at New Albany, Ind. Not a house all put together and standing up, of course, but sturdy floors, walls, ceilings and roofs—in section form—all ready to be put together by the time you can change your address.

On that shaded lot of yours, workmen can erect this home in one day. Fixtures are installed, porches added, and the place is ready to live in a week later.

This result of science and mass production is not only a well built, rugged, efficiently planned structure but a livable home with charm and distinction.

Available in eight sizes, prefabricated homes built by Gunnison Homes, Inc. (a subsidiary of United States Steel Corporation) range in price from around $3500 to $9000. When its new $1,000,000 plant is completed by the middle of this year, Gunnison will increase its capacity 1650 houses a year, on an 8-hour production basis, or 3200 on a double-turn schedule.

The Gunnison home is assembled from interchangeable hardwood panels, built up in layers and with a sheet of thermosetting phenolic resin placed between each layer before the whole panel undergoes a chemical conversion process in hot-plate presses. The final result is a combination of wood and plastics which Gunnison engineers report is stronger for its weight than steel. It is waterproof, more resistant than metals to heat and cold, and inert to acids, corrosion and bacteria. All panels, including floors, exterior walls, ceiling and partition panels, have chemically treated rock wool bat insulation sealed within them.

Doors and windows, also assembled at the factory, reach the home site all set in special panels, with no cutting or trimming required. Two coats of white paint are applied to the exterior at the plant and a third coat is added after the house is assembled.

Gunnison prefabricated homes are available in eight sizes; these are typical plans

Screened-in porch, gay shutters and window boxes add charm to a factory-built home. Below, interior walls paneled in hardwood

Wall panels at left, with space for windows, are mass-produced at New Albany, Ind. Small home (below) sells for about $3500

Figure 56. 1946 *Popular Mechanics* article on Gunnison Homes, showing the prefabrication process from planning, to production, to inhabiting the home.

A. B. Sawyer Park. The families of different sizes and means that moved to Whipps Mill Village in 1954 found themselves on somewhat of a frontier as infrastructure outside of the small historic towns played catch-up with the housing. In 1961, the parks department acquired parkland to serve new residential areas such as Whipps Mill Village and named it for A. B. Sawyer, the local farmer and businessman who served on the Ormsby Village board from 1928 to 1968.

Though the county attempted to honor Sawyer, he was displeased with the deal as he later expressed that it was an intentional move to dismantle Ormsby Village. In his 1985 interview, Sawyer said Judge Marlow Cook was instrumental in getting money for the new park as well as ending the agricultural operation at Ormsby Village. "He tore all those buildings down, even the silos and the barn buildings, everything... he didn't want to ever be able to operate Ormsby Village again" (LMP 2009; Sawyer 1985).

By 1979, the county government dissolved the social service facilities at Ormsby Village and by 1987, announced that all but the historic house was to be demolished. Hurstbourne Green office park, a neo-traditional suburban complex, was erected in the campus' place adjacent to A. B. Sawyer Park's ball fields in the 1990s at which time Hurstbourne Lane became Parkway and was extended north from Shelbyville Road across Beargrass Creek and the APE (Morgan 2001:679). Cul-de-sac subdivisions and strip malls have since proliferated on this corridor.

4
PARK DEVELOPMENT

The large amount of county-owned land that lay at the Louisville-Jefferson County Children's Home was identified as a prime location for additional parkland during the late 1960s. As early as 1963, County Parks Director Charlie Vettiner and Lyndon Recreation Chairman Percy Bramlett were scouting the Lyndon area for additional space for recreational activities. Baseball programs in the area had been limited to the solitary Lyndon Elementary field and fields at Westport High (now Middle) School for years—space Vettiner judged to be "greatly inadequate space" (Vettiner 1966). By 1966, Vettiner and Bramlett were looking at a 35-acre parcel fronting Whipps Mill Road. This land surrounded a new police station and was being used as an educational agricultural enterprise.

In 1967, Charlie Vettiner presented a proposal to Fiscal Court for development of a park, to be named Lyndon Park, which would encompass 70 acres and offer golf, a pool, tennis courts, a football field, picnic area, and tot lot (*Courier-Journal* 1967). It appears the map prepared for this presentation may have been completed by Bramlett. The acquisition was supported by George Reed, Jr. and Arthur Howard, both of the Lyndon Recreation Board; the association proposed to contribute $5000 to the park (Vettiner 1966). It was proposed that funds for the park were to come from the Land and Water Conservation Act, with some of the Ormsby Village land being offered as the matching fund (*Courier-Journal* 1967). It is not known whether this occurred. During this time, the separate city and county parks departments were undergoing a transition as well. A merger between the City Parks Department and the County Parks and Recreation Board led to the creation of the Metropolitan Parks and Recreation Board with Charlie Vettiner as director (*Courier-Journal* 1967).

The park was completed in 1969 and named for Albert Butler Sawyer. Sawyer arrived in the area during the 1920s from Missouri. While in Kentucky, he began dairy farming and became president of the Kentucky Dairies, Inc. Much of his additional time was spent enhancing the lives of children. He served on the board of Ormsby Village for 30 years (*The Louisville Times* 1985). In addition, he was founder and board member of many Salvation Army Boys Clubs. "If you give people the right start as children", A. B. Sawyer has stated, "then you're really doing something" (Voskuhl 1987). The same sentiment drives others at the park to follow this mission.

The continued development of A.B. Sawyer Park has been closely tied to the development of the recreational baseball leagues of the Lyndon area and the development of the Lyndon Recreation Association (LRA). The LRA provided team photographs, maps, and additional information. Newspaper clippings and additional information were acquired from Metro Archives and Louisville Metro Park archives.

Lyndon Recreation Association

The Lyndon Recreation Association began during the 1950s and met at Lyndon Elementary—now Mary Grace Middle School. Lyndon Recreation Association recognizes a number of individuals that were influential in the association's development. According to his obituary, Percy W. "Perk" Bramlett was "Mr. Lyndon Recreation" and was the driving force behind the Lyndon Recreation Association (Cox 1995). Those that contributed much of the drive in the

formation of the association, particularly with regard to baseball, included Clem Schildt, Bill “Rip” Roberts, and Perk Bramlett. During that time, the playing fields consisted of only one field at Lyndon Elementary, and teams of various ages were tightly scheduled. After Joe Wrigley became coach at Westport High School—now Westport Middle School--players between 11 and 16 years old played at the high school fields.

The continued development of the association relied on the efforts of many families. Names such as Pete Kaelin, Perk Bramlett, Roy Pearl, Dale Fishback, and Andy Singer are still remembered as significant contributors. Teams included the Lyndon Senators—a T-ball team that in 1968 was comprised of players approximately six years in age (**Figure 57**). Coaches at that time included Joe Wrigley (on left), who later became the high school coach, and Ed Monheimer (on the right). Team members included the following: in the front row, David Collins, unknown, Brian Monheimer, Dwight Wrigley, Tim Lentz, and two unknown players. The back row includes four unknown players and Dale Tisendorf (fourth player from the left).

Figure 57. 1968 Lyndon Elementary T-ball Senators. Courtesy of the Lyndon Recreation Association.

Figure 58. 1969 Lyndon Senators. Courtesy of the Lyndon Recreation Association.

Coaches during 1969 included Bud Ochnersner (on left), Collins (center), and Joe Wrigley (on right) (**Figure 58**). Players that could be identified included the following: in the front row, David Collins (first on left on bench) and Brian Monheimer (third from left on bench). In the back row, players included Mark Ochnersner (third from left), Tim Lentz (fifth from left), and Dwight Wrigley (on right).

Many during that year worked to build fields at the new A.B. Sawyer Park. Coaches and families pitched in and accomplished much of the work Individuals remembered for their contributions include Joe “Bub” Singer, Don Baker, and Bill Snipp, H.D. Adkins, and Ron Jones. From ball fields, concession stands, and pavilions to general maintenance, much was completed with volunteer labor and is seen by the some as a “handmade park”.

Heavy machinery was used to grade some areas and to fill other areas of the park property. Equipment included at least two wheel-tractor scrapers (**Figure 59**) and another scraper (**Figure 60**). As indicated on park mapping, a large depression—possibly another sinkhole—appeared to be located in the central portion of the park. This would have been the first topographic setting to be addressed in order to make level playing fields. This cutting and filling would have demolished any shallowly located archaeological sites; below-ground features such as post molds and storage pits may have survived. The depth of disturbance may be depicted in one photograph (**Figure 61**). The original ground surface is shown in the lower right corner; the

graded surface is on the left. It is not known, however, whether this was the final pass. Although interior upland areas away from streams have been documented as generally sparsely populated with prehistoric debris, an area surrounding a sinkhole is desirable--data indicate this was the case during the Paleoindian period especially. It is highly unlikely, however, that any intact archaeological remains would have survived the cutting and filling. At least one ppk has been reported as being recovered from the central area of the park, but its provenience would have been questionable. Additional photographs of the preparations for the fields document one building—a two-story brick residence on the boundary (**Figure 62**). This structure was thought to have been located at the present location of the adjacent office park.

Figure 59. Wheel-tractor scraper used to grade the park prior to the development of baseball fields. Courtesy of the Lyndon Recreation Association.

Figure 60. Additional scraper used for grading. Courtesy of the Lyndon Recreation Association.

Figure 61. Grading depicting depth of disturbance. Courtesy of the Lyndon Recreation Association.

Figure 62. House on property thought to have been in vicinity of current location of office park. Courtesy of the Lyndon Recreation Association.

The leagues moved from Lyndon Elementary to the new park during the 1969 season. In 1970, a team photograph documents Mr. Winkler as coach, and players David Winkler (first row on far right), Tim Lentz (third from left in back row), and Ronnie Haga (sixth from left in back row) among many unnamed players (**Figure 63**).

Figure 63. 1970 team photograph of the Sawyer Eagles. Courtesy of the Lyndon Recreation Association.

Figure 64. 1971 team photograph of the Eagles. Courtesy of the Lyndon Recreation Association.

A 1971 team photograph includes a dollar bill—received by Tim Lentz for four homeruns in one game (**Figure 64**). The background includes a number of buildings. These had once been located where the current office park is located. The photograph also documents the status of the field and facilities at that time.

Figure 65. 1973 team photograph. Courtesy of the Lyndon Recreation Association.

Figure 65 depicts the Mets in 1973. In the background, a previous scoreboard is visible. Players Bill Brown and Bruce Heiser are located second and third, respectively, from the left in the back row. In the front row, Tim Lentz and Alvin Phelps are seated first and second from the left.

Figure 66. 1974 Mets team photograph. Courtesy of the Lyndon Recreation Association.

In 1974, a team photograph includes players Tom Payne, Tim Lentz, Alvin Phelps, and Richard Heiser second through fifth, respectively, from the left in the back row (**Figure 66**). Players are approximately thirteen years old. In the background, the scoreboard, lighting, and an announcer stand or building are visible.

Figure 67. 1975 A's team photograph. Courtesy of the Lyndon Recreation Association.

Figure 67 depicts the A's. This group, comprised of players approximately 14 years old, was one of the final years for these players to participate within the youth leagues at A.B. Sawyer Park. After this age, many continued their interests on school teams.

Maintenance and Development by the LRA

From field care, to concession contracts, to infrastructure upkeep; maintenance and development of the park continue. Facilities include 12 ball fields, with three near the Whips Mill Road parking area devoted to T-ball. Nine others are devoted to various ages of baseball and softball players. Football fields include four practice fields located in the southeast corner of the park. Infrastructure consists of roadways, paved pathways, 18 dugouts, 8 announcer stands, lighting, fencing, 2 multipurpose buildings, bleachers, and 3 concession stand/restroom buildings. The availability of shade has always been a priority. In years past, a ladies auxiliary did much of the tree planting, in addition to making runs for ice.

Over the years, fields were named for certain individuals in order to honor or memorialize them. The old Field 2 memorialized John Shallee, one of the players that was killed while riding his bike home. This field, often identified as the "Schlee Diamond", was the first field that was improved with lighting, which occurred in 1976. The old Field 3 honored Pete Kaelin, a major contributor to the park's formation

During the 1980s, the park's organization underwent much revision. Fields were relocated and improvements were made between 1987 and 1988. Perhaps then, or much later, the names were lost and fields were renamed by sponsorship. Prior to beginning revisions, restriction imposed by funding agencies were considered. According to documents on file at Metro Parks, tennis courts were completed in 1975 using funds from the Land and Water Conservation Act

(Solodkin 1987).Once used, future landuse is often restricted; this was not the case in this situation, however. Parking had been an issue in years past. Some remember when parking along Whipps Mill Road was a safety dilemma. This may explain the extent of the asphalt surrounding the cemetery, which may have been completed during the 1987-1988 revisions. In more recent years, parking at the adjacent office complex has alleviated this problem.

A few maintenance dilemmas are legendary. During the 1970s, tournaments were in limbo as heavy rains soaked the fields. In desperation, the waterlogged fields were first swept with brooms to push as much water out as possible. The field was burned until the fire died out. Finally, the fields were dried. Using personal connections, a helicopter and pilot were brought and, using the helicopter's rotor wash as it hovered above the field, the field was dried and ready for play.

The Lyndon Recreation Association now involves 1,500 ball players, including t-ball, baseball, and softball. The baseball season traditionally began the Monday after the Kentucky Derby in early Mary and extended through mid-July; this year, the season began earlier—during April. A football season begins in the fall, which brings the total involvement to approximately 3,000 players per year. Park attendance over these two seasons may reach 275,000 (brochure). In addition to these youth leagues, participation in the Lyndon Lightning teams, affiliated with the Amateur Athletic Union, permits serious competition throughout the region, including five neighboring states. Such serious play has produced athletes that have continued on to professional teams.

A commitment to promoting the health of area families has spurred the association to promote an ambitious capital campaign with many planned improvements. Contributors include Rich Brooks, former Head Football Coach at the University of Kentucky. Goals range from additional equipment and storage to irrigation systems and scoreboards. Connections between park trails and the Louisville Loop are greatly anticipated.

5
CULTURAL RESOURCES IDENTIFIED

Types of cultural resources that could be encountered include buildings, structures, objects, sites, and districts as classified by the National Register of Historic Places (NRHP). The NRHP also considers cultural landscapes and traditional cultural properties. Buildings include anything intended to shelter human activity. Structures usually do not completely shelter human activity although people use them, such as a grain elevator, gazebo, or bridge. Objects include small-scale mobile or immobile things associated with a certain environment, such as monuments, sculptures, and fountains. Sites include cemeteries, significant prehistoric or historic archeological finds, designed landscapes such as parks, battlefields, and other locations that are not buildings or structures; sites usually possess significance for their potential to yield information in the future. Districts include a definable area, urban or rural, united by past events, plan, or development. Cultural landscapes are natural landscapes altered by cultural groups and are usually larger than a district, but smaller than a region. Traditional cultural properties include those locations, structures, districts, and objects that perpetuate the cultural beliefs, rituals, and traditions of extant cultural communities, not just properties significant by virtue of past associations or age.

As a result of the site visit, archival research, and informant interviews, potential archaeological sites and one cemetery were identified on park property.

Archaeological Sites

Three locations within the park were documented during a walkover survey that contained foundation remnants (**Figure 68**). Additional archaeological deposits are expected surrounding these locations.

