



McNeely Lake Park MASTER PLAN REPORT

August 2013



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REDWING ECOLOGICAL SERVICES, INC.



STRAND ASSOCIATES, INC.

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McNeely Lake Park Master Plan

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Acknowledgements

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McNeely Lake Park Master Plan

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Background

Located in Jefferson County, Kentucky, McNeely Lake Park is considered a major urban park under the classification system of the Louisville Metro Parks 1995 Parks and Open Space Master Plan. Major urban parks seek a balance of active and passive uses and often include a facility drawing users from around the county and region. The site is within the Floyds Fork watershed.

McNeely Lake Park was opened in 1961. It is a 746-acre park with established roadways and recreational uses. The Park has a scenic 46-acre fishing lake with accessible pier and boat ramp, picnic shelters, restrooms, walking/exercise paths, playground, model airplane flying field, horseback riding stable, bridle trails, a ballfield, basketball court, tennis courts, volleyball court, soccer fields, and the Korean War Memorial. Immediately adjacent to the park is Quail Chase, a privately operated 27-hole golf course built on public land and open for public use.

McNeely Lake Park is intended to be a key bicycle and pedestrian connection along the Louisville Loop, as that 100-mile shared use path departs from the Floyds Fork corridor and continues west toward the Jefferson Memorial Forest.

Pennsylvania Run, a tributary of Floyds Fork Creek runs through the site. There are extensive woodlands, several caves, and smaller streams. Rare and threatened plant species are documented in McNeely Lake Park, and there are several archaeological sites of interest catalogued by the Kentucky Heritage Council.

After a thorough review and evaluation of all of these incredible assets, Metro Parks came to the conclusion that the park needed some improvements in order to better take advantage of the assets and to address the growing and changing recreational needs of the surrounding communities. Therefore, in January 2011, Metro Parks issued a request for proposals for a design team that would develop a master plan for the park that would celebrate its unique features and enhance its usability. A design consultant was selected in February 2011.

At the same time that the master plan was being developed, interest in having a connector road between Mt. Washington Road and Cedar Creek Road began to grow and gain support. Metro Parks saw the merit of having the road run through the McNeely Lake Park because it would provide a connection between park use areas that was desired by the community.



McNeely Lake Park Master Plan

d

Background

Therefore, Metro Parks issued a separate RFP for a design team to develop a design and construction drawings for the new road in parallel with the development of the park master plan. The selected design team included the master plan consultant, thus enabling the two projects to be coordinated and integrated.

While Metro Parks led the interaction with the selected design team, two local citizens served as champions and supporters for the project— Councilman James Peden assisted with funding and political leadership for the park master plan, and State Representative Larry Clark assisted with funding and political support for the proposed connector road and shared use path. Their leadership has been vital in making these projects possible and will continue to facilitate the funding and implementation of the master plan vision.



McNeely Lake Park Master Plan

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Master Planning Process

The Design Team employed a time-tested approach to developing the master plan for McNeely Lake Park. The process consisted of three, distinct phases: Awareness, Exploration, and Vision.

The **Awareness** phase enabled the Design Team to become familiar with the park's context and the various cultural and natural resources defining and affecting the park. This phase also included requesting and gathering input from the community and specific stakeholder groups regarding their needs and vision for the park.

Once the Design Team felt that they understood the essential issues related to existing conditions at the park, they began the **Exploration** phase, where they generated an array of conceptual alternatives for the park use areas and trails. During this phase, a range of issues, limits, and possibilities were explored to test relationships between, location of, and the scale of park facilities. To help determine which ideas should be carried through to the master plan, the community and stakeholder groups were asked for their feedback and comments on the concepts.

During the **Vision** phase, the stakeholder comments were integrated and developed into a preliminary master plan that expressed the community's collective aspirations for the park in one cohesive plan. A third public meeting provided one more chance for the community to comment on the master plan before it was completed. To facilitate the implementation of the master plan, the Team generated an Estimate of Probable Cost, taking a birds eye view of the potential costs for building the master plan vision. And, finally, to set priorities and a timeline for implementation, a phasing strategy was developed in collaboration with Metro Parks staff.

This entire process, along with the materials presented at each public meeting, are outlined as part of this report.

Phase 1: Awareness



Phase 2: Exploration



Phase 3: Vision

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AWARENESS





McNeely Lake Park Master Plan

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Awareness

The goals of the Awareness phase were to:

- Generate a more complete picture and understanding of the existing McNeely Lake Park site and its context
- Learn about the community needs and desires for improving the park facilities and amenities
- Share the collected information with Metro Parks, the community, and the Design Team so that everyone has a common basis of understanding about the issues and opportunities related to the existing park.

To gain a better understanding of the existing park and its context, the Design Team reviewed previously written studies and reports, performed site reconnaissance, and contacted various public agencies to better understand their role in shaping the park. Extensive geographic Information System (GIS) mapping was employed to learn more about the natural and cultural resources on the site and how they might affect subsequent design and create a unique identity for the park.

These efforts revealed several assets that the Design Team should acknowledge and celebrate in the master plan:

- The unique dolomitic limestone karst geology of the area has produced caves and sinkholes that could be interesting features in the park.
- The local geology combined with shallow bedrock, sunny slopes, and forest glades has created a unique ecology where two rare plants species can be found: the Eggleston Violet and Kentucky Glade Cress. The caves found in and near the park have been used by Native Americans for centuries for shelter, resources, storage, and burials.
- The park site was the former location of several significant homesteads and the Old Liberty No. 1 Schoolhouse.
- McNeely Lake is relatively healthy and is an important fishing, boating, and recreational asset for the local community and beyond.
- The forest resources of the park are significant and very diverse.



Awareness

While these important features could help define a unique identity for the park, a significant challenge might affect the success of the master plan vision: the fragmented nature of the park. In terms of access and connectivity, McNeely Lake Park is in essence four separate parks—a golf course, a soccer facility, an equestrian facility, and a general use recreational open space. Both pedestrians and cars are unable to easily access each of the use areas of the park. Until this issue is addressed, it will be difficult to create a unified identity for the park.

In addition to research, site visits, and mapping, the Design Team met with several stakeholders with varied and vested interest in the future of the park. Some of the groups interviewed included the Okolona Soccer Club, cross-country running enthusiasts, and the Louisville Radio Control Club.

To complete the Awareness phase, Metro Parks hosted the first public meeting. Here, the gathered data was shared with over 40 participants. After the presentation, the attendees were given surveys that gave them the opportunity to state their vision for the park as well as their concerns about specific issues related to the park that should be addressed in the future.

This chapter summarizes the findings from the Awareness Phase.