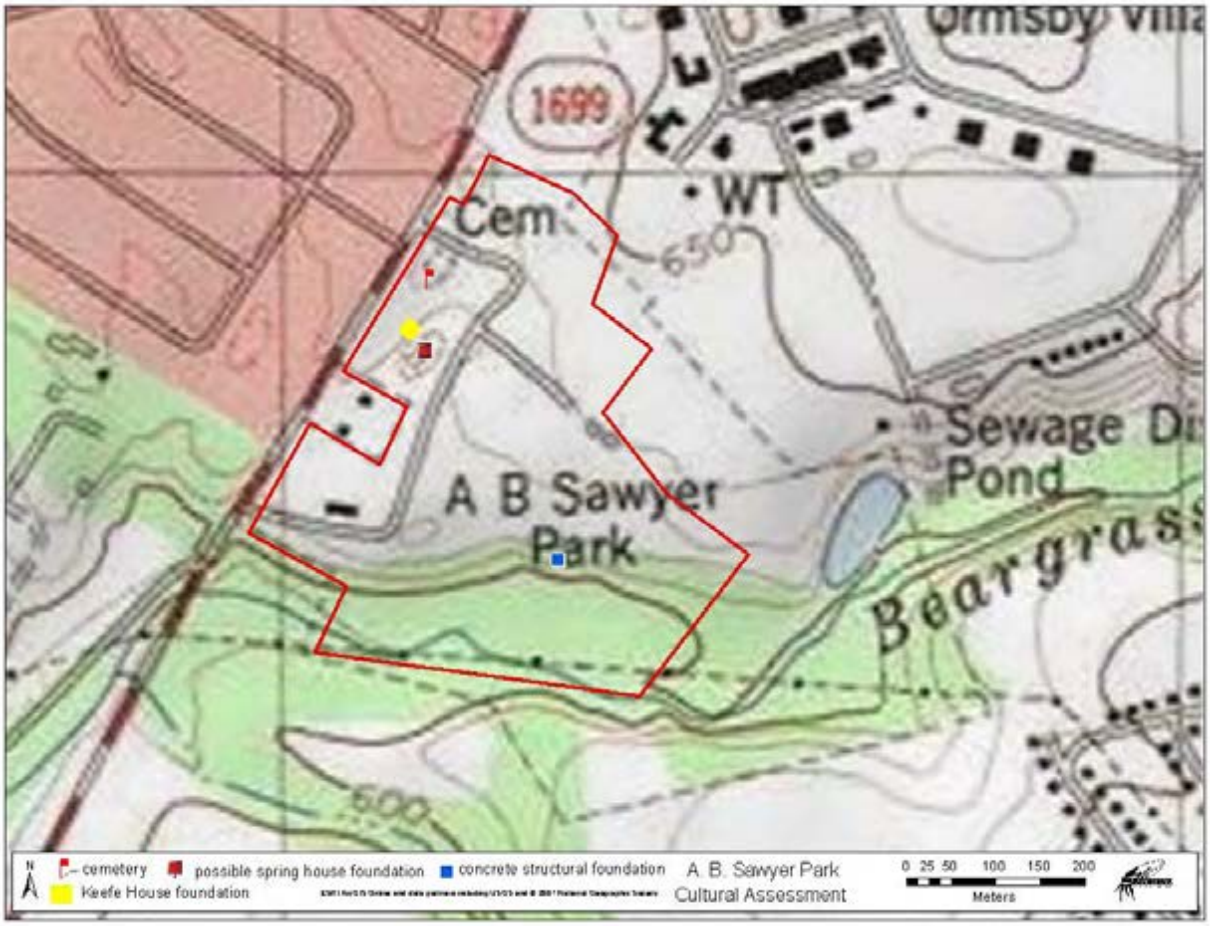


Figure 68. Archaeological remains identified during walkover.

Old House Foundation and Rock Wall

Two sinkholes were identified in the northwestern section of the park. The largest lies within a woodlot (**Figure 69**) that is bounded to the west by an old limestone fence (**Figure 77**). Whips Cemetery is located 25 m (82 ft) to the northeast of the wooded lot. Within this wooded lot between the large sinkhole and Whipps Mill Road is the possible location of a residential structure. On the 1858 Bergmann map there is a structure near this location that was owned by the Hamilton Ormsby family. This previously unlabeled structure is also located on the 1879 Beers and Lanagan map and identified as Keefe (**Figure 70**). A structure is also shown on the on the 1912 USGS topographic map just to the south of the sinkhole that may be the location of the Keefe house and is an area where park facilities currently stand. Thus, this structure was likely demolished between 1913 and 1950 as it does not appear on the 1951 USGS topographic map.

The USGS 1951 topographic map is the first USGS map to show a structure located immediately north of the sinkhole. The structure was likely demolished sometime during the 1970s as is it does not appear on the later 1981 USGS topographic map. Employees of the Lyndon Recreation Association remember this building as two-story white frame structure in this approximate location. A house or structure also is identified on mapping on Metro Parks maps (**Figure 71** and **Figure 72**).

Figure 69. Woodlot and location of large sinkhole with spring, small cave, and foundation. Portion of Whips Cemetery is visible in the far right of image.

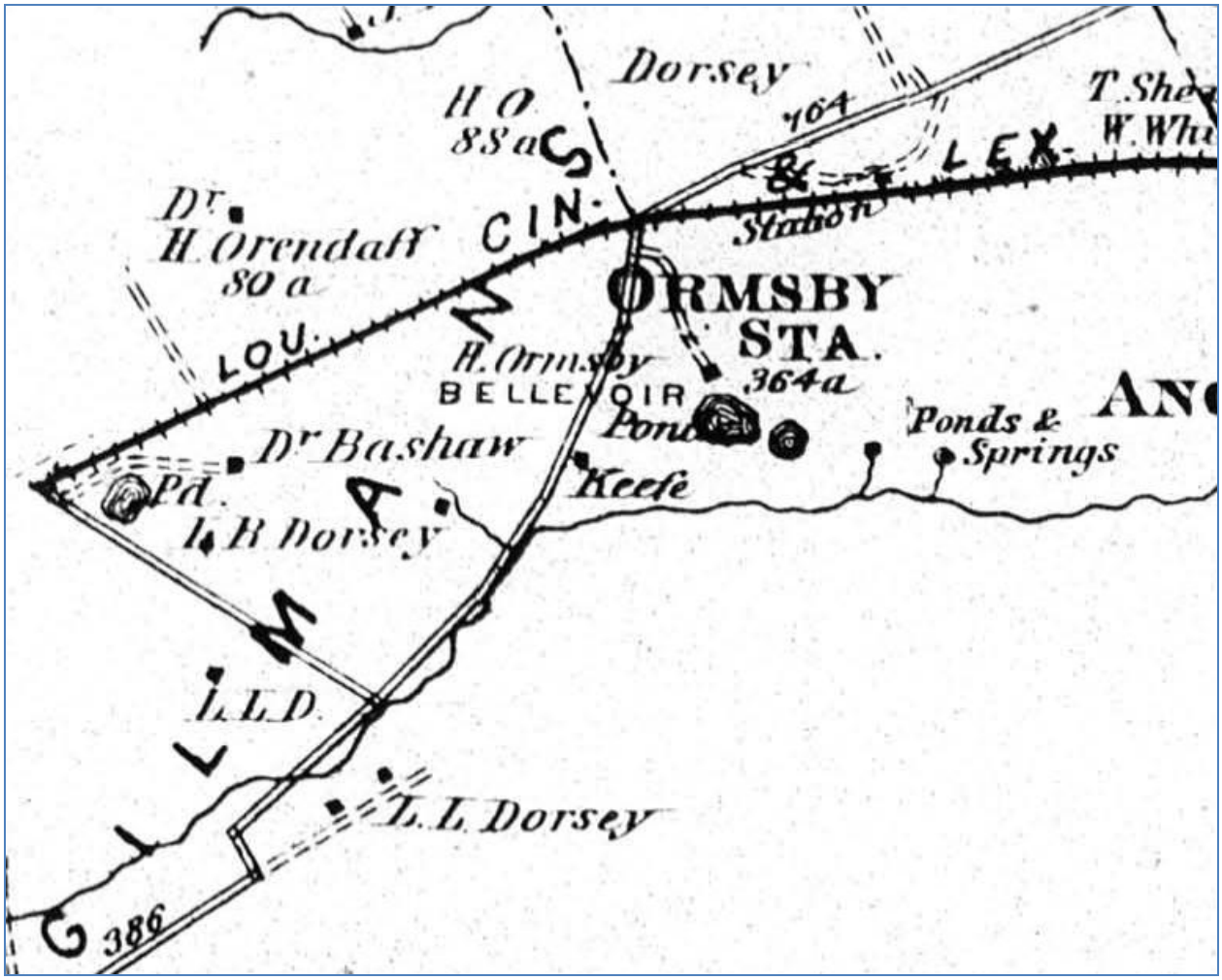


Figure 70. 1879 map showing location of Keefe residence.

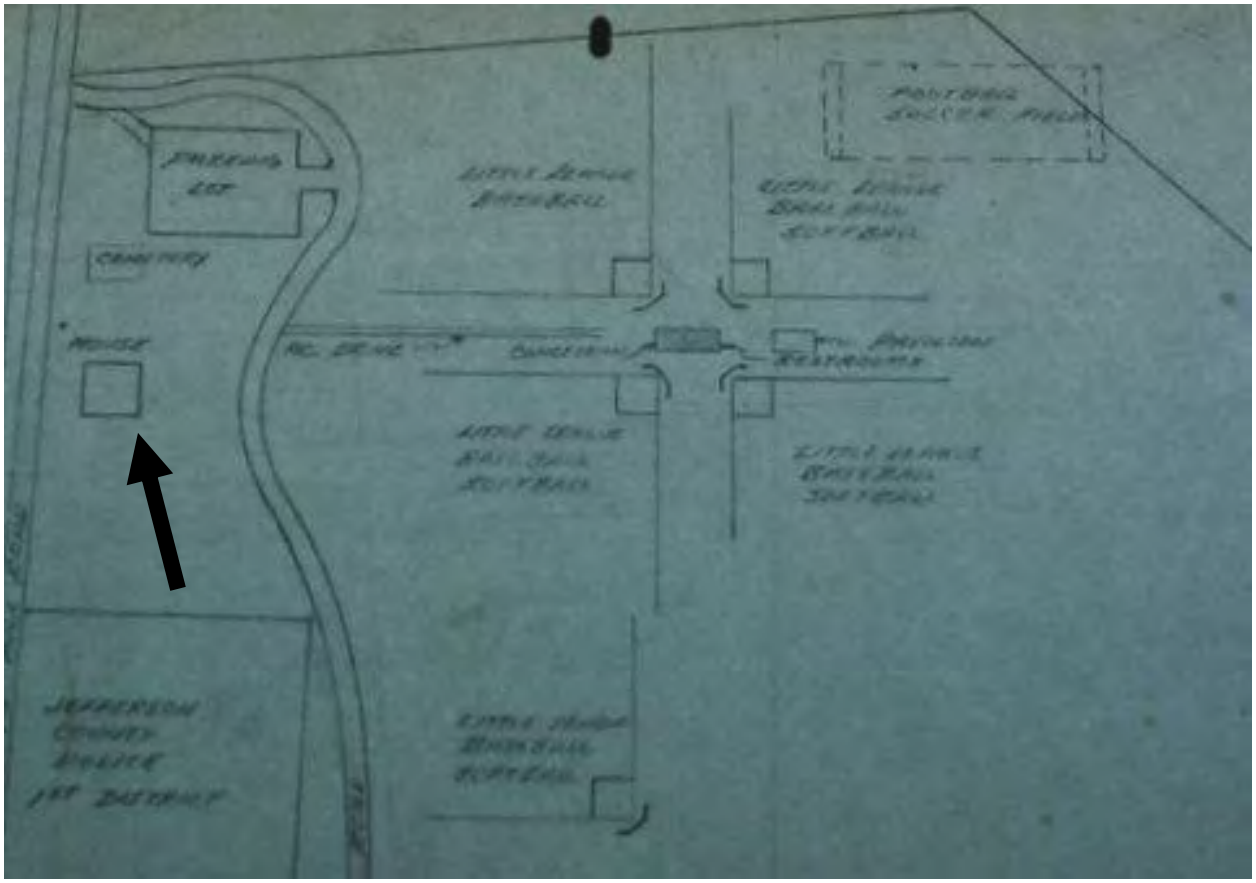


Figure 71. House identified on Metro Parks map (James 1971). North is to the top right.

Figure 72. Undated map on file at Metro Parks depicting structure at sinkhole.

The remains of this later were structure relocated during this survey. A foundation and large depression were located to the immediate northwest of the large sinkhole in the woodlot (**Figure 73** and **Figure 74**). The foundation is constructed of cut limestone and is rectangular in shape with a central depression containing an old furnace, brick, mortar, coal, and other construction material (**Figure 75**) The south foundation wall is particularly well preserved (**Figure 76**). Whiteware, window glass, and stoneware were also observed on the surface. The dimensions of the foundation and depression are approximately 10-x-10 m (33-x-33 ft).

Figure 73. General overview of house foundation and central depression. Southern wall foundation to left of photo, depression to right, facing northwest.

Figure 74. Northeast corner of house foundation and depression.

Figure 75. Old furnace and construction material within central depression of house, facing east.

Figure 76. Southern foundation wall of house from within central depression, facing south.

Springhouse Foundation and Cave

At the base of the sinkhole a freshwater spring emerges and runs approximately 25 m (82 ft) to the southwest and then flows back into the subsurface returning again to an underground spring (**Figure 77**). Three meters (10 ft) to the south of the springhead is a limestone and poured concrete foundation, the remnants of what appears to be a possible springhouse (**Figure 78**). The cement overlies stacked limestone which may be remnants of an earlier construction that have been incorporated into the later (**Figure 79** and **Figure 80**). However, the foundation is not located in or over the creek that runs a few meters to the northwest of the foundation. This structure may have had water diverted to it in the past, or perhaps this was simply a cooler location for storage during the summer months. The foundation is 2.9-x-2.2 m in width and the foundation wall is 10 cm wide. The height of the foundation wall is approximately 1 m and there is a 1-m wide entrance located at the center of the northwest wall facing the spring. This structure is likely associated with the former Keefe residence to the south or the residential structure that was once located to the immediate northwest of the sinkhole.

Figure 77. Limestone fence row bordering woodlot and sinkhole, facing southwest.

Figure 78. Spring head at base of large sinkhole, facing north.

Figure 79. Foundation at base of large sinkhole, facing northeast.

Figure 80. Limestone and concrete foundation at base of large sinkhole next to spring, facing west.

In addition, within the sinkhole approximately 18 m (59 ft) to the south of the possible springhouse is an additional sinkhole (approximately 2-x-1 meter in width and 2.6 meters (9 ft) deep) with a small cave opening at its base (**Figure 81**). Some nineteenth century ceramics are observable at the base of the sink (**Figure 82**). These include a blue and grey stoneware crock fragment and a blue transfer printed whiteware fragment. Nineteenth ceramics were also observable on the surface in various other locations within the large sinkhole (**Figure 83**).

Figure 81. Cave entrance at base of large sinkhole, facing west.

Figure 82. Nineteenth century ceramic artifacts at base of sink and cave entrance, facing southwest.

Figure 83. Blue transferprinted whiteware sherd observable on surface within sinkhole.