Inventory & Analysis: Site Context

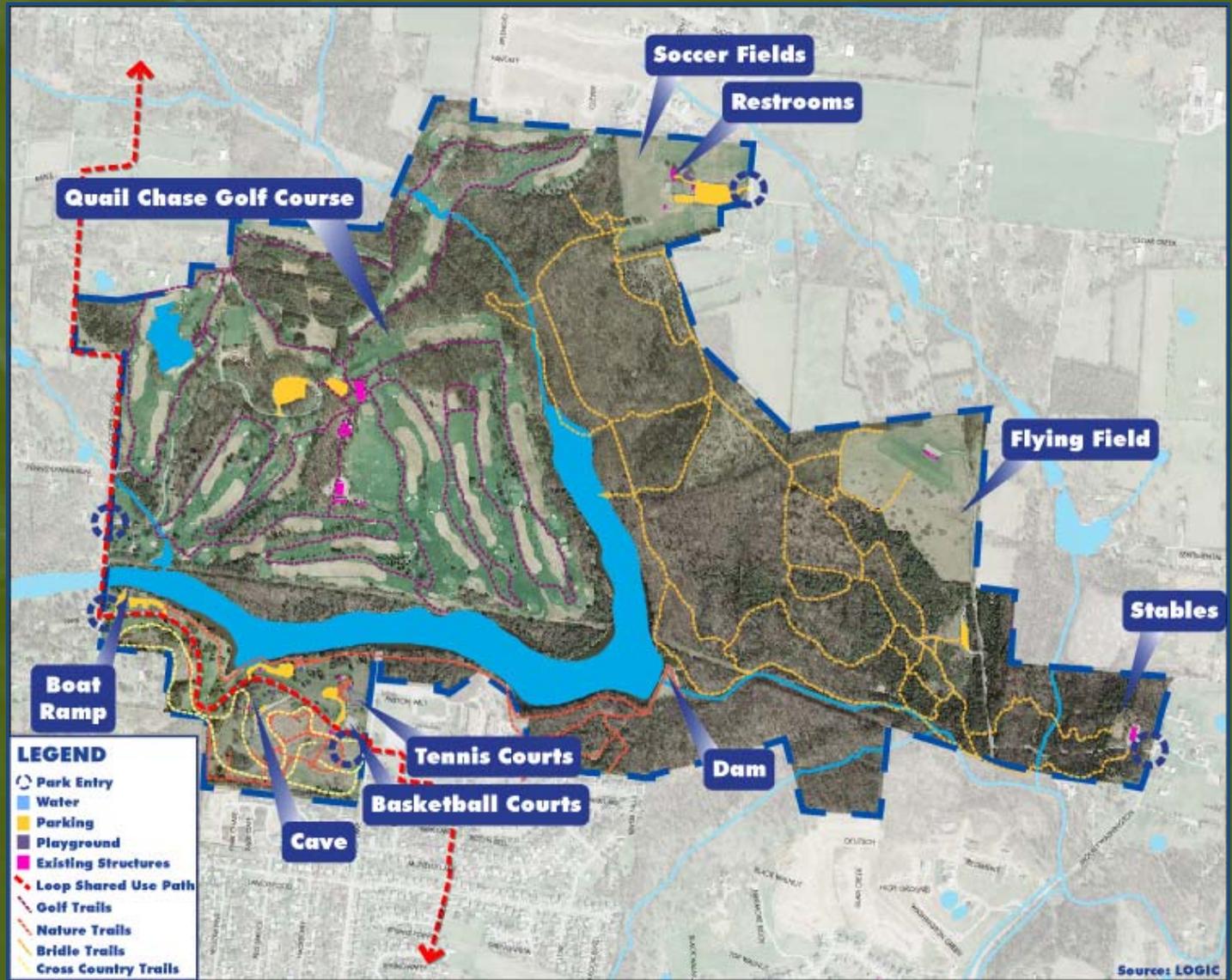




McNeely Lake Park Master Plan Awareness

Existing Features

- Lake
- Shelters
- Parking Areas
- Play Areas
- Basketball
- Soccer
- Tennis
- Nature Trails
- Golf Course
- Bridle Trails
- Stables





Awareness

Existing Park Features

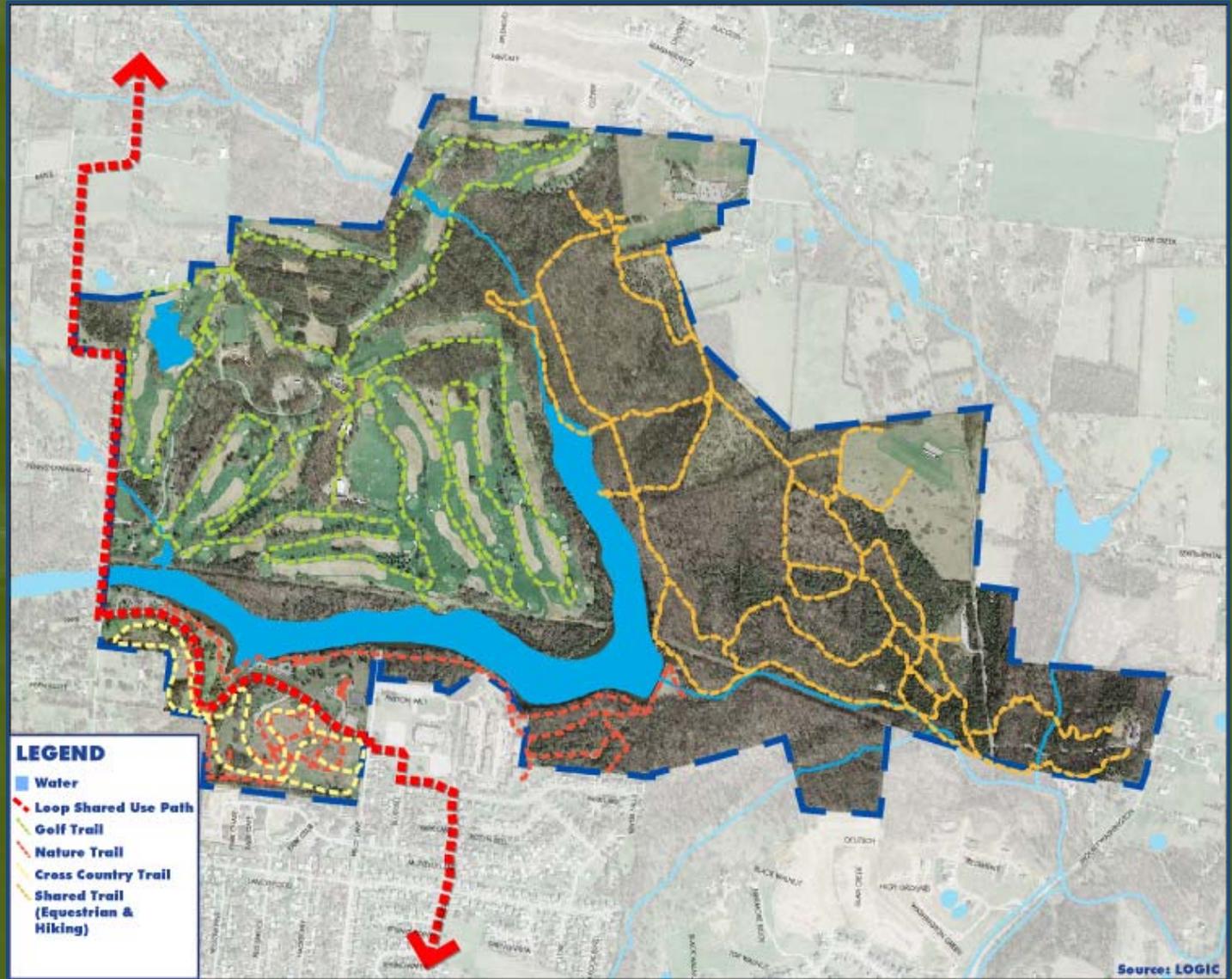




Awareness

Trails

- Shared (Equestrian & Hiking)
- Nature
- Golf
- Cross Country
- Proposed Louisville Loop Shared Use Path Connection





McNeely Lake Park Master Plan Awareness

Trails

- Nature
- Equestrian
- Golf
- Bike





Inventory and Analysis: Natural Resources

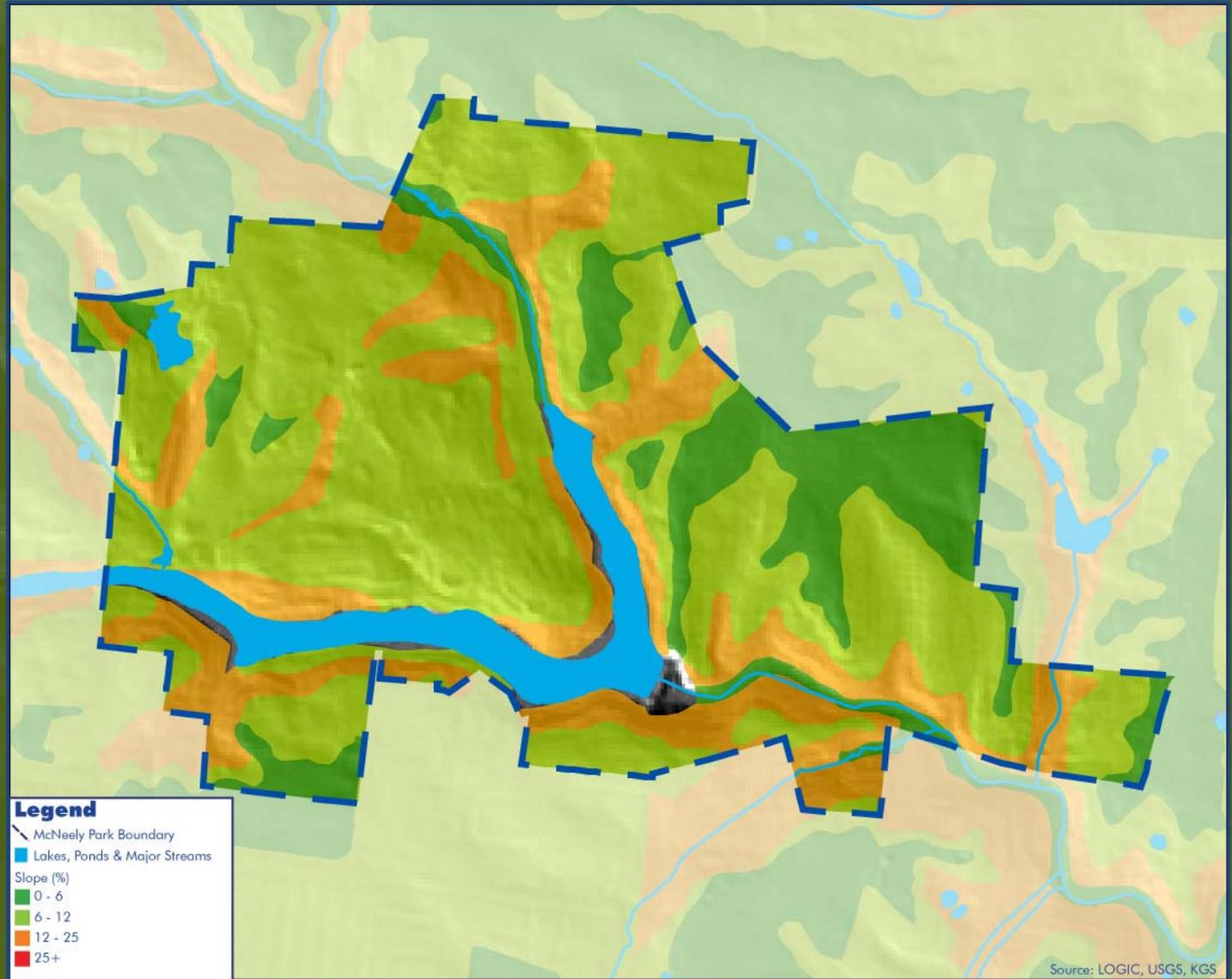




Awareness

Slope

On-site topography varies from flat to moderately steep and influences the location of both existing & new facilities.

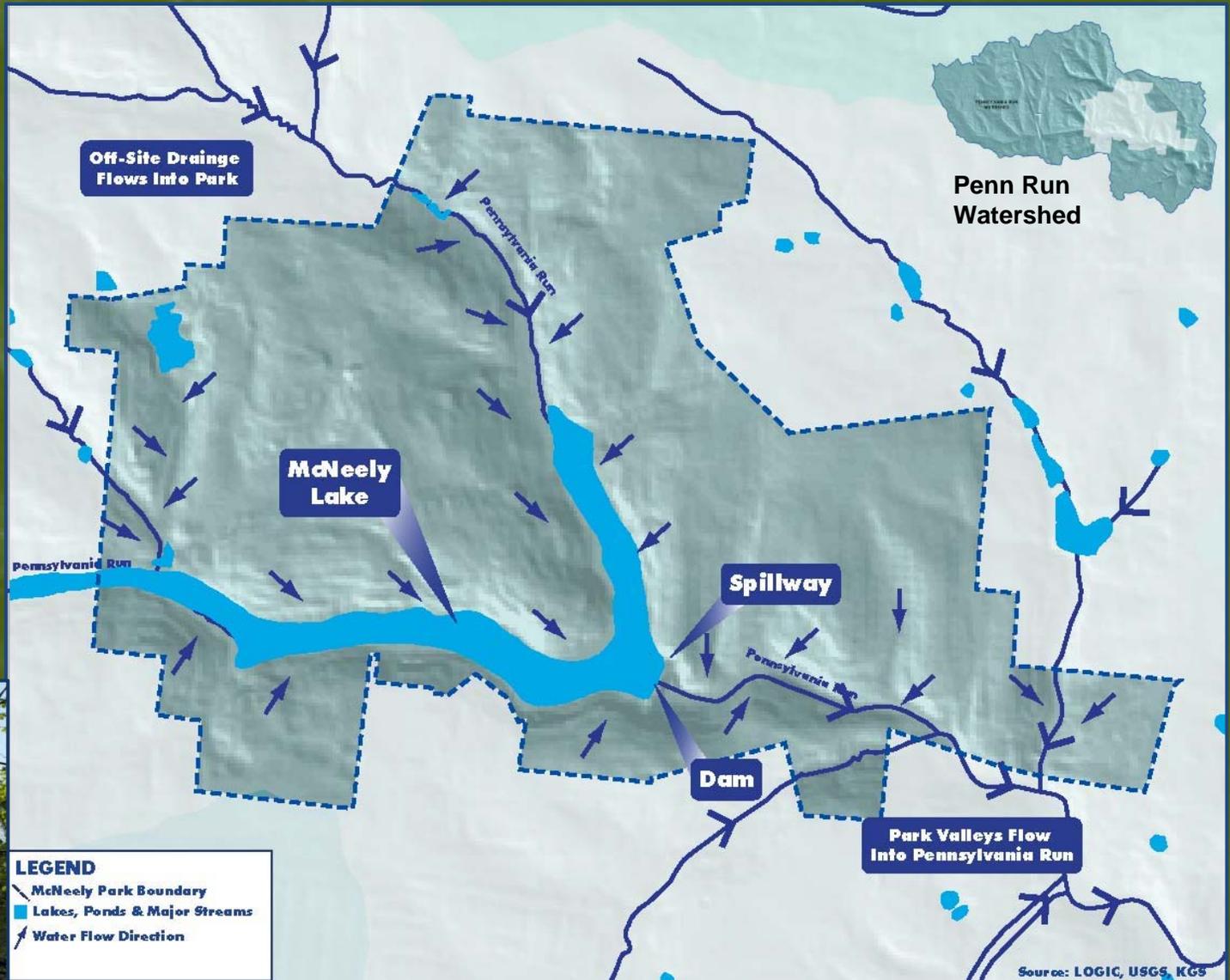




Awareness

Hydrology

All site runoff flow into either Penn Run or McNeely Lake





Awareness

Dam/Spillway

- Spillway is in need of substantial repairs and improvements
- East edge has been compromised and significant erosion has occurred downstream.