Structural Foundation in Wooded Slope South of Ball Fields

The remains of a structure and its foundation were located within a wooded area along the slope that descends to the floodplain of the Middle Fork of Beargrass Creek in the south central portion of the park (**Figure 84** and **Figure 88**). A concrete pad is depicted on mapping on file at Louisville Metro Parks, but the size and shape do not appear to be the same (**Figure 86**)

The foundation observed in the field is of poured concrete and has a concrete floor (**Figure 85** and **Figure 89**). The leveling of the area for the structural foundation has cut into the slope so that the top of the northern foundation wall is at ground level (**Figure 90**). There is an old fence that appears to have enclosing a former lot that the structure was once located in (**Figure 91**). Near the foundation are piles of brick and other structural refuse (**Figure 92**). No chimney remains were observable and it is possible that the structure was non-residential. Possibly, but not necessarily, related to the former structure are moderate amounts of trash and rubbish within the woodlot at various locations, some of which have evidence of small fires being built near them, although no clear evidence of people camping in the park was observed (**Figure 93**).

Figure 84. Floodplain of the Middle Fork of Beargrass Creek facing wooded slope and location of concrete structural foundation, facing north.

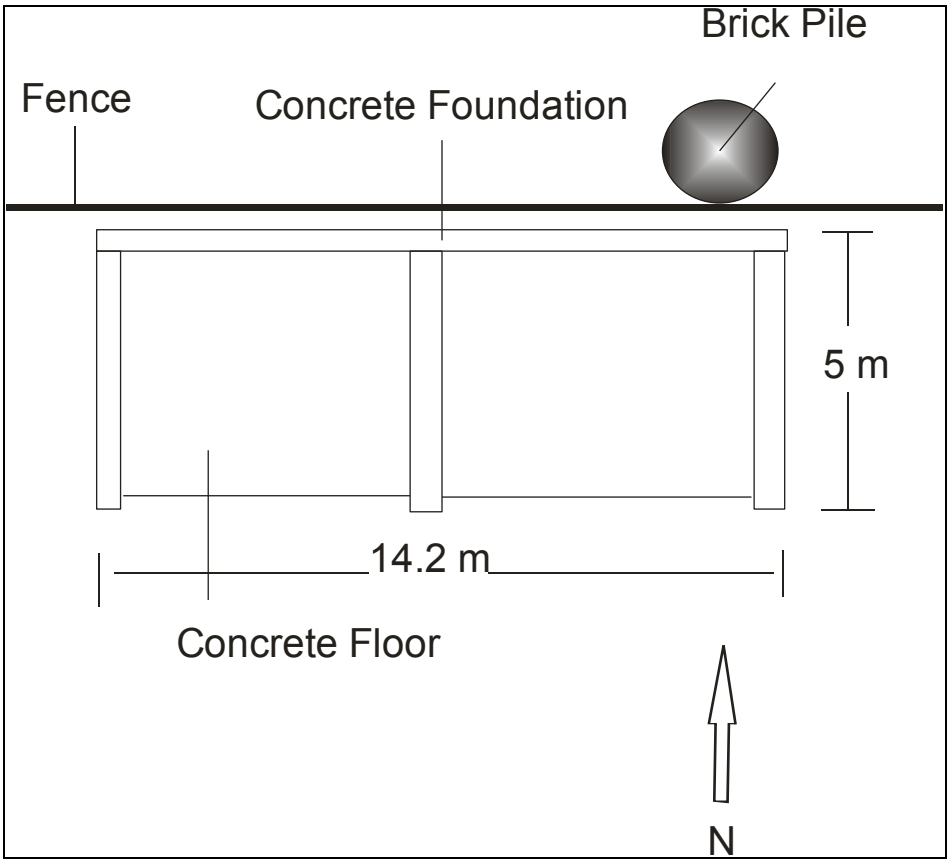


Figure 85. Plan of concrete foundation in woodlot along slope.

Figure 86. Concrete pad noted on maps (James-Winstead and Associates 1988). North is to bottom left.

Figure 87. Closeup of concrete pad marked on maps. North is to bottom left.

Figure 88. Concrete foundation of structure located in sloped and wooded area south of ball fields.

Figure 89. Poured concrete floor and foundation, facing east.

Figure 90. Structural foundation, facing west.

Figure 91. Old fence and fence opening enclosing concrete structural foundation, facing southwest.

Figure 92. Pile of brick immediately north of concrete foundation.

Figure 93. Trash and rubbish located in wooded slope.

Figure 94. Modern rubbish with remnants of fire, facing south.

Probability Assessment for Subsurface Cultural Resources.

The current survey did not involve any subsurface investigations to identify potential buried archaeological deposits associated with European or Native American cultural activities or settlements. However, high probability areas within the park can be predicted based on previous archaeological research of the region.

Much of A. B. Sawyer Park has undergone extensive landform modification and development. Portions of the park are paved (**Figure 95**), recreation facilities have been constructed (**Figure 96**), and ball fields have been constructed that has resulted in leveling and earth moving activities (**Figure 97** and **Figure 98**). The potential for intact cultural deposits in the areas where significant earth moving has occurred and areas where buildings have been constructed is low. However, it is unclear in some areas how extensive the earth modification was towards the construction of some of the ball fields and recreational facilities (**Figure 99**).

Some areas with high potential for intact cultural deposits include the higher areas of the park that have been undisturbed and particularly the area surrounding the wooded lot and sinkhole. The paved areas in these locations would likely not have disturbed any cultural deposits below the pavement, and one lot to the south of the sinkhole is unpaved. The freshwater spring and higher landform would have been particularly attractive to humans in the past and should be

considered as a high potential area for the occurrence of potentially significant archaeological deposits. The floodplain and slope along the Middle Fork of Beargrass Creek also has a high potential for archaeological deposits, as soils in this area appear to be mapped as natural Crider silt loam deposits. Any planned construction activities in the northwest and southern portions of the park should take into consideration the possibility of disturbing potentially important cultural resources.

Figure 95. Paved areas within A.B. Sawyer Park, facing northeast.

Figure 96. Offices, restrooms, and recreation facilities within A.B. Sawyer Park, facing east.

Figure 97. Football field and observable land modification within A.B. Sawyer Park, facing north.

Figure 98. Baseball field and observable land modification within A. B. Sawyer Park, facing northeast.

Figure 99. Ball fields and recreation facilities at A. B. Sawyer Park. Undetermined extent of land modification. Possible high probability area for buried intact cultural resources. facing south.

Cultural-Historic Sites

Cultural-historic sites, such as buildings, structures, objects, designed landscapes, or potential districts, 50 years of age or older (the NRHP recommended limit) no longer exist in the project area. Buildings and structures currently within the park include a maintenance shed (**Figure 100**), concession stands and restroom facilities (**Figure 101**), and office building (**Figure 102**). Infrastructure includes announcer stands, dugouts, lighting, fencing, and paved pathways (**Figure 103**).

Figure 100. Maintenance shed.

Figure 101. Concession stand and restroom building.

Figure 102. Lyndon Recreation Association office.

Figure 103. Example of announcer stands, lighting, and fencing.

Cemeteries

One historic cemetery has been identified within the present park property (**Figure 104**). It is identified on LOJIC as the Whips Cemetery. The cemetery is surrounded by a paved parking lot, is enclosed by a chain link fence, and is accessed through a gate in the west corner (**Figure 105**). As shown on this map, there are a number of depressions within the cemetery. A few depressions located immediately within the gate appeared to be rodent burrows. A raised area in the interior may have been caused by the burrowing animals (**Figure 106**). The sod is extremely thick; a survey during winter months may permit more and better-defined depressions. Of those that were discerned, they appear to be aligned east-west, as expected within early cemeteries.

Figure 104. Whips Cemetery, facing northeast

Only one broken headstone was observable (**Figure 107**). A number of interments are expected within the fenced boundaries. In addition, the presence of interments outside this fenced location is a possibility as well, whether they are associated with enslaved African Americans, a Native American occupation, or antebellum family. Enslaved African American interments, for example, often occur in land surrounding identified cemetery boundaries.

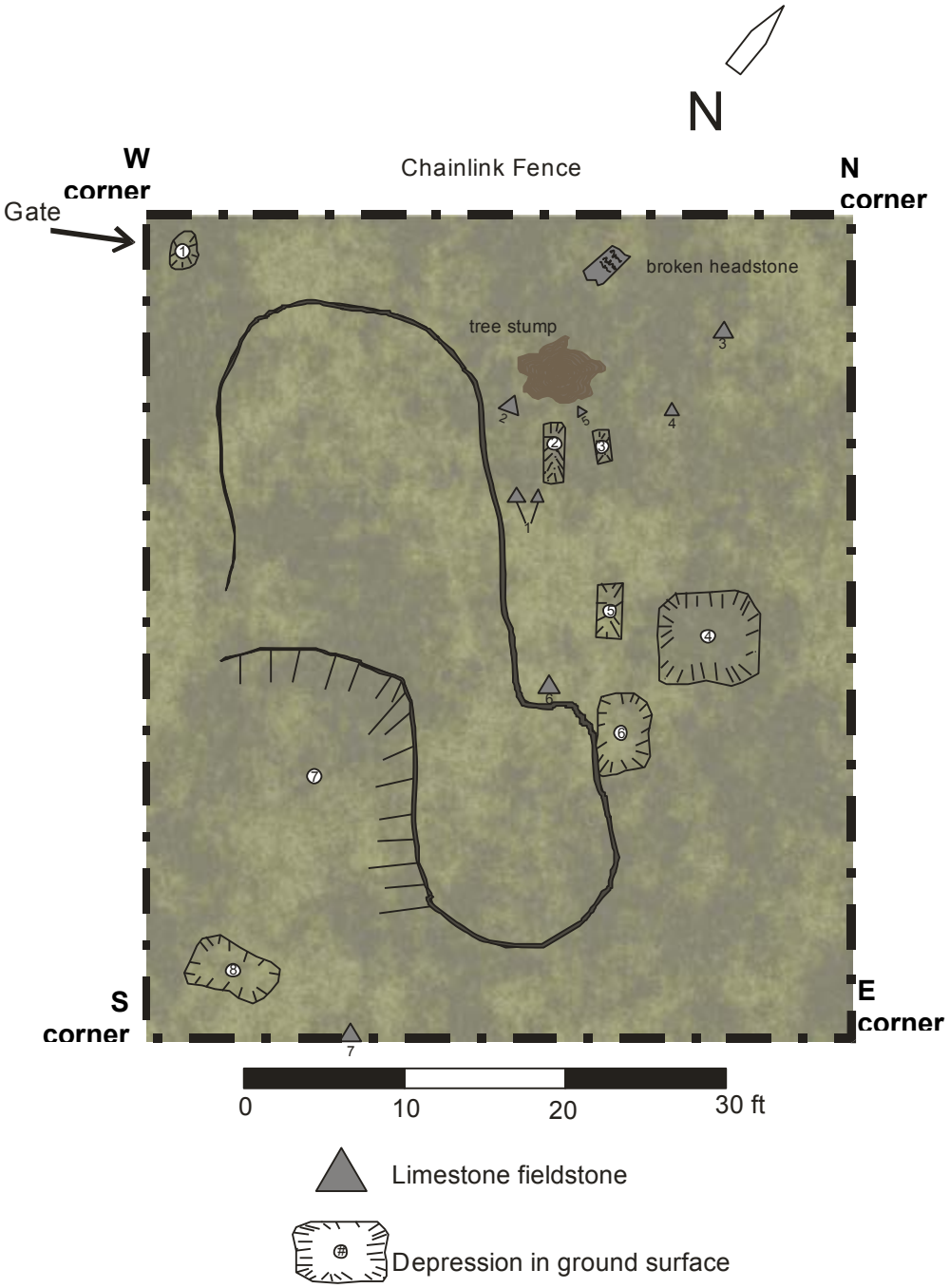


Figure 105. Plan view of Whips Cemetery.

Figure 106. Within cemetery, standing in northwest corner looking toward the east corner with rise near center of cemetery visible to the right.

Figure 107. Possible marker for Sarah Leland Whips (1771-1826), located near northwestern fence line.

This cemetery has no name plate, but appears on LOJIC as the Whips Cemetery. Local cemetery historian Jack Koepple directed CIA to inscriptions documented on RootsWeb. This source identified two markers and states others had been removed. One was for James Whips, who had died in August 1833 at the age of 34 years. The other marker was that of Sarah Leland Whips and is possibly the broken headstone relocated during the current survey (**Figure 107**). According to the RootsWeb entry, markers had been recorded in 1921. The inscriptions for the two head stones recorded in 1921 read as follows:

> Sacred to the memory of Sarah Whips, consort of Wesley Whips and daughter of L. O. Leland, died 26 Aug 1926, aged 55 years. 'Go home dear friends and cease from tears, I must lie hear till Christ appears, Prepare for death while life you have, there's no repentance in the grave.
>
> To the memory of James Whips, died 17 Aug 1833, aged 34 years.

The only visible headstone identified during the current survey is limestone, is highly weathered, and is broken, resulting in the absence of the top of the headstone. The following as still legible:

> "…who departed this life Aug ?2 1826 aged 53 years 9 mo. 17 days."

"..o home dear friend and cease from tears…
…must lie hear till Christ appears…
…Prepare for death while life you have, there's no repentance in the grave."

The 1926 date recorded in 1921 is an obvious mistake and was likely intended to have been recorded as 1826, the same date as on the headstone still observable in the cemetery. However, there are other differences between the previously recorded and currently observed inscriptions on this headstone. There are differences in the beginning of the inscription, for instance "…who departed this life Aug ?2 aged 55 years 9 mo. 17 days…" vs "…died 26 Aug 1926, aged 55 years…" It is possible that these are different recorded tombstones although this seems unlikely considering the same year of death and epitaph. It would also seem unlikely that the headstone observed today would not have been recorded in 1921. Therefore, the headstone likely marks the grave of Sarah Whips, but this cannot be confirmed at present.

Additional interments at the cemetery may be her husband, Wesley Whips, any of their children that might have died in childhood, or her Leland ancestors. Millers George and John Whips may also be interred within the cemetery. Although the Rootsweb source documents all other stones having been removed, sources at the Lyndon Recreation Association recall approximately 12 markers with dates ranging from the 1860s to the 1880s. As it is remembered, a number of the markers were for children.

In addition to the only visible headstone, there are several small fragments of stone within the cemetery that appear to be broken fieldstone footers (**Figure 108**, **Figure 109**, and **Figure 110**). Considering the placement of the stones and locations of depressions, the stones may not be *in situ*. The positioning of the stones may have been altered at various times. One possibility is that they may have been moved at the time the headstones were removed. A second possibility includes during acts of vandalism, as other nearby cemeteries have been vandalized. The third possibility is during mowing sessions—a possibility considering a number of stones surround the tree stump, which would be a convenient place to relocate them.

The tree that once stood on western border is remembered by employees at the Lyndon Recreation Association. The tree was described as stately with an open-growth canopy. Although it was suspected to be a white oak, mapping completed in 1988 documented it as a hackberry with a 48-inch circumference (**Figure 111**).

Figure 108. Small fieldstones, located east of stump.

Figure 109. Largest fieldstone, located near northeastern corner.

Figure 110. Stone located on eastern fence line near southeastern corner.

Figure 111. 1988 map with cemetery documented (James-Winstead and Associates 1988).