McNeely Lake Park Master Plan Awareness

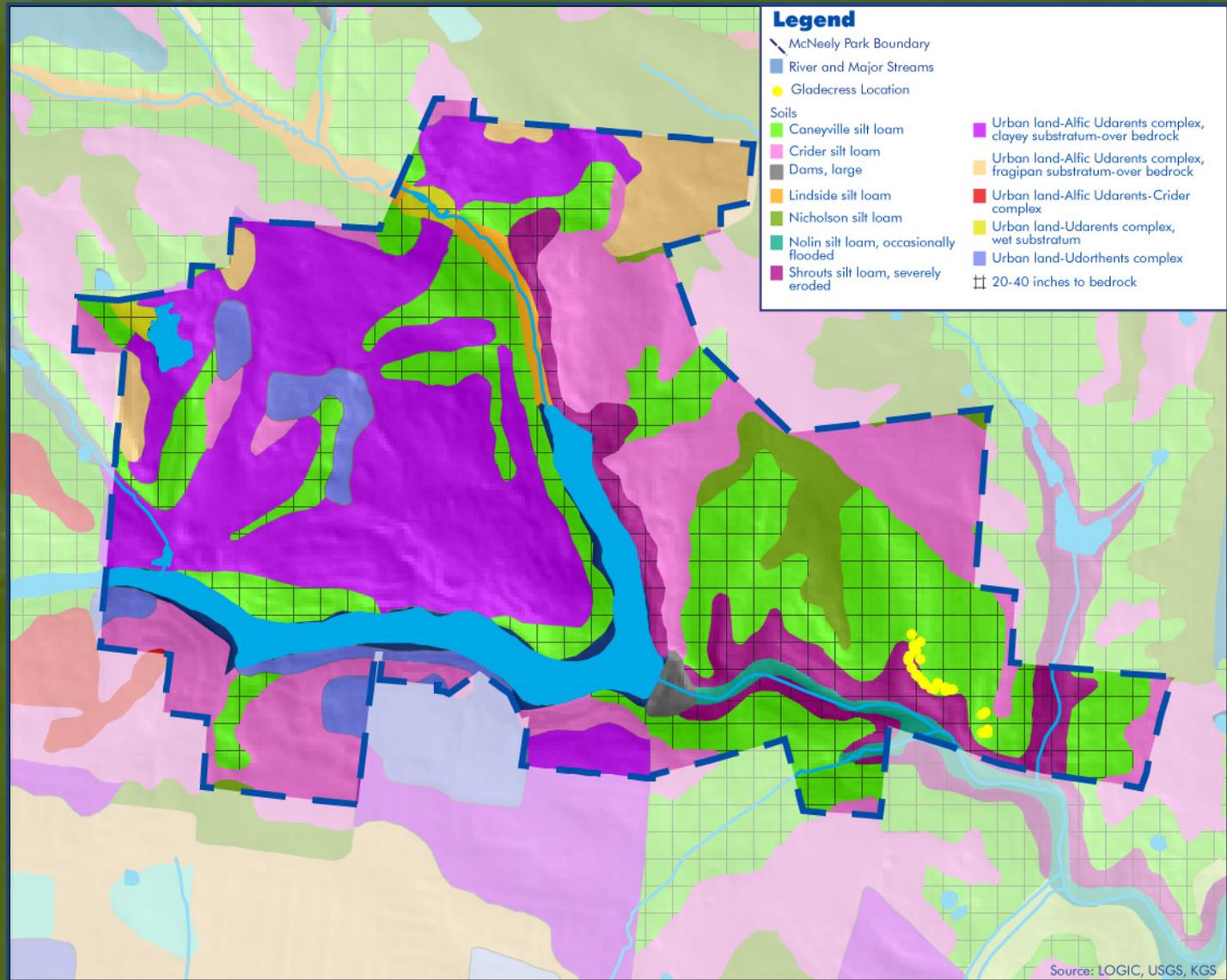
Soils

20 – 40 inches to
Paralithic (weak)
bedrock

- Shrouts silt loam

20 – 40 inches to
Lithic (strong) bedrock

- Caneyville silt loam;
Caneyville-Rock
outcrop; Urban
Land-Udarents
complex, wet
substratum



Source: LOGIC, USGS, KGS

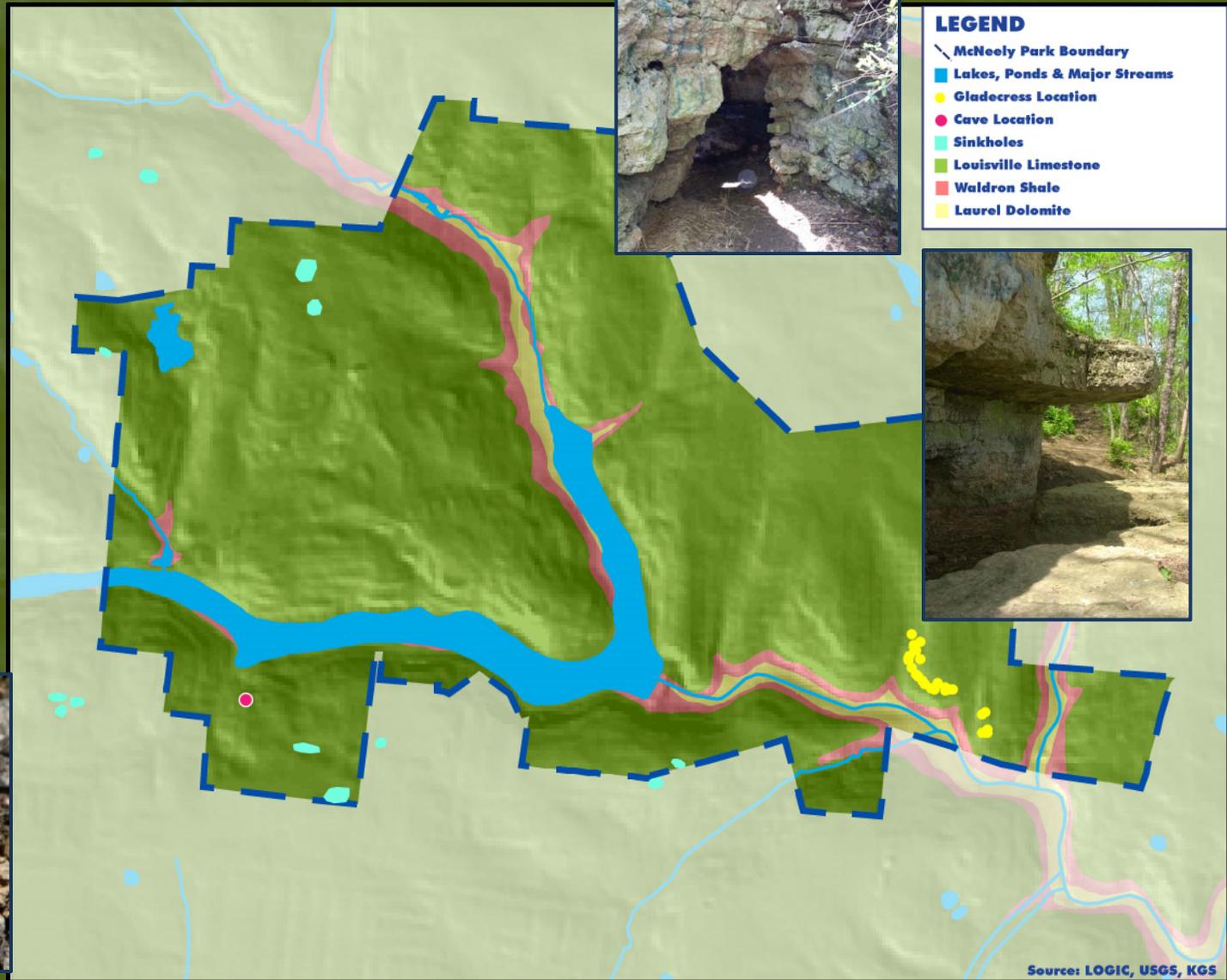




McNeely Lake Park Master Plan Awareness

Geology

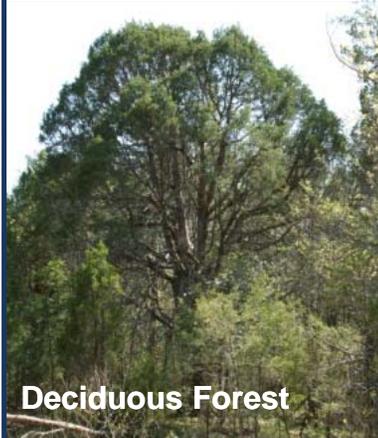
- Karst- Formed by underground erosion of rocks (i.e., limestone).
- Support unique ecosystems and species (i.e., caves and glade cress)





Awareness

Existing Vegetation



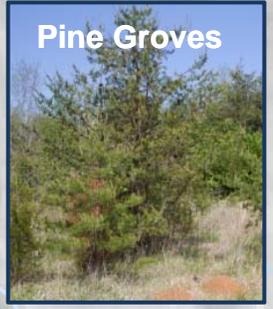
Deciduous Forest



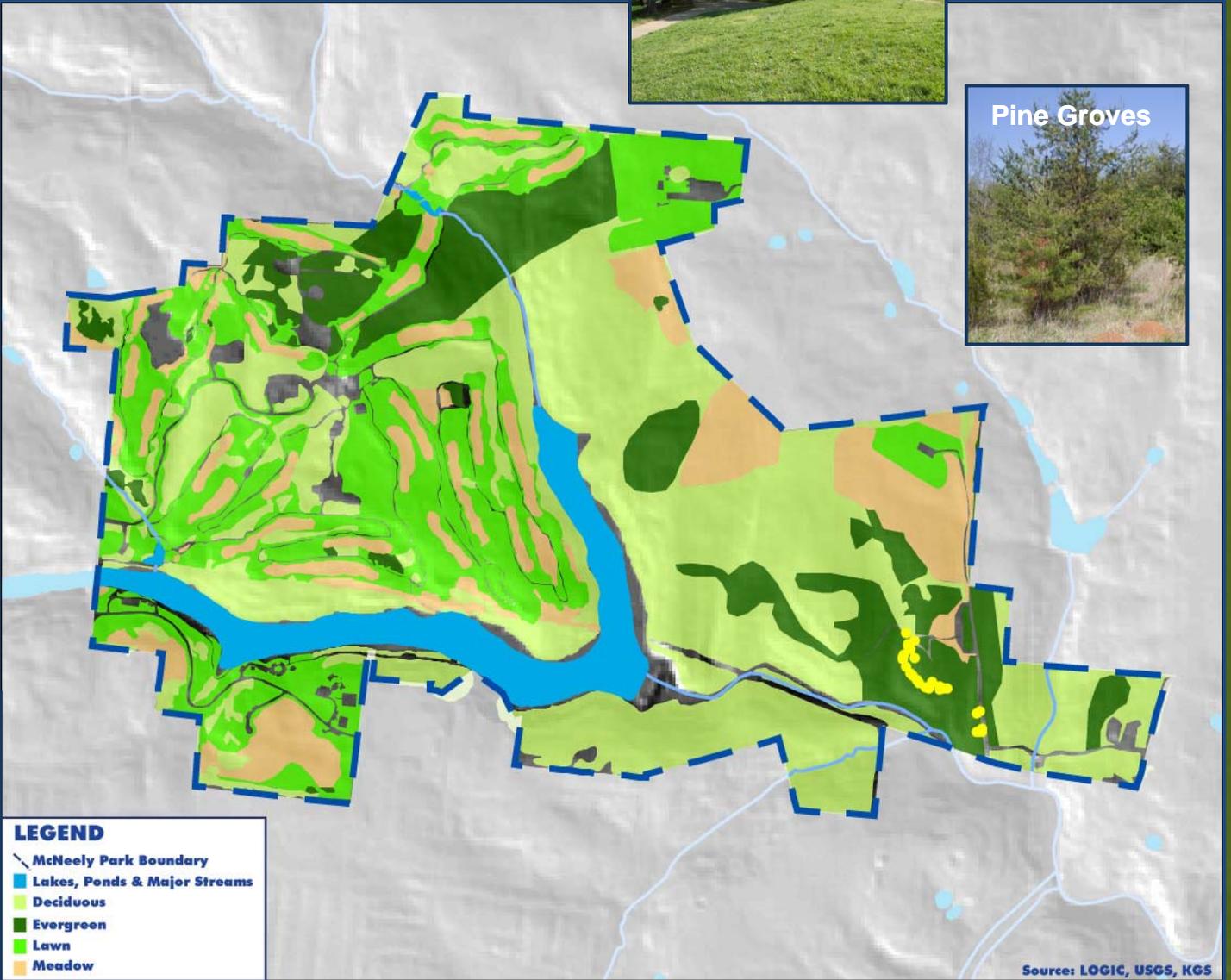
Meadows & Cedar Glades



Lawn



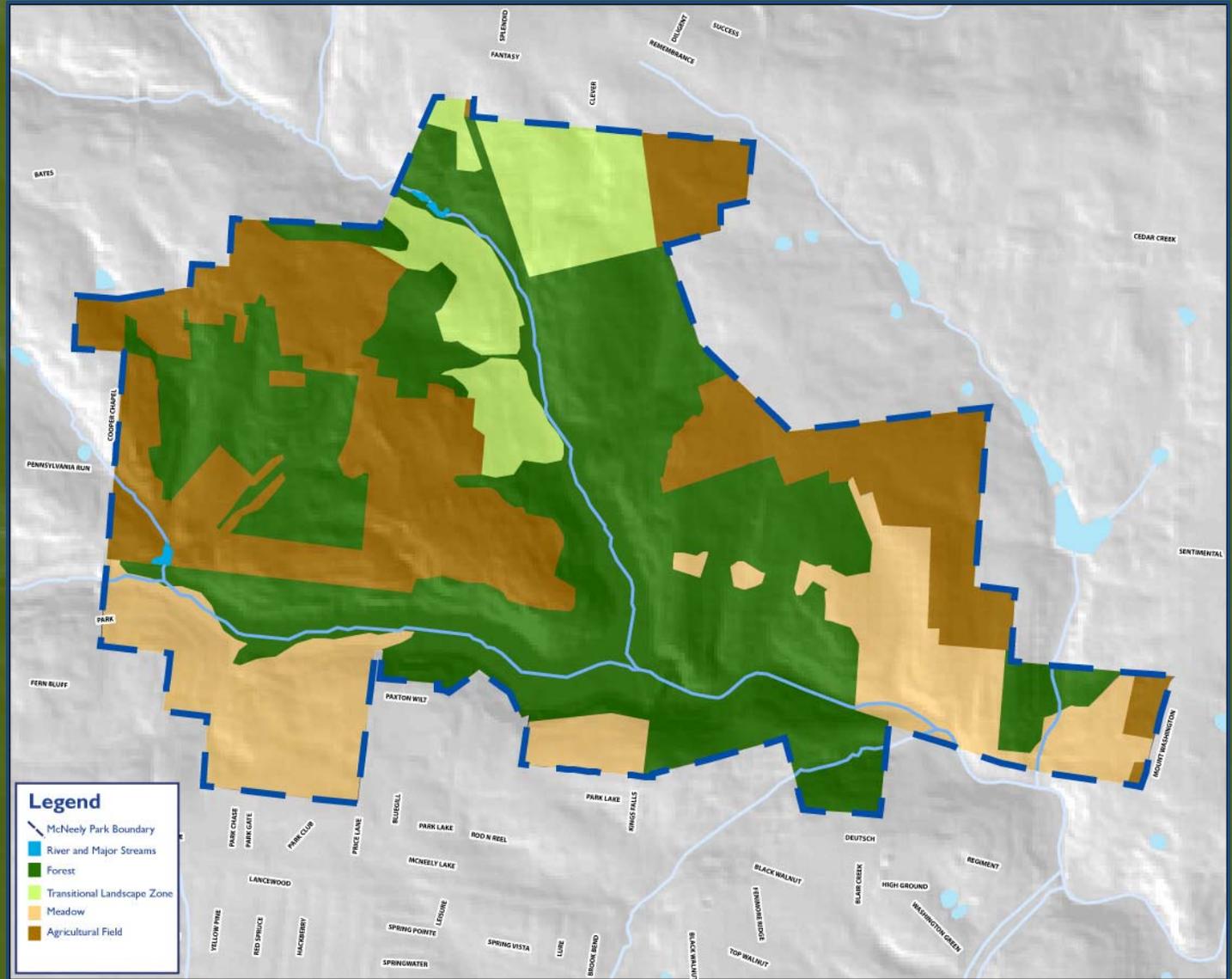
Pine Groves





McNeely Lake Park Master Plan Awareness