Traditional Cultural Properties

The identification and documentation of TCPs has been summarized in National Register Bulletin 38, which can be accessed at http://www.nps.gov/history/nr/publications/bulletins/nrb38/. TCPs are different from other historic properties nominated to the NRHP in a number of ways. First, in order to identify TCPs, the intangible cultural rituals, beliefs, and traditions of a cultural group must be understood. Only the tangible cultural property may be recommended to the NRHP, but it is the intangible attributes associated with the property that make the property significant. Second, the identification of a TCP relies on an emic approach rather than the etic approach useful for the identification of other historic properties like structures. As such, the identification of TCPs relies on consultation with the cultural communities in question. As recommended by Bulletin 38, cultural groups may include Native American groups, rural communities, ethnic groups, urban neighborhoods, a socioeconomic community, or an artist community. Springs and cave sites have been nominated. There may be others, depending on the circumstances.

No currently identified TCP exists within the park property.

6
SUMMARY and RECOMMENDATIONS

Between March and July, 2011 Corn Island Archaeology, LLC was retained by Gresham Smith and Partners to provide cultural resources services related to the preparation of a Master Plan for A. B. Sawyer Park in eastern Jefferson County, Kentucky. Gresham Smith and Partners is developing the Master Plan at the request of Louisville Metro Parks. Currently, there is no such plan to provide for future development of the park. As part of this overall effort, Corn Island Archaeology was tasked with researching existing conditions relative to cultural resources, including historic structures, archaeological sites, and cemeteries. Specifically, Corn Island Archaeology prepared an inventory of known (recorded) cultural resources within the park; assessed the potential for intact, unknown archaeological sites to be present; and developed archaeological and historical contexts to allow informed interpretation of these resources. This information will allow Metro Parks to make informed decisions relative to cultural resources compliance laws and regulations as they design and implement plans for future development. The project area of potential effects encompassed the 47.25 acres (19.21 ha) of the park.

The cultural resources evaluation has involved a number of entities, including public, private, and personal. State-level, county-level, and city-level public records included those found at the Office of State Archaeology, Metro Parks, Jefferson County archives, University of Louisville Digital Archives, and Louisville Metro Planning Commission. Private collections include those housed at the Filson Historical Society and in-house references. Most importantly, personal experiences and knowledge such as that of the Lyndon Recreation Association and area residents provided unique perspectives other records could not provide.

Summary

As a result of this research, it was learned that two professional archaeological surveys have been conducted within the park boundaries, but no archaeological site has been documented within the park that has been recorded with the OSA. Archaeological sites may be present, although the park property has seen a fair amount of disturbance. The summary of previous archaeological investigations in the 2-km radius surrounding A.B. Sawyer Park demonstrated that prehistoric sites in the area generally occur along reliable water sources such as tributaries of Beargrass Creek and the karst system. Judging by the known sites and prehistoric context, temporal periods and site types most likely encountered include Middle Archaic, Late Archaic, Early Woodland, or Middle Woodland lithic scatters. Paleoindian sites also are expected due to the presence of sinkholes with springs.

Two historic structures have been previously documented within a 2-km radius of the park; one has been demolished and one has been listed in the NRHP. Six cultural-historic investigations have been completed in the vicinity of the park. These include three cultural-historic surveys, one multiple property listing, and two contexts. Unrecorded cultural-historic sites include the Whipps Millgate Subdivision, the University of Louisville campus, and A. B. Sawyer Park. One cemetery, the Whips Cemetery, lies within the park property. One stone was documented that may have belonged to Sarah Leland Whips. A number of others are expected. Although well maintained, the cemetery has been thought by some to be a small dog park. No traditional cultural properties have been identified within the park.

Recommendations

Archaeological Resources. Areas of the park that have not been previously surveyed should be subjected to subsurface testing. In particular, areas surrounding the sinkholes and the drainages should be of high priority. In addition, public education regarding the importance of intact archaeological resources should target the Lyndon Recreation Association. Significant ground-moving activities should occur only after an archaeological survey. Monitoring should be encouraged. Coordination and cooperation with the LRA should be encouraged. The heavily wooded buffer surrounding the sites should be retained. They not only provide a buffer to security of the locations but also to environmental hazards.

Cultural- Historic Resources. With regard to the historic context of the area, additional studies could illuminate many of the trends touched on here. Further study could better document genealogical information of the Dorsey, Ormsby, Lawrence, and Whips families involved. Continued communication with local informants could add depth and details to much of the context. The collection of family histories, identification of the locations of demolished structures, and documentation of photographs and records are all possible avenues of further research. In addition, such methods of investigation are the only way to discover or confirm traditional cultural properties that might exist in the area. A survey of the park could assess the faciltites and landuse as a historic designed landscape.

In addition to the tangible resources, the intangible resources should be documented and shared. The Louisville Recreation Association could be appreciated as a cultural group with its own associated organizational history, stories, and cultural practices. Their capital campaign should be encouraged. Development of an internal master plan, if this has not already been completed should be encouraged, and should be coordinated with the park's master plan. Documentation of policies, number of participants, fees, contracts, chemical storage, and fuel storage are some factors that could be included.

Cemeteries. Further documentation of the Whips Cemetery should be conducted. Avenues of research might include genealogical researchers. Searches of crime and newspaper reports regarding vandalism of the cemetery could be completed. While a marker for the cemetery might honor the families interred, it would also draw public attention to the plot. A small sign at the gate would be appropriate.

Public interpretation projects could highlight a variety of these themes and could take various forms. The following are suggestions, but the possibilities are by no means limited to these. Additional vision could come from partnerships with community groups. From school groups completing class projects; to church and community groups looking for service projects; to 4-H, Boy Scout, and Girl Scout groups completing badges; community input adds to the depth of the finished work.

With the continued completion of pedestrian and bike trails connecting A. B. Sawyer Park to the Louisville Loop, increased traffic will permit additional interpretation projects, including signage. However, the security of the resources should be of utmost importance at all times. In particular, the rockshelters and cave sites located just outside the boundaries of the park should be concealed and preserved.

7
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1.6 Geologic Information

The Beargrass Creek watershed is in the Outer Bluegrass Physiographic Region of Kentucky. Rock units in the Outer Bluegrass region are generally thin-bedded limestones, dolostones and shales (McDowell, 2001). Although most of the Outer Bluegrass is characterized as having low- to moderately-developed karst, the geologic formations underlying Beargrass Creek watershed exhibit well-developed karst. In particular, the watershed is underlain by the Sellersburg, Jeffersonville and Louisville limestones, with minor amounts of New Albany Shale and Quaternary deposits.

The Quaternary deposits are derived from a variety of sources. Kepferle (1974) notes terrace deposits, loess, glacial outwash, lacustrine deposits and alluvium. However, for the purposes of this report these will be considered holistically as undifferentiated Quaternary deposits (this includes minor amounts of artificial fill). Kepferle (1974) describes the New Albany Shale as silty and carbonaceous, appearing massive in fresh exposures but weathering to thin, brittle chips. Shale is typically thought to inhibit groundwater movement, and therefore, karst development. However, in the Beargrass Creek watershed the New Albany Shale is rather thin, limited in geographic extent, displays sinkhole formation and has active karst conduit flow beneath it (Ray and others, 2008).

The three limestone units referenced above are the focus for karst development in the Beargrass Creek watershed. The Sellersburg Limestone is partly dolomitic, very fine grained and occurs in thin beds. The Jeffersonville Limestone is also partly dolomitic, but is coarse grained and thinly crossbedded. The Louisville Limestone is dolomitic, very fine grained and occurs as thin to thick beds (Kepferle, 1974). Evidence of significant karst development includes large cover-collapse sinkholes and documented groundwater velocities in excess of 1.4 km/day (Ray and others, 2008). Numerous tracer tests from sinkholes and stream swallets within the watershed provide further evidence of karst conduit flow.

These groundwater recharge, or insurgence, features typically do not adequately attenuate or filter contaminants entering the karst drainage network. Potential impacts to water quality in karst regions can take various forms. Thrailkill and others (1982) note that due to the dendritic pattern of karst drainage systems, NPS contaminants can be introduced across a large area and coalesce to be discharged at a single spring. Thus, NPS pollution can be concentrated at one spring which may have significant impacts to the water quality of the receiving stream. Conversely, well-developed karst drainage may also have a radial discharge pattern from topographic highs, allowing contaminants from a single source to be dispersed over a large area (Joseph A. Ray, oral comm. 2008).

Geologic formations in the Beargrass Creek watershed are summarized in Table 1.2 and illustrated in Figure 1.3 (Kepferle, 1974; Nelson, 2002a-e and Ray and others, 1994).

Table 1.2 Geologic Formations in the Beargrass Creek Watershed

Geologic Formation	Karst Development	Hydrogeologic Sensitivity to Pollution
Quaternary Deposits	None	Moderate - significant permeability
New Albany Shale	Minor	High - thin shale underlain by significant karst development
Sellersburg Limestone	Well-Developed	Extremely High - swallet and shaft drain with conduit flow
Jeffersonville Limestone	Well-Developed	Extremely High - swallet and shaft drain with conduit flow
Louisville Limestone	Well-Developed	Extremely High - swallet and shaft drain with conduit flow

Figure 1.3 Geologic Map of the Beargrass Creek Watershed

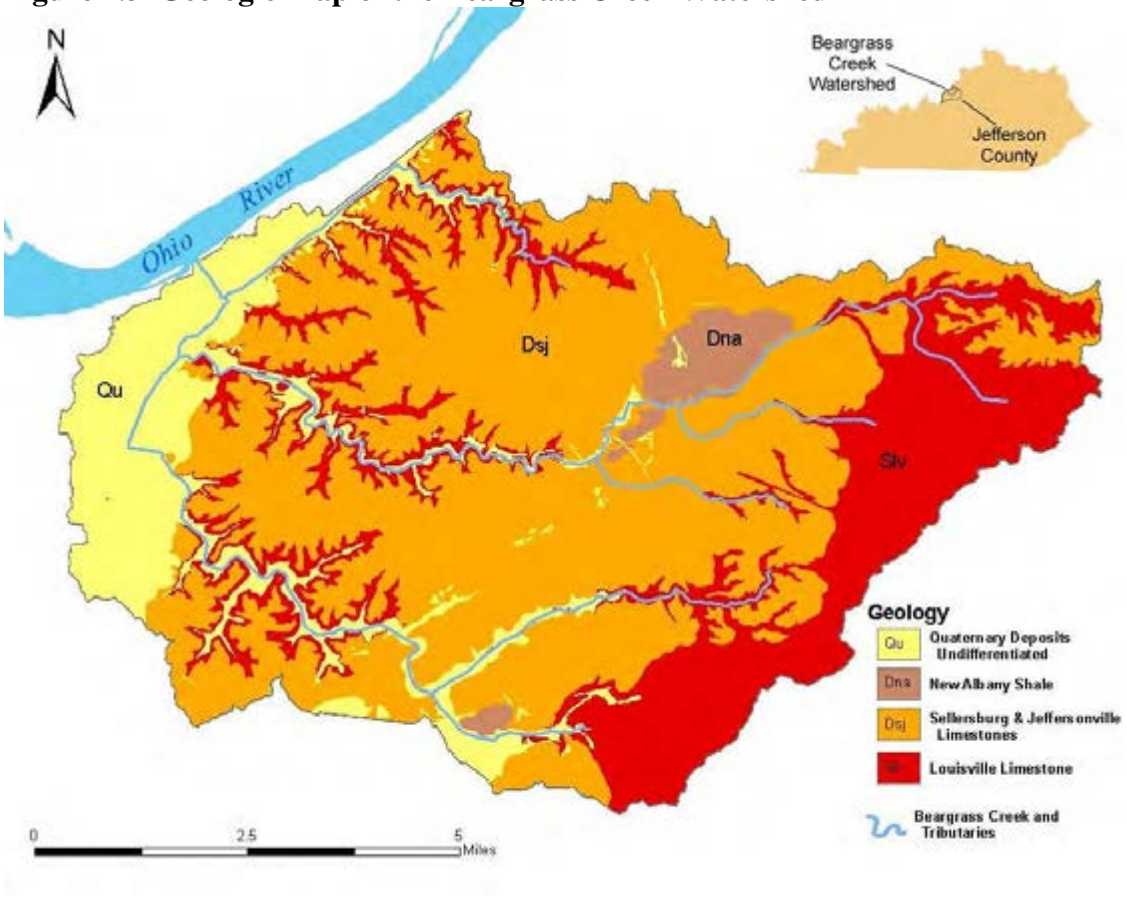


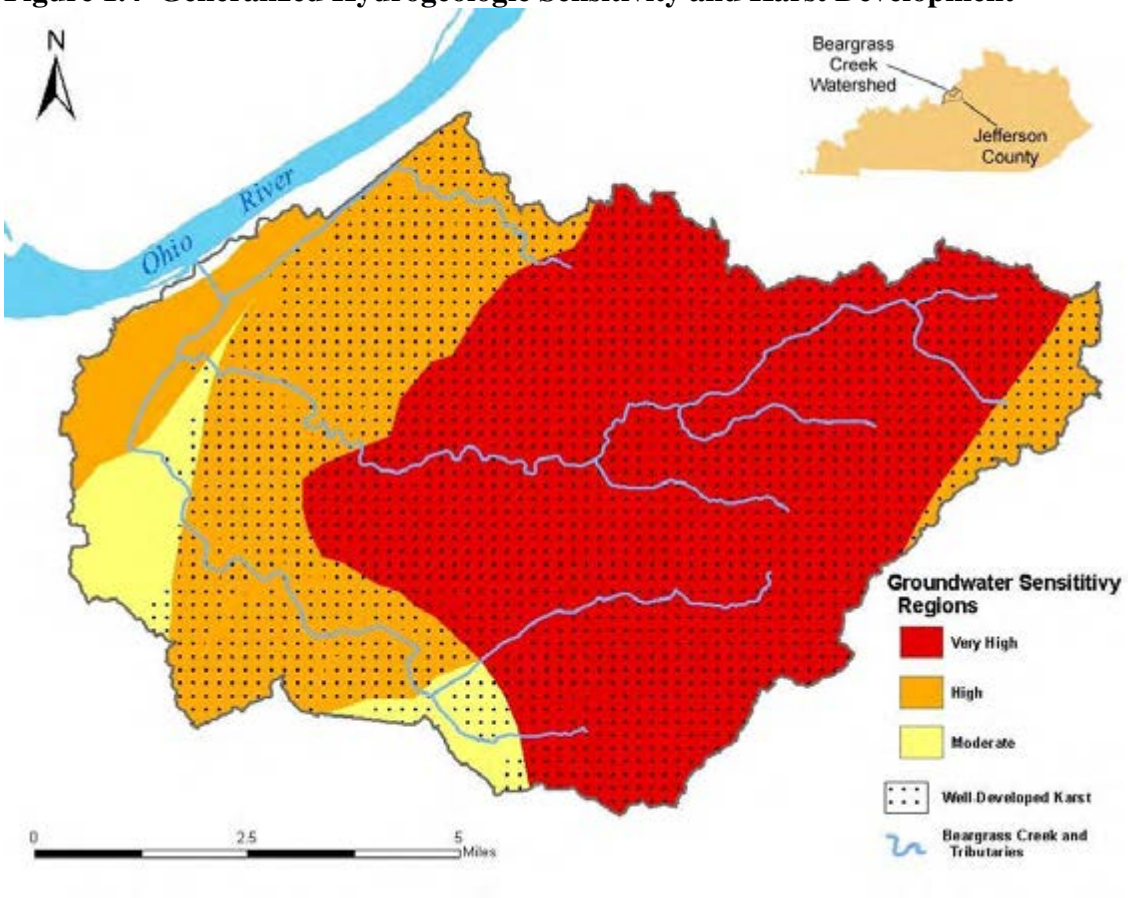
Figure 1.4 illustrates the generalized hydrogeologic sensitivity of geologic formations that underlay the Beargrass Creek watershed. The hydrogeologic sensitivity of an area is defined as "the ease and speed with which a contaminant can move into and within the groundwater system". The hydrogeologic sensitivity ratings range across five categories. The criteria that control these sensitivity ratings are recharge to the system, flow rate and

dispersion potential within the system. Low sensitivity ratings are characterized by slow, diffuse recharge, flow and dispersion. Groundwater movement is through any combination of tight fractures, intergranular porosity or bedding plane partings and discharge is localized. Higher sensitivity ratings are characterized by rapid, turbulent recharge, flow and dispersion. Groundwater recharges via sinkholes, swallets and shaft drains, flows through solutionally enlarged fractures or conduits and dispersion may be widespread or radial (Ray and others, 1994).