Historical Vegetation 1937

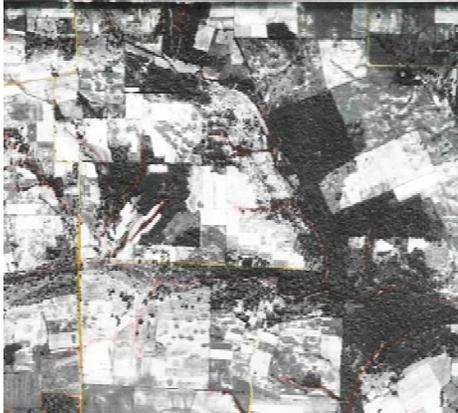
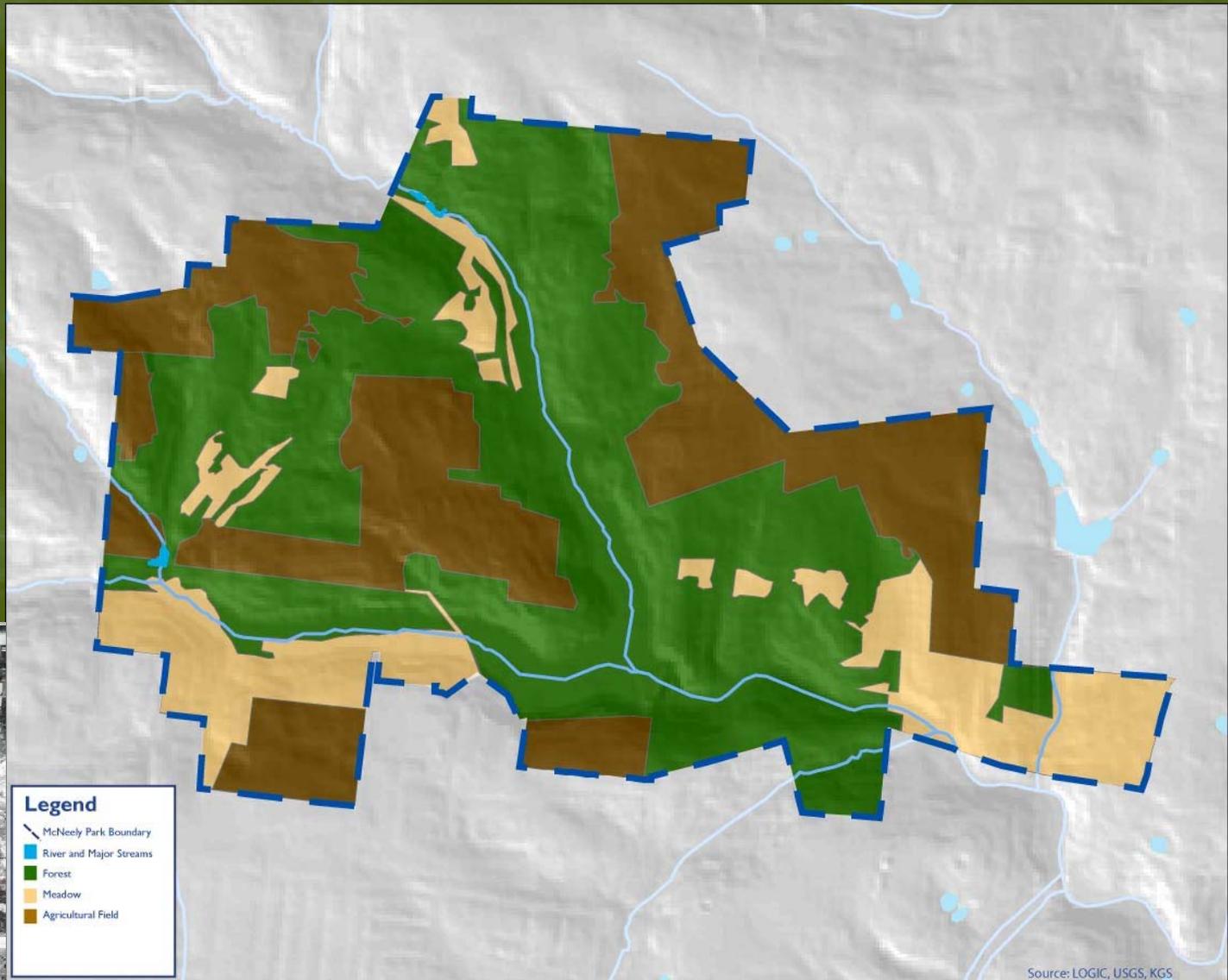




Awareness

Historical Vegetation

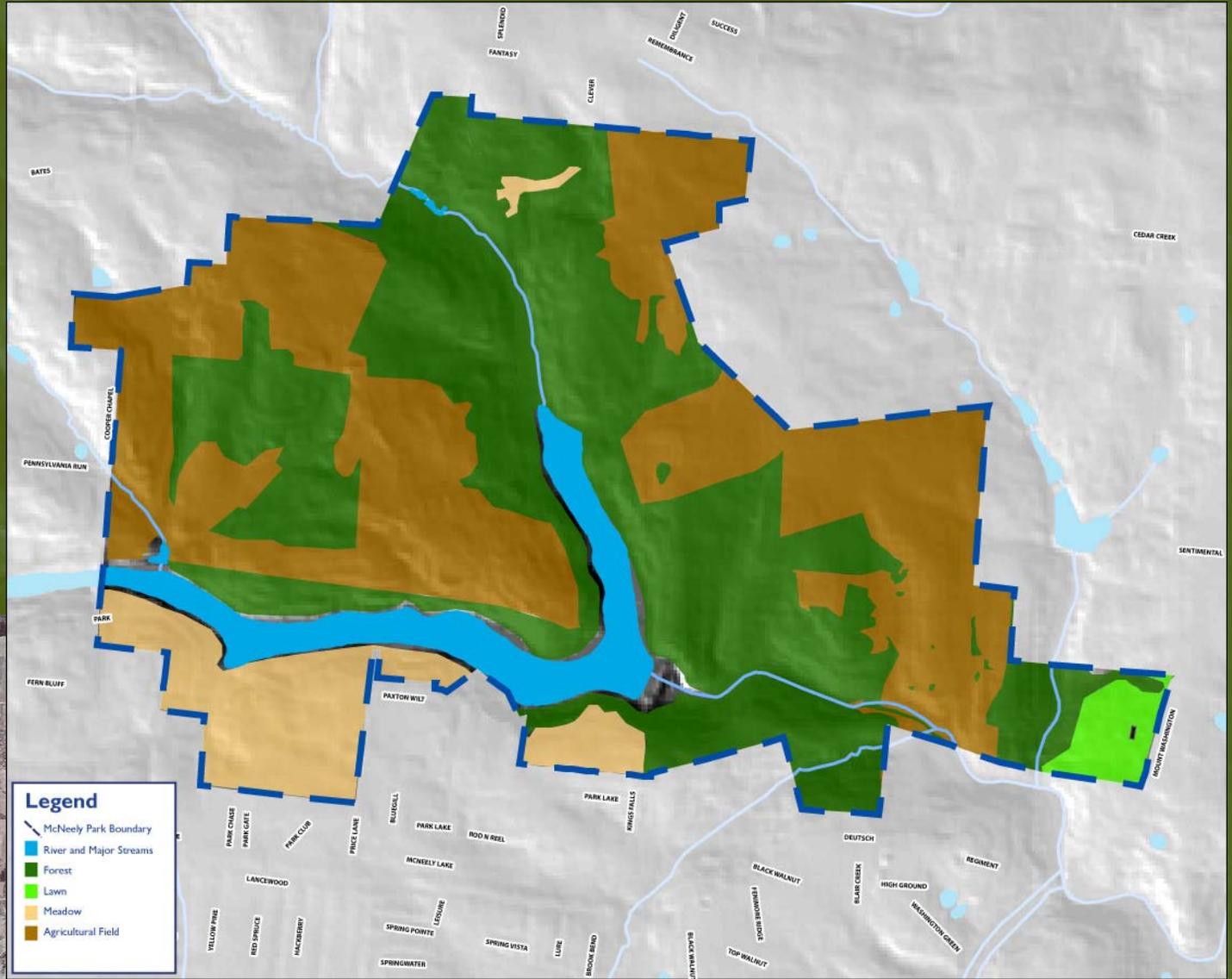
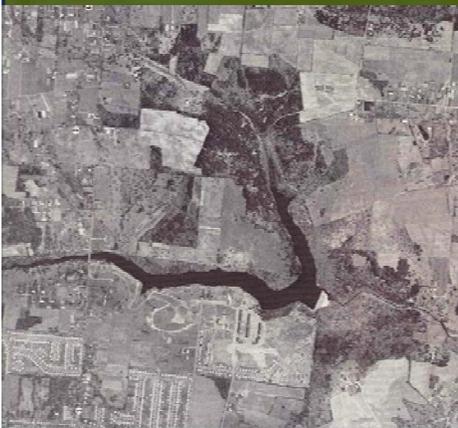
1951