The hydrogeologic sensitivity ratings within the Beargrass Creek watershed are predominantly high. This indicates that the geologic formations underlying the Beargrass Creek watershed have relatively large infiltration pore size and groundwater flow velocity with the potential for widespread and radial dispersion patterns. Areas underlain by karst terrane can have rapid groundwater flow rates and complex flow routes. Stormwater and associated pollutants can quickly percolate through soils, or infiltrate stream swallets and sinkholes with little or no filtration or attenuation of the contaminants. Groundwater velocities within conduits are commonly measured in thousands of feet per day instead of the typical rate of inches or feet per year in non-karst systems. Ray and others (2008) note verified, traced groundwater velocities in the Beargrass Creek watershed exceeding 1.4 kilometers per day.

In order to be conservative from a management perspective, all surface runoff is modeled assuming that it flows consistent with surface catchment topography. With the exception of the small karst addition to the Middle Fork subwatershed as discussed earlier, all other karst drainage appears to be confined to the overall watershed. However, additional refinement of the resulting loading allocations may require a more in-depth karst analysis for particular catchments.

Figure 1.4 Generalized Hydrogeologic Sensitivity and Karst Development



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A.B. Sawyer Park Master Plan

We need your input! This survey is part of the master planning project underway for A.B. Sawyer Park. Please take a few minutes to let us know how you use the park. Thank-you!

1. Your zip code:

2. How often on average do you visit A.B. Sawyer Park?

__ 1 - 3 times a week or more
__ about once a week
__ about once a month
__ about once a year
__ never

3. When visiting A.B. Sawyer Park, do you:

__ participate in activities sponsored by the Lyndon Recreation Association?
__ use Park facilities not associated with Lyndon Recreation Association?
__ both of the above.

4. How long do you usually stay in the park when visiting?
(Please select one answer)

__ 1 hour or less
__ 1-3 hours
__ more than 3 hours
__ it depends (please explain)_____
_____
_____

5. What time of day do you most often visit the park?

__ 7:00 a.m. to 9:00 a.m.
__ 9:00 a.m. to 12:00 noon
__ 12:00 noon to 4:00 p.m.
__ 4:00 p.m. to 7:00 p.m.
__ 7:00 p.m. to 11:00 p.m.
__ 10:00 p.m. to 7:00 a.m.

6. How do you normally travel to the park?

__ on foot
__ bicycle
__ car
__ public transportation
__ other_____

7. If you currently drive to the park, would you consider walking or biking if a safe pleasant route were available?

__ yes
__ no

8. How close do you live to the park?

__ right next to the park
__ within a ¼ mile
__ within a ½ mile
__ ½ mile or greater

9. When you come to the park, do you come (check all that apply)

__ alone
__ with friends
__ with family
__ with a sports team
__ with a group (not a sports team)

10. If you come to the park with children, what age group do they fall into? (check all that apply)

__ toddler
__ 3-5 years old
__ 4-7 years old
__ 7-12 years old
__ 13-16 years old
__ 16 - 18 years old

11. What do you do when you visit the park?
Please rank numerically with #1 being most frequent.

__ play baseball
__ play football
__ play tennis
__ jog/run
__ leisure walking/ measured walking
__ walk a dog
__ picnic
__ watch a sporting event
__ enjoy nature
__ relax
__ meet friends
__ attend organized activities
__ play pick-up sports
__ sit at a table or bench
__ use the playground
__ use the restroom
__ use the recycling center
__ enjoy view from the road

12. How satisfied are you with the following facilities/services/amenities within the park. (check one for each)

	very satisfied	somewhat satisfied	not very satisfied	no opinion	
general maintenance	_____	_____	_____	_____	_____
cleanliness / litter pick-up	_____	_____	_____	_____	_____
storm drainage					
safety / security	_____	_____	_____	_____	_____
access to the park	_____	_____	_____	_____	_____
access within the park					
condition of turf	_____	_____	_____	_____	_____
condition of trees & shrubs	_____	_____	_____	_____	_____
tennis courts	_____	_____	_____	_____	_____
ball fields	_____	_____	_____	_____	_____
parking	_____	_____	_____	_____	_____
walkways	_____	_____	_____	_____	_____
views, vistas and scenery	_____	_____	_____	_____	_____
restroom	_____	_____	_____	_____	_____
signs	_____	_____	_____	_____	_____
lighting	_____	_____	_____	_____	_____
benches	_____	_____	_____	_____	_____
drinking fountains	_____	_____	_____	_____	_____
playgrounds	_____	_____	_____	_____	_____
picnic areas	_____	_____	_____	_____	_____
conduct of other users	_____	_____	_____	_____	_____
parking	_____	_____	_____	_____	_____

13. What do you like best about the park?

_____
_____
_____
_____

14. What do you like least about the park?

_____
_____
_____
_____

15. What ideas would you suggest to improve the park?
This could include adding new facilities and activities or taking existing ones away.

_____
_____
_____
_____
_____
_____

16. Please share any thoughts about the look and feel of the park, along with the amenities within it.

_____
_____
_____
_____
_____
_____
_____

17. What is your age range?

__ 10 – 16
__ 17 – 24
__ 25 – 35
__ 36 – 45
__ 46 – 64
__ 65+

18. What is your gender?

__ female
__ male

19. Are you completing this survey as an individual user or as part of a group, class or team? If part of a group / class / team, with which group are you associated?

__ individual
__ group _____
__ both

Thank-you for participating in our survey. Results will be available at the next A.B. Sawyer Park master plan meeting. We look forward to seeing you there!

A.B. Sawyer Park Master Plan

Stakeholder Interview: Lyndon Recreation

July 13, 2011

Present: Tom Evans, General Manager
Tim Lentz, Grounds Supervisor
Bryan Morrison, Board Member
Martha Berner, Metro Parks
Jon Henney, GS&P

Interview Questions

The following questions are representative of the type of information that Lyndon Recreation can contribute to the data collection phase of the master plan:

1. Existing Facilities
    a. Concessions (square footage, equipment, how each is used, etc.)
        - During spring and summer season, each team must provide volunteers to staff the concession 1 night; during fall season, concessions staffed by paid, seasonal employees
        - Spring/summer seasonal concession staff is 5 – 3 at main concession and 2 at smaller concession
        - Fall seasonal staff can be as much as 11
        - Paid employees do all of the cooking
        - Smaller concessions do less cooking (only hotdogs)
        - Need restrooms by stand near fields 11 & 12; larger rest rooms by small concession near football field. Restrooms by large concession recently updated but are not accessible
    b. Multi-purpose building (square footage, equipment, how each is used, etc.)
        - Fix A/C
        - Need ability to use building year round (i.e., monthly Board meetings). Water is turned off at park in early December and back on in mid-March, so no access to bathrooms (building is heated but restrooms are not)
        - Poor natural light (no windows in office or meeting room)
        - Meeting room is too small. Needs to be able to accommodate representatives from 20 teams plus staff
    c. Storage (what are storage needs, how is it currently being addressed, etc.)
        - Need umpire lockers. Umpires currently use meeting room and have no place to store their equipment

- General storage (uniforms, sports equipment, trophies, office supplies, etc.) is maxed out
- Garage currently stores 2 tractors, a club cart, a golf cart, and 2 mowers plus attachments for tractors. No room for additional equipment. Would like to be able to have a 3rd mower and a place to store it
- "Pen" currently stores diesel fuel, diamond dry, pure line, and similar bulk items. Would like a covered/enclosed area for much of these materials. Would like a second fuel tank for unleaded
- Would like a storage shed for both the football field and a future football practice area (small garage size – 15' x20')

d. Utilities (type, location, capacity, service history, etc.)
- PA system is housed in multi-use building and works well
- Lights for fields are adequate with the exception of adding lights to the football field (low priority)

2. Operations
   a. Overview of routine operations (business office, maintenance, etc.)
      - Fields 1-3 are dedicated to T-Ball and Pee Wee softball/baseball
      - Staff hours: Tim 6am -3:30 pm; Tom: 9 am – 11 pm (4 month season); 9am – 4 pm (off season)
      - 10 teams/field (M-F) is limit according to Tim
   b. Operations budget
3. Programs
   a. Overview of existing programs (size/make-up, length/start of season, maintenance/operations issues associated with each, etc.)
      i. Baseball
      ii. Football
      iii. Tennis
      iv. other
4. Improvements already underway (funded and/or contracts let)
   a. Example - bleacher/bleacher pad replacement
      - All bleachers/bleacher pads are being upgraded and should be completed by the end of the year
      - All dugouts are being upgraded and should be completed by end of the year
5. Known issues (be as specific as possible)
   Example – need for football practice facilities (4 practice fields, 50' x 50' minimum/each)
      - Indoor practice facility is top priority to allow for off season practice and to generate year round income. Facility would accommodate infield practice as well as indoor batting cages. Comparable facilities are renting for $100/hour
      - Would like a playground close to fields 1-3 where smaller children are playing
      - Need scoreboards for fields 1-3 (cost estimate of $10k/each, installed); need a larger scoreboard for field 4 (estimate of $15k, installed)

- Need for a pavilion for picnickers (possibly one near ball fields for League users, one elsewhere)
- Need for an informational sign to post events, practice cancelations, etc. Better visibility for "Lyndon Recreation"
- Need more trees (see concept plan) for wind screens and to provide shade
- Need landscape improvements to make existing monument/flag pole more of a focal point
- Would like to have scoreboard clocks on all fields
- Add/upgrade benches for players on T-Ball fields (1-3)
- Add score towers for fields 1-3

6. Institutional knowledge/history of the park
    a. People, events, physical changes, etc.
    b. Programs that the park had and no longer has (what happened?)
        - Lyndon Recreation is working with Corn Island to provide this information

Stakeholder Interview: Metro Parks Landscape Division

July 26, 2011

Present: Mesude Duyar, Forestry Manager
Amelia Royalty DeMoisey, Landscape Supervisor I
Martha Berner, Metro Parks
Jon Henney, GS&P

Interview Questions

7. Operations/Staffing
    a. Forestry and Landscape are a joint division, with Forestry staff located at Creason Park and Landscape staff at AB Sawyer
    b. Landscape staff is responsible for tree installation, trimming/maintenance throughout the park system
        - Staff of 10, ~ half are field personnel
        - Large equipment kept at AB Sawyer includes: skid loader, 2 arrow boards (?), 4 trailers, water tank, 3 mini dumps, 3 pick up trucks, skid loader attachments (auger, fork lift)
        - Small equipment/tools (i.e., weed eaters, chain saws) are kept in former kennel building on site
        - Equipment not kept at AB Sawyer includes chipper, tractor, bush hog
        - Wood chips, picnic tables, kept on site
8. Facilities
    a. Office staff housed in former police substation. Office space is adequate though layout of offices is awkward
    b. Storage, meeting space is adequate
    c. One "men's" and one "women's" restroom. Women's restroom lacks locker space. Restrooms are shared with staff from recycling center
    d. Parking is adequate
    e. Would benefit from covered outdoor storage area to protect/secure larger equipment

A.B. Sawyer Park Master Plan

Stakeholder Interview: Metro Parks Maintenance Division, AB Sawyer

August 12, 2011

Present: Aubrey Tierney, Supervisor II
Martha Berner, Metro Parks
Jon Henney, GS&P

Interview Questions

9. Operations/Staffing
    a. AB Sawyer is one of 3 Maintenance Division facilities including Vettiner and Creason
    b. AB Sawyer has 9 full time staff (Supervisor II, Supervisor I, and 7 Worker IIs, two of which are CDL certified to haul heavy equipment)
    c. They currently employ 1 seasonal staff person, though have 4-5 during the summer
    d. Staff is responsible for mowing, trimming, and general maintenance for the following parks: Carrie Gaulbert Cox, Thurman Hutchins, Hounz Lane, Locust Grove, Crosby, Berrytown, Long Run/Long Run Cemetery, Hays Kennedy, and Mary T. Meagher Aquatic Center (Crescent Hill Park)
    e. Equipment kept at AB Sawyer includes:
- (9) riding mowers, 1 large Toro mower
- 2 tractors
- 1 bucket loader
- 4 trailers
- 2 mini dumps
- 1 large roll back (requires a CDL driver)
- 1 small roll back
- 2 crew cab pick up trucks
- 1 Ford Ranger
- 2 progressive mowers
    - Small equipment/tools (i.e., weed eaters, chain saws, push mowers, blowers, etc.) are kept in shed
    - Equipment not kept at AB Sawyer includes chipper, tractor, bush hog
    - Playground wood chips, picnic tables, kept on site at Landscape Division
    - Other misc. bulk material including straw, salt (seasonal)

    f. Staff performs routine equipment maintenance at this location. Major repairs are sent to Louisville Metro parts shop or to vehicle repair shop

g. Staff attempts to cut every park in the district every 2 weeks, though practically speaking it is often every 2.5-3 weeks (get pulled off mowing as other issues come up)
h. Parks has a separate playground crew that maintains the playground areas. Maintenance supplies and delivers mulch to each playground site

10. Facilities
    f. Facility consists of a concrete block/metal frame structure with a small office, a unisex bathroom, a combination break room/locker room and a equipment storage/shop area accessed by two overhead doors.
    g. Facility also has a fuel tank for diesel and unleaded fuel located at the end of the building.
    h. Access is provided on each end of the building with parking along the back of the structure as well as outdoor storage for tractors, trucks, trailers and other large equipment.
    i. Storage room is located on the end of the building and houses hand tools (weed eaters, chain saws, blowers, push mowers, etc.). An open air storage area next to the storage room contains bulk materials like straw.
11. Assessment
    a. Operations/Staffing
        - Parks should evaluate need for additional full time staff given the size of the service area being maintained
        - Planning process should look at efficiencies of shared resources if Maintenance and Landscape Divisions both remain housed on-site
    b. Facilities
        - Would benefit from covered outdoor storage area to protect/secure larger equipment
        - Upgrade restroom to handicap accessible
        - Consider separate men's/women's facility, combining restroom and locker room needs
        - Outdoor storage area is at or nearing capacity; consider a more efficient layout
        - Use of land area between Maintenance/Landscape facilities needs to be evaluated
        - Storage of hand tools isn't adequately secure

A.B. Sawyer Park Master Plan

Stakeholder Interview: FGG Plaza I & II

July 26, 2011

Present: Becky Vice, Leasing Agent, CBRE (phone interview)
(502) 429-6700
bvice@cbrelouisville.com
Jon Henney, GS&P

FGG Plaza 1 & 2 Louisville 1, LLC through FGG Plaza 1 & 2 Louisville 25, LLC, a Delaware LLC.

Interview Questions

A phone interview was conducted with the leasing agent for the FGG Plaza I & II buildings.

1. Ms. Vice was asked about her understanding of the relationship between the park and the FGG Plaza building owners regarding shared parking. She responded that there as an "informal understanding" that park patrons could use their parking immediately adjacent to the park after office hours. She said she was not aware of any formal agreement or binding element requiring such an arrangement and did not thing that the building owners would be interested in encumbering the property in such a fashion.
2. Ms. Vice was asked about her knowledge and understanding of the "pedestrian crossover access" shown on the approved development plan (docket 9-13-88, revised 12/11/03) in the northwest corner of the parking closest to the park. Ms. Vice was not aware of such a designation. A pdf of a portion of the plan showing the access was forwarded to her on 8/5/11.
3. Ms. Vice was asked if she was aware of any issues/concerns that the property owner would like to see addressed as part of the master plan. She responded that she was not aware of any significant issues/concerns, though mentioned that littering and speeding were periodic issues.
4. Ms. Vice was asked about the value of the park to building tenants and how they used the park. She stated that felt tenants did use the park (primarily to walk) but had no real sense of how much it was used by occupants of the building. When asked about interest in any other use or amenities to the park, she speculated that tenants might be interested in places to sit and eat lunch or have more options for walking/jogging.
5. Ms. Vice stated that the 3rd building was owned by Norm Risen and the leasing manger was Shelly Chandler.

A.B. Sawyer Park Master Plan

Stakeholder Interview: FGG III

August 11, 2011

Present: Shelly Chandler, Leasing Agent, Norm Risen, Managing Partner (phone interview)

(502) 992-6165
shelly@r3-realty.com
Jon Henney, GS&P

Plaza 3, Wittington Realty Partners (WRP), LLC

Interview Questions

A phone interview was conducted with the leasing agent and owner for the Plaza III buildings.

1. WRP purchased the building in 2006 and own 70% of the parking. Ms. Chandler and Mr. Risen were asked about any issues/concerns they had regarding the park. They stated that initially parking, rest room use (park patrons using the rest rooms in the office building) and litter were all an issue, particularly during heavy use of ball fields (i.e., spring season). WRP worked with the previous manager at Lyndon Recreation and felt that there have been real improvements. Lyndon Recreation has put flyers on cars to help address abuse of parking and liter issues and WRP secured the building to fix the rest room issue.
2. WRP was asked about their understanding of a shared parking agreement. They stated that when they purchased the building they were told by Lyndon Recreation that an agreement existed but have found no evidence of such an agreement in their research.
3. WRP stated that the most pressing issue is speeding by park users through WRP's parking lot, particularly when late for game. Stated that most ball field parking is occurring from 4:30 on.
4. WRP would be interested in a more formalized arrangement for shared parking in order to establish clearer rules and responsibility and to share in liability.
5. When asked about park amenities and what they felt their tenants would want to see, a pavilion (or other facility for lunch time use) and more access for walking were mentioned.
6. WRP also noted that two larger tenants in Plaza II (Almost Family and Senior Care) hold annual family events at the site that would include use of the park.
7. Neither Ms. Chandler or Mr. Risen realized that the park was a Metro facility, believing it was only a base ball facility for Lyndon Recreation.
8. Asked to be added to the notice list for future public meetings.

Stakeholder Interview: NE YMCA

August 19, 2011

Present: Mark Thornell, District Executive Director, NE YMCA
Martha Berner, Metro Parks
Jon Henney, GS&P

Interview Questions

A face-to-face meeting was conducted with the parties identified above present.

1. Operations/Staffing
    a. YMCA is open from 5:00 am – 10:00 pm, M-F; 7:00 am – 7:00 pm, weekends.
    b. This branch has ~7,000 member units equaling over ~14,000 people
    c. Facility maintains a staff of over 200 on 3 shifts (confirm)
    d.
2. Facilities
    a. Outdoor facilities consist of:
        - Water park with concession (concessions managed by Valu-Mart through a partnering arrangement). Opens week before Derby and closes last week of September. Only open on weekends when school is in session.
        - Small ball diamond
        - (1) Field hockey/soccer field
        - (2) play grounds, including Adventure Center for 3-10 year olds (supervised)
        - Parking
3. Programs
    a. Off-site programs
        i. Flag football (~300-400 kids)
        ii. Youth soccer (~1,200 kids – largest program at YMCA)
        iii. Volleyball (~100 kids)
        iv. Field hockey (~200 kids), only spring season
        v. Basketball (~1,200 kids). Play at Westport Middle School
        vi. Baseball/T-Ball (~600-700 kids), only spring season. 3-14 year olds
    b. Cross Country Running/Track. Only YMCA in District with this program. Opportunity for kids to run/train at AB Sawyer. Approximately 70 kids in program. Program run by Jeff Sinclair.
    c. Teen Leaders Club. Focuses on service projects. Seen as an opportunity to partner with AB Sawyer
    d. Licensed pre-school (5-7 classrooms; full time cook; infant to 5 years old)

e. (5) day camps run during summer. Approximately 400-500 kids enrolled. (3) camps are run on-site, (2) are held at Cedar Ridge. Natural trails and pavilions at AB Sawyer would be useful for these camps

Mr. Thornell said that the YMCA wants to be a "good neighbor". He said he would be interested in a more formalized agreement with all parties to address shared parking. He felt that the there was too much fencing separating the Park and the YMCA and would like to have the master plan look at ways to reduce barriers and improve connections. Mr. Thornell also said he would be willing to meet with Parks staff and Lyndon Recreation staff to explore ways to share facilities and programs.

AB Sawyer Park Master Plan

June 21, 2011 Neighborhood Meeting

Meeting Agenda

- Welcome/Introductions
- Master Plan – What Is It; Why Do It?
- Master Planning Process Overview
- Planning Context
- Existing Conditions Inventory/Assessment
- Recent Improvements
- Public Input - Opportunities/Constraints
- Next Steps
- Adjourn

Study Area

A.B. Sawyer Park
9300 Whipps Mill Rd., 40242
(Whipps Mill and Old Mill Roads)

Size: 47.25 acres
Acquired: 1969
Metro Council Representative: Jon Ackerson, 18th

Why Master Plan?

master plan - *n.* A comprehensive plan to provide long-term guidance or instruction

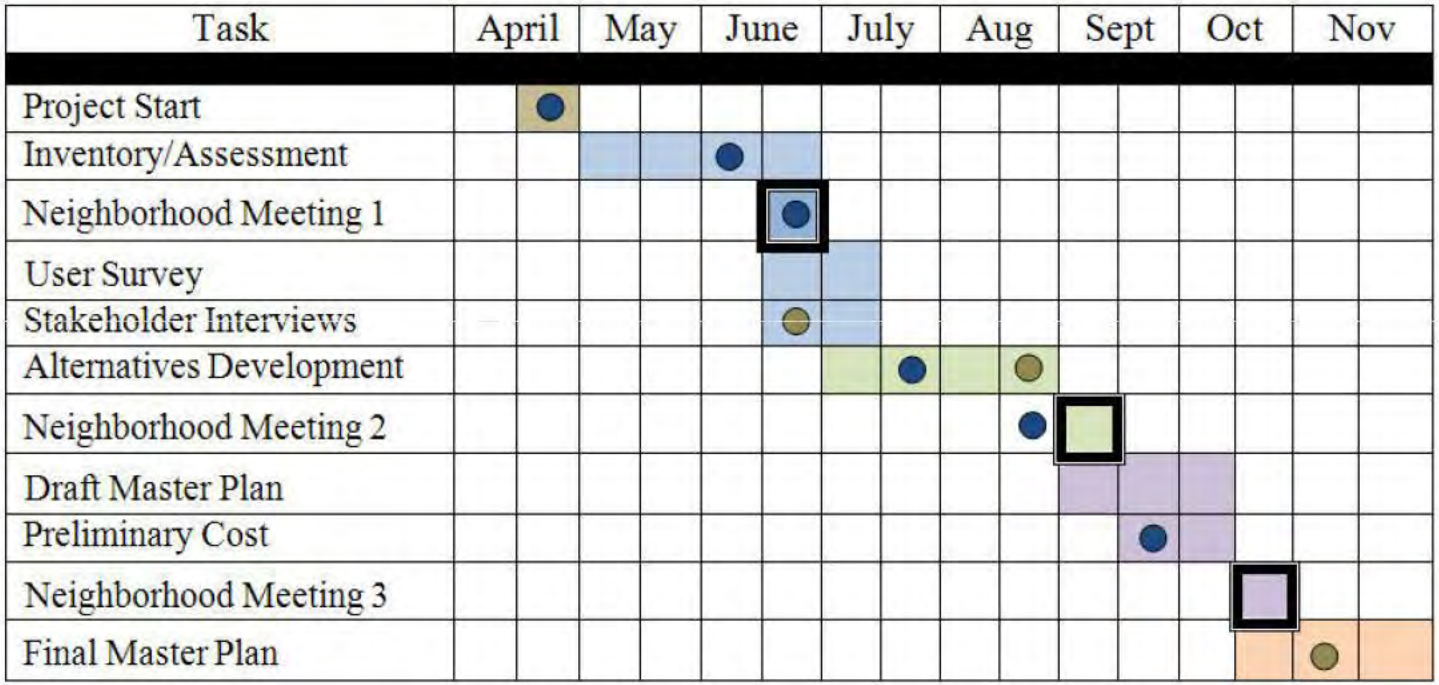
The purpose of a Park Master Plan is to develop a comprehensive vision for a specific parkland in context with its location, natural resources, and community needs. Master Plan provides a framework for the use and development of the park over time.

Master Planning Process

- Public Input
- Inventory and Assessment
  - Natural Features and Landscape
  - Man-made, Historic and Cultural
- Identify Uses/Activities
- Alternatives Development
- Draft Master Plan
- Final Master Plan

Public input occurs throughout the Master Plan process and includes public meetings, stakeholder interviews and user survey

Master Plan Schedule



Neighborhood Meetings

Technical Advisory Review

Project Team Meetings

Park Function

Park and Open Space Guidelines

Park Category	Function	Service Area	Desirable Size	Acres / 1,000 population	Desirable Site Characteristics
Neighborhood Park	Relatively small park which serves a nearby neighborhood or neighborhoods. Provides "walk-to" recreation opportunities for the immediate neighborhood. Area for intense recreational activities, such as field games, court games, crafts, playground apparatus area, skating, picnicking, wading pools, etc.	2 mile radius	less than 20 acres	10 acres/1,000	Suited for intense development. Easily accessible to neighborhood population-geographically centered with safe walking and bike access. May be developed as a school-park facility
Community Park	Medium sized park accommodating active and some passive recreational uses, which serves several surrounding neighborhoods. Area of diverse environmental quality. May include areas suited for intense recreational facilities, such as athletic complexes, large swimming pools. May be an area of natural quality for outdoor recreation,, such as walking, viewing, sitting, picnicking. May be any combination of the above, depending upon site suitability and community need.	3 miles or less	20-100 acres	10 acres/1,000	May include natural features, such as water bodies, and areas suited for intense development. Easily accessible to neighborhood served
Major Urban	Large park with balance of active and passive uses, designed to serve a substantial region of the City or County.	6 miles or less	100-1,000 acres	15 acres/1,000	Include facilities which draw people from all over the County
Regional	Area of natural or ornamental quality for outdoor recreation, such as picnicking, boating, fishing, swimming, camping and trail uses; may include play areas.	up to 1 hour driving time	>1,000 acres	15 acres/1,000	Contiguous to or encompassing natural resources.

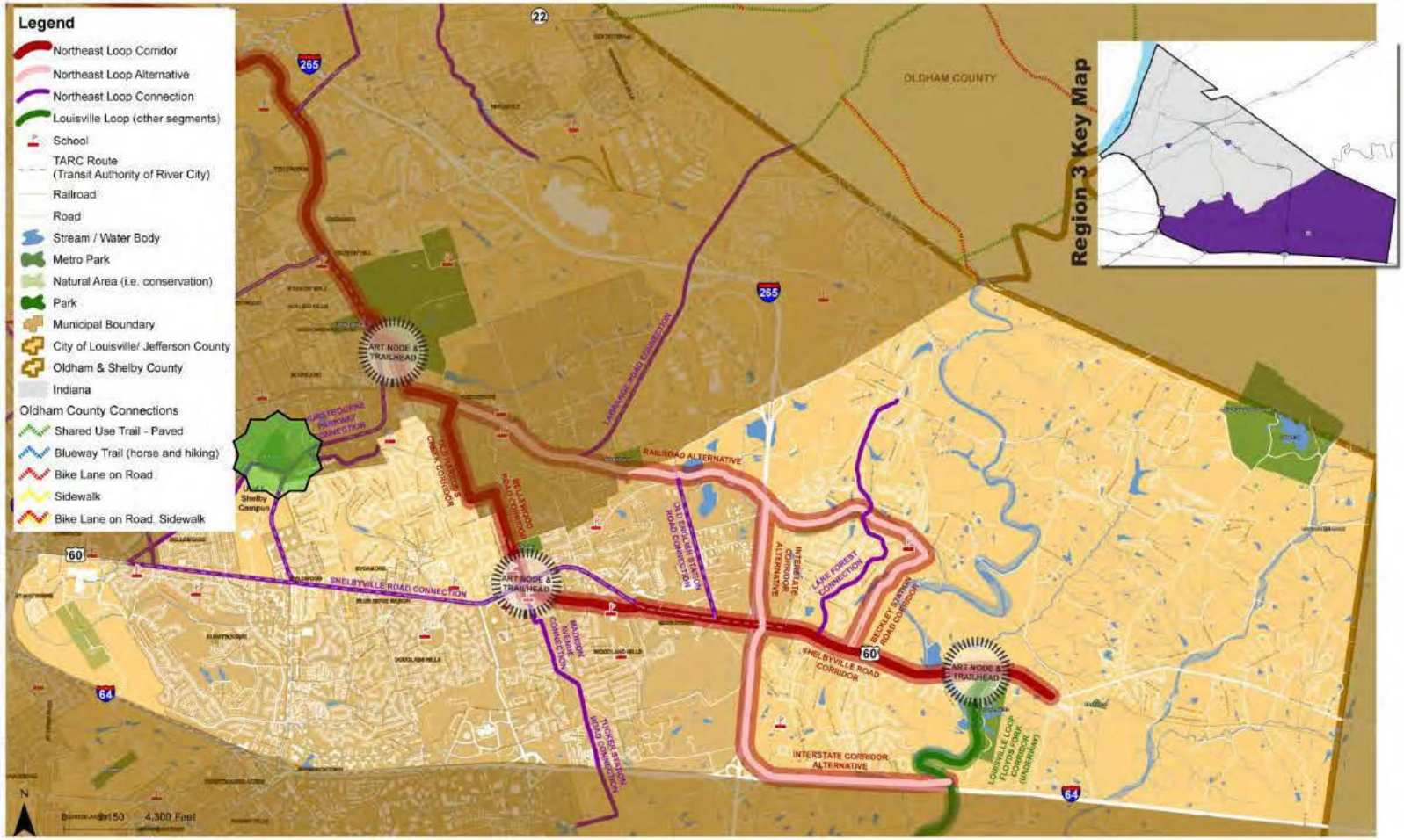
Sources: Louisville Metro Park and Open Space Master Plan
National Recration and Park Association