McNeely Lake Park Master Plan Awareness

Historical Vegetation 1971

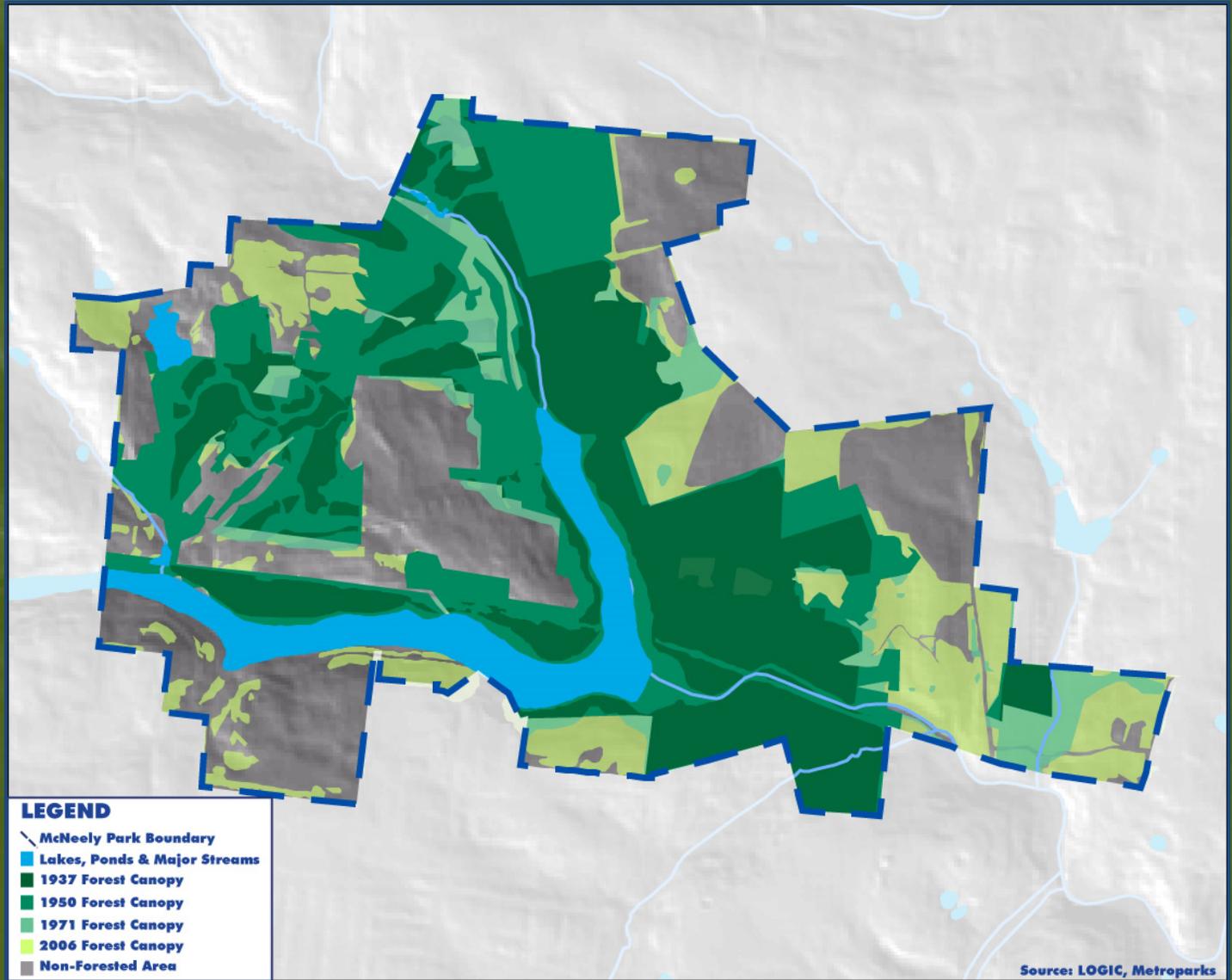




Awareness

Forest Canopy Progression

- Since 1937 the forest canopy has grown considerably.
- The most mature forests are shown in dark green.





Awareness

Existing Forest Canopy

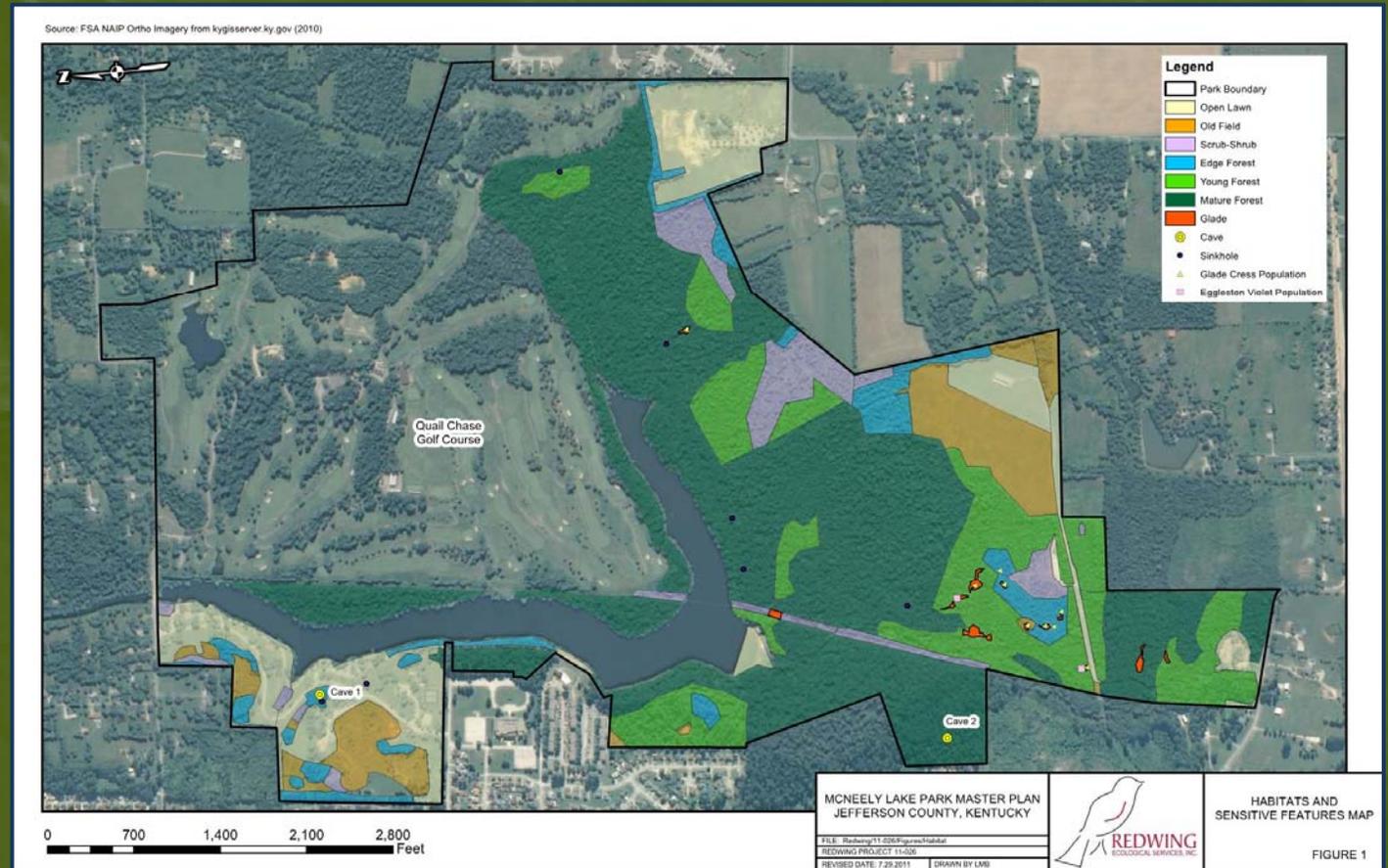




McNeely Lake Park Master Plan Awareness

Managing Habitats and Sensitive Features

- Remove infected Ash trees
- Protect McNeely Lake Cave
- Avoid development that would increase erosion to water
- Promote unmown, native vegetated buffers along lake
- Retain higher quality woods in south-central section of park
- Remove Bush honeysuckle
- Avoid disturbance to karst features (e.g., caves, sinkholes, seeps)