Planning Context

Linkages


Prop. Multi-Use Path
Prop. Bike Lanes
Existing Greenway
Exist. Multi- Use Path
Exist. Bike Lane
15
31
LA GRANGE ROAD
WHIPPS MILL BIKE LANE
WILLOW SPRINGS
FOREST GREEN GREENWAY
SHELBYHURST MULTI USE TRAIL
OLD DORSEY PLACE
HURSTBOURNE PARKWAY
WHIPPS MILL ROAD
BELLEMEADE
HURSTBOURNE MULTI USE TRAIL
DORSEY WAY
SHELBYVILLE ROAD

Linkages (continued)



Inventory and Assessment

Understanding of the Environmental Context and Existing Conditions

1. Conduct relevant background data collection from local agencies, past site investigations, deeds, similar relevant projects in the vicinity
2. Conduct site inventories for key environmental indicators such as site geology, soils, plant life, animal species
3. Conduct archival and on-site research for cultural and archaeological resources located in the project area and pertinent to the site
4. Research existing area policies and trends such as zoning, land use, and traffic patterns, population, demographics, and recreational trends

Grave Marker for Sarah Leland Whipps

Natural Features and Landscape

Natural Features and Landscape

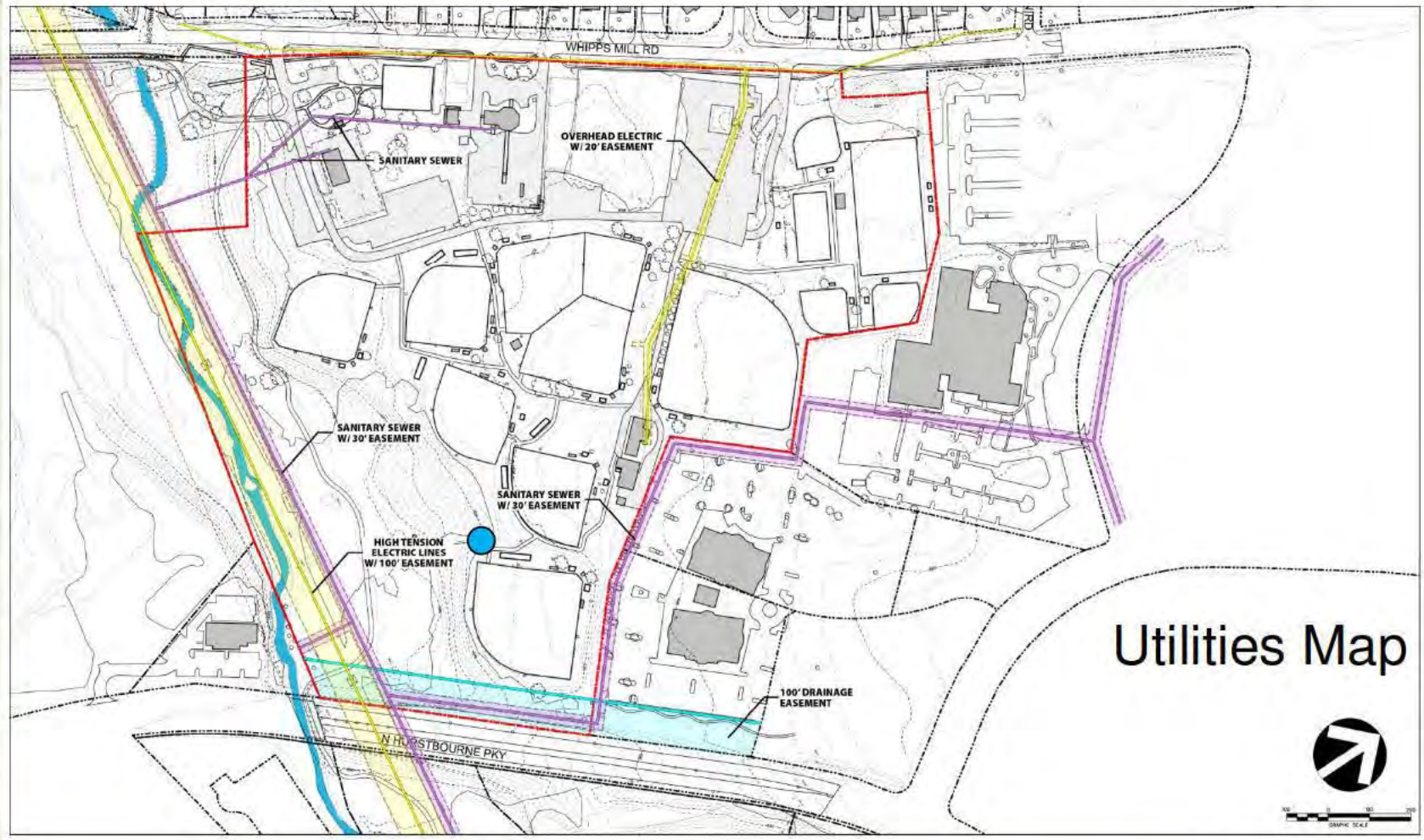
Man-made, Historic, Cultural

A. B Sawyer
Platted From Deeds & Records
LOUISVILLE & JEFFERSON COUNTY
CHILDRENS HOME
~~Ormsby Village~~ - Anchorage, Ky.
9/6/66
MILLER, WIHRY & BROOKS
SAW
(3)

Man-made, Historic, Cultural

Man-made, Historic, Cultural

Man-made, Historic, Cultural



Recent Improvements

- Bleachers/Pads
- Playground Equipment
- Walking Paths
- Play Field Renovations

Your Turn

What do you perceive as the positives of AB Sawyer Park?

- Parking/Access
- Recreational Facilities (physical)
- Recreational Programs
- Comfort/Convenience (i.e., restrooms, concessions)
- Natural/Environmental
- Cultural/Historic

Your Turn

What changes would you like to see at AB Sawyer Park?

- Parking/Access
- Recreational Facilities (physical)
- Recreational Programs
- Comfort/Convenience (i.e., restrooms, concessions)
- Natural/Environmental
- Cultural/Historic

Next Steps

- Project Updates/User Survey Website
  www.louisvilleky.gov/MetroParks/cityofparks/masterplans/ab sawyer master plan.htm
- Stakeholder Interviews
  - Lyndon Recreation
  - Adjoining Property Owners
  - Area Neighborhood Groups
  - Other Recreation User Groups
  - City of Lyndon
- Alternatives Development
- Neighborhood Meeting #2 (early September)

AB Sawyer Park Master Plan

Thank You!

AB Sawyer Park Master Plan

January 17, 2012 Neighborhood Meeting

Meeting Agenda

- Welcome/Introductions
- Study Area
- Master Planning Process Overview
- Master Plan Alternatives
- Public Discussion
- Next Steps
- Adjourn

Why Master Plan?

To develop a comprehensive vision for AB Sawyer Park in context with its location, natural resources, and community needs

Master Plan provides a framework for the use and development of the park over time

Study Area

A.B. Sawyer Park
9300 Whipps Mill Rd., 40242
(Whipps Mill and Old Mill Roads)

Size: 47.25 acres
Acquired: 1969
Metro Council Representative:
Jon Ackerson, 18th

Planning Context

Existing Conditions

Amenities:

Ballfields (12)
Multi-purpose (2)
Playgrounds (2)
Restrooms
Tennis (2)

Master Planning Process

- Public Input (User Survey)
- Inventory and Assessment
  - Natural Features and Landscape
  - Man-made, Historic and Cultural
- Public Input (Public Meeting-6/2011)
- Identify Uses/Activities
- Public Input (Stakeholder Interviews)
- Alternatives Development
- Public Input (Public Meeting-1/2012)
- Draft Master Plan
- Final Master Plan

Alternatives

- 3 Alternatives Developed Based on Analysis and Public Input
- Range From Most Intensive Uses/Least Changes to Least Intensive/Most Changes
- Several New Elements Common to all Three Alternatives

Common Elements

- Increase Tree Canopy
- Improve Multi-Purpose Bldg, Restrooms, & Concession
- Practice Fields
- Additional Trails
- Improve Connections
- Added New Pavilion
- Improve Playgrounds
- Formalize Shared Parking Agreements
- Improve signage
  - Identification
  - Informational
  - Directional

Alternative 1

Alternative 1

- Reclaim Park Frontage
- Re-Align Park Entrance
- More Efficient Parking
- Reclaim Unused/Underutilized Paving For Green Space

(49 fewer spaces but ~ equal in “useable” spaces)

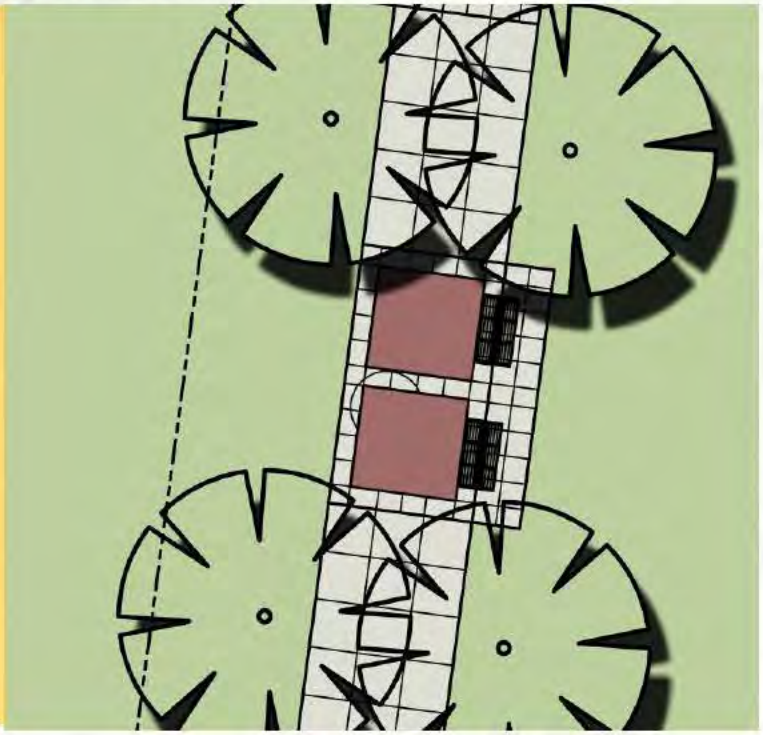
- Elimination of One Way Traffic Pattern

Alternative 1

- Parks Maintenance and Landscape Divisions Remain in Current Locations
- Relocate Recycling Center
- Add Additional Trails
- New Playground
- New Pavilion

Alternative 1

- Convert drive to an “entrance promenade” to create a sense of arrival from parking to ball field complex
- Provide seating, decorative paving, and commemorative signage



Alternative 2

Alternative 2

- Additional Trails
- Improve Connections
- Combine Landscape and Maintenance in New Facility
- New Pavilion Framed on Open Space
- Park Lodge
- Re-Locate Recycling Center Off-Site to Increase Green Space
- Net loss of 36 Parking Spaces (But All Are Functional)

Alternative 3

Alternative 3

- Additional Trails
- Improve Connections
- Landscape and Maintenance Moved Off-Site
- Expanded Open Space
- Tennis Court Moved; New Court Added
- New Pavilion With Redesigned Parking
- Net loss of 29 Parking Spaces (But All Are Functional)

Questions/Comments

Common Elements

Next Steps

- Develop Recommended Plan
- Develop Master Plan Report
- Project Updates Website
  www.louisvilleky.gov/MetroParks/cityofparks/masterplans/ab sawyer master plan.htm

AB Sawyer Park Master Plan

Thank You!

AB Sawyer Park Master Plan

August 21, 2012 Neighborhood Meeting

Meeting Agenda

- Welcome/Introductions
- Master Planning Process Overview
- Draft Master Plan
- Public Discussion
- Next Steps
- Adjourn

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Planning Context

Linkages


Prop. Multi-
Use Path
Prop. Bike
Lanes
Existing
Greenway
Exist.
Multi- Use
Path
Exist. Bike
Lane
15
31

Linkages (continued)

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SAW
3

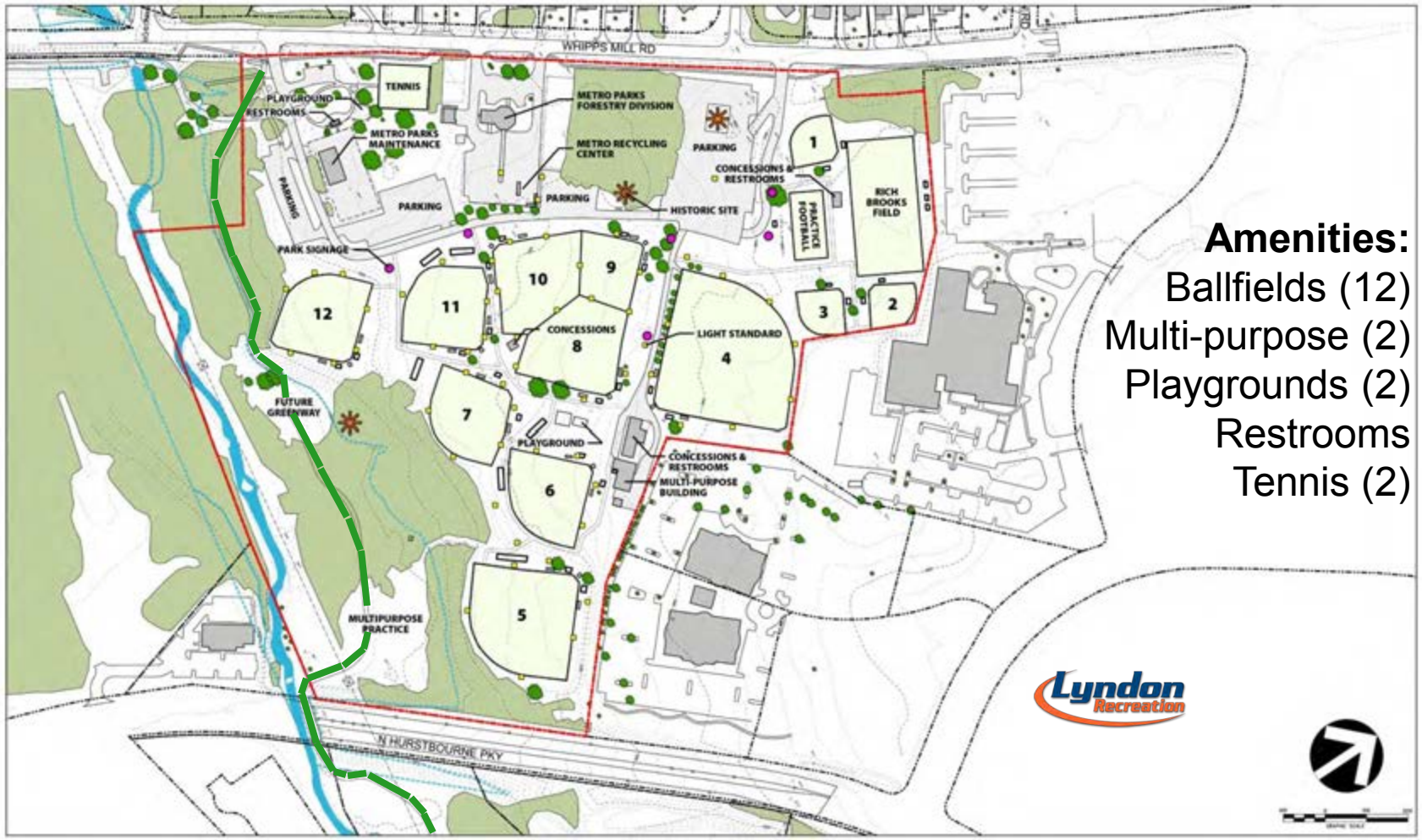
Public Process

Lyndon Recreation

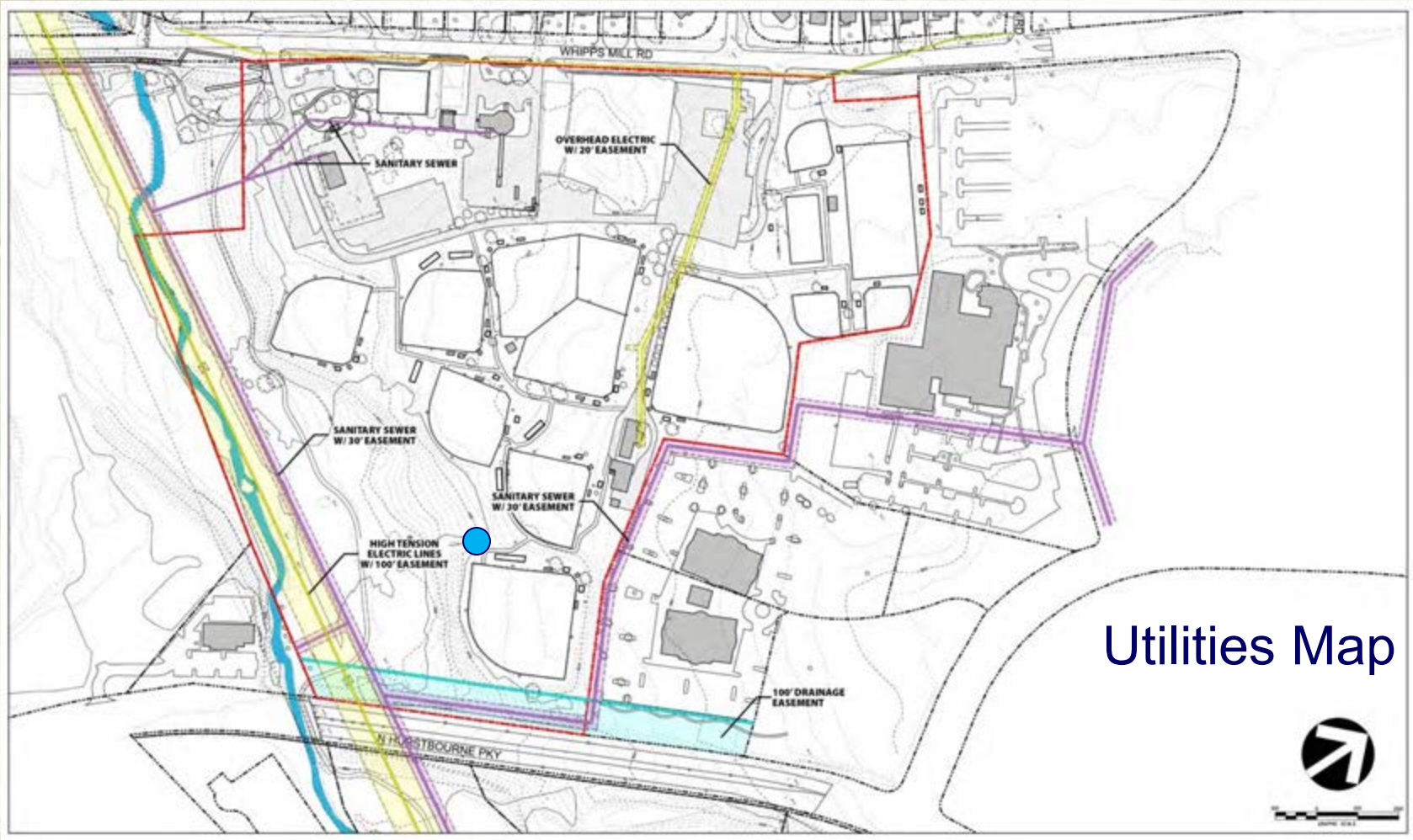
the YMCA

The Park - Today

The Park - Today



The Park - Today



Utilities Map

Recent Improvements

- Bleachers/Pads
- Playground Equipment
- Walking Paths
- Play Field Renovations

Master Planning Process

- Public Input (User Survey)
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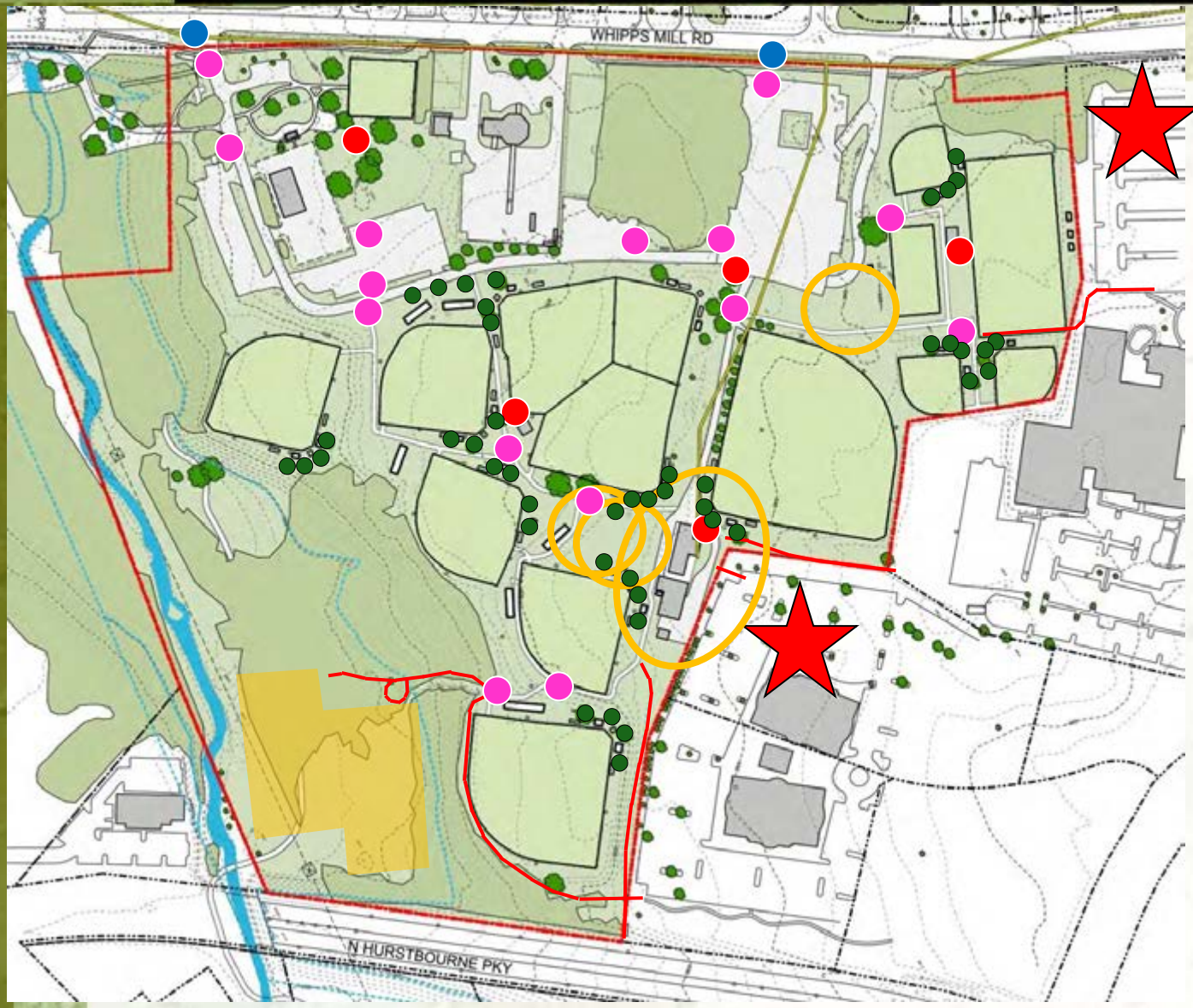
Common Elements



- Increase Tree Canopy
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- Practice Fields
- Additional Trails
- Improve Connections
- Added New Pavilion
- Improve Playgrounds
- Formalize Shared Parking Agreements
- Improve signage
  - Identification
  - Informational
  - Directional

Common Elements

- Re-Align Park Entrance and Improve Efficiency of Parking
- Reclaim Park Frontage by Eliminating Paving For Green Space
- Elimination of One Way Traffic Pattern

Alternative 1

Alternative 1

- Parks Maintenance and Landscape Divisions Remain in Current Locations
- Relocate Recycling Center
- Add Additional Trails
- New Pavilion
- (49 fewer spaces but ~ equal in “useable” spaces)

Alternative 2

Alternative 2

- Additional Trails
- Improve Connections
- Combine Landscape and Maintenance in New Facility
- New Pavilion Framed on Open Space
- Park Lodge
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- Net loss of 36 Parking Spaces (But All Are Functional)

Alternative 3

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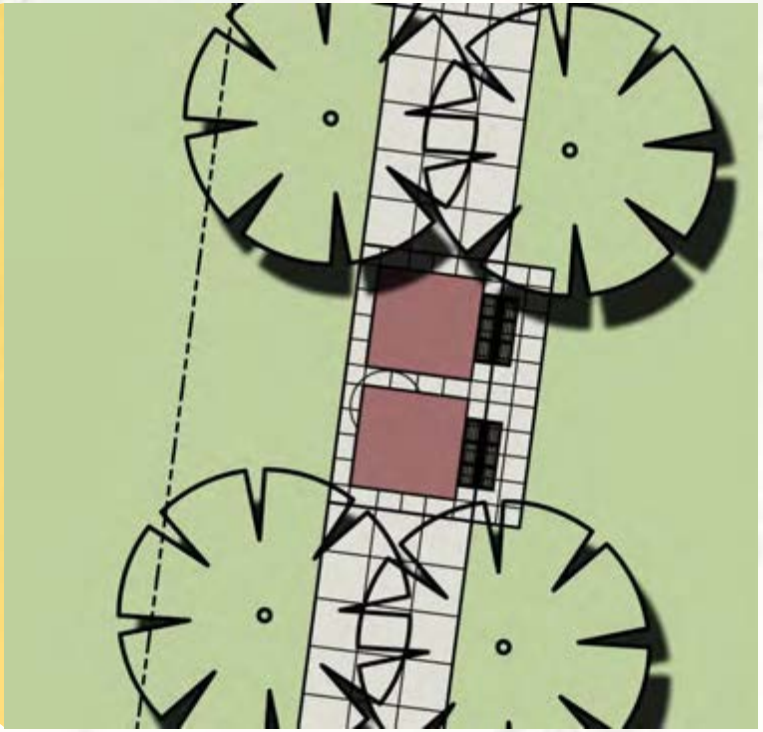

Alternative 3

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Implementation – "Low Hanging Fruit"

"Low Hanging Fruit"

- Practice Fields
- Parking Agreements
- New Connections
- Shade Trees for Bleachers

Mid-Range

- ADA – Exist. Restrooms
- Small Pavilion
- New paths
- Renovated Playground

Implementation: Major Investments

- ADA – Exist. Restrooms
- New Restroom
- Promenade
- Relocate Maintenance
- Large Pavilion w/Parking
- Relocate Entrance w/Parking
- Relocate Landscape
- Move Courts/New Paths
- Remodel Multi-Purpose

Alternative 3 – Prelim. Cost Opinion

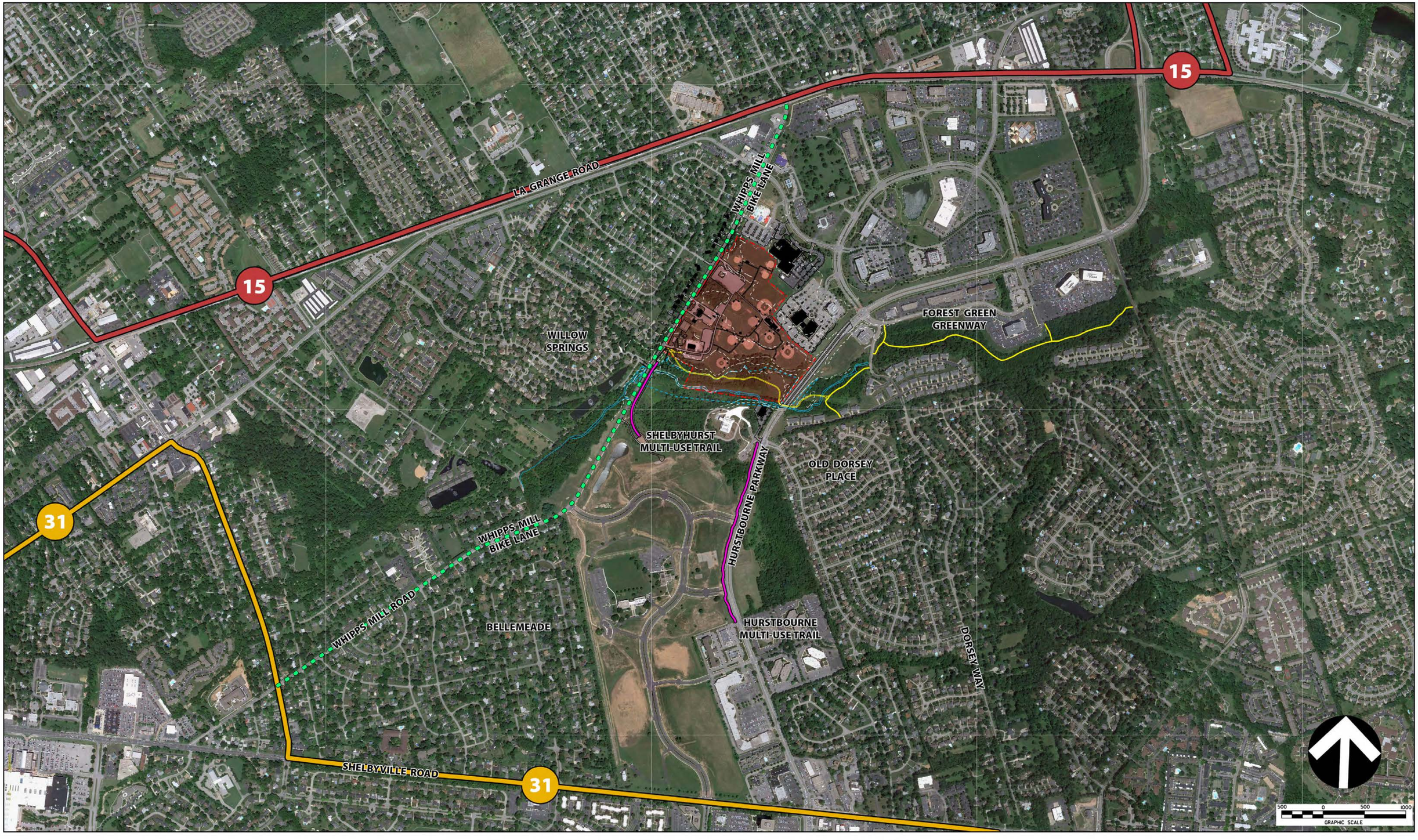
What's Left?

- Finalize Plan
- Develop Master Plan Report
- Project Updates Website
  www.louisvilleky.gov/MetroParks/cityofparks/masterplans/ab sawyer master plan.htm

Questions/Comments

AB Sawyer Park Master Plan

Thank You!



A.B. SAWYER PARK MASTER PLAN

Louisville, Kentucky

LINKAGES MAP

June 21, 2011