Awareness

Natural Resources: Park Habitats





Awareness

Natural Resources: Unique Landscape Features





McNeely Lake Park Master Plan Awareness

Habitat Summary Matrix

Habitat	Description	Potential Use by Federally-Listed Threatened and Endangered Species									
		Indiana Bat	Gray Bat	Kirtland's Snake	Clubshell	Louisville Crayfish	Running Buffalo Clover	Glade Cress	Eggleston's Violet	American Burying Beetle	Louisville Cave Beetle
		<i>Myotis sodalis</i> Federal Endangered	<i>Myotis grisescens</i> Federal Endangered	<i>Cionophis kirtlandii</i> Federal Species of Concern	<i>Pleuroberma clava</i> Federal Endangered	<i>Orconectes jeffersoni</i> Federal Species of Concern	<i>Trifolium stoloniferum</i> Federal Endangered	<i>Leavenworthia exigua</i> var. <i>laciniata</i> Federal Candidate	<i>Viola septemloba</i> subsp. <i>egglestonii</i> (Kentucky Special Concern)	<i>Nicrophorus americanus</i> Federal Endangered	<i>Pseudanophthalmus troglodytes</i> Federal Candidate
Open Lawn	Regularly mowed lawn and maintained landscape areas, including shade trees.	Yes - in some scattered trees	No	Yes	No	No	No	No	No	No	No
Scrub-Shrub	Habitat dominated by shrubs and saplings. May have scattered young or mature trees.	Yes - in some scattered trees	No	Yes	No	No	No	No	No	Yes**	No
Old Field	Infrequently (annually or semi-annually) mowed with taller grasses, forbs, and small shrubs.	Yes - in some scattered trees	No	Yes	No	No	No	No	No	Yes**	No
Edge Forest	Mix of shrubs, saplings, and young or mature trees. The canopy is often uneven or "bumpy" on top due to different heights of vegetation.	Yes	Yes - foraging habitat	Yes	No	No	Yes	No	No	Yes**	No
Young Forest	Habitat dominated by young trees with a closed canopy, containing shade-tolerant or partial-shade species in the understory.	Yes	Yes - foraging habitat	No	No	No	Yes	No	No	Yes**	No
Mature Forest	Habitat dominated by mature trees (>8in dbh) with a closed canopy, containing shade-tolerant species in the understory.	Yes	Yes - foraging habitat	No	No	No	Yes	No	No	Yes**	No
Glade	Habitat with shallow bedrock that limits tree and shrub growth. Contains specially-adapted grasses and herbs.	No	No	No	No	No	No	Yes	Yes	No	No
Aquatic Habitat and Sensitive Features	Streams, wetlands, caves, and sinkholes.	Yes - roosts in caves*, forages along streams	Yes - roosts in caves, forages along streams	Yes - in wetlands and around streams	Yes - in perennial streams	Yes - in perennial streams	No	No	No	No	Yes - in caves

*The Indiana bat roosts in caves in winter, and in trees with cracks, cavities, or exfoliating bark in the summer.
**However, the species is considered extirpated from Jefferson County and no known re-introduction efforts are underway.

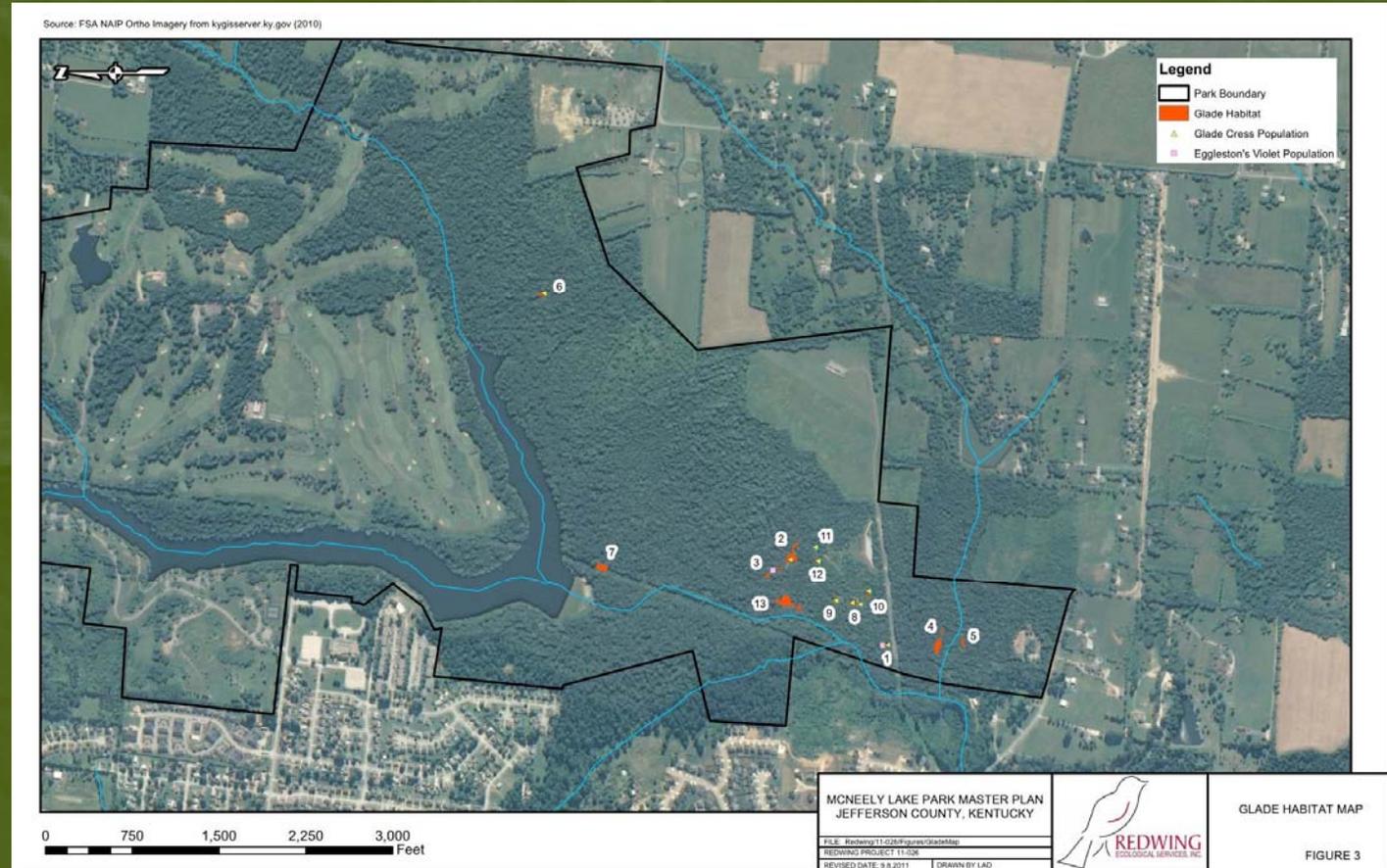




McNeely Lake Park Master Plan Awareness

Glade Habitat

- 13 glade areas found ranging in size, plant diversity, accessibility, weed invasion, and human disturbance
- Glades are unique habitats with shallow bedrock that limits tree and shrub growth
- Focus restoration efforts on most stable glade areas





Awareness

Glade Habitat Summary

Glade	Location*	Size	Exposed Rock	Species Observed					
				Glade Cress	False Aloe	Eggleston's Violet	Little Skullcap	Whorled Milkweed	Flatstem Spikerush
				<i>Leavenworthia exigua</i>	<i>Manfreda virginica</i>	<i>Viola septemloba</i> subsp. <i>egglestonii</i>	<i>Scutellaria parvula</i>	<i>Asclepias verticillata</i>	<i>Eleocharis compressa</i>
1	Off road north of horse stables	0.039	Yes	X	X	X	X		
2	Along trail north of horse trailer parking lot	0.198	Yes	X	X		X	X	X
3	Along trail and old road northwest of Glade 2	0.084	Yes		X	X	X		
4	North of stream, north of horse stables	0.156	No		X		X		X
5	South of stream, north of horse stables	0.044	No		X				X
6	North of flying field, south of west arm of lake	0.065	Yes	X	X		X		X
7	In powerline easement east of lake dam	0.126	No		X			X	
8	North of trail intersection, northwest of horse trailer parking lot	0.051	Yes	X					
9	Just north of Glade 8	0.04	Yes	X					X
10	Just south and across trail from Glade 8	0.038	Yes	X				X	
11	Small area off trail	0.003	Yes	X			X		
12	North of trail intersection, north of horse trailer parking lot	0.034	Yes	X			X		X
13	Just east of streamside trail, northwest of horse trailer parking lot	0.252	Yes		X			X	X

*See Figure 3 for mapped location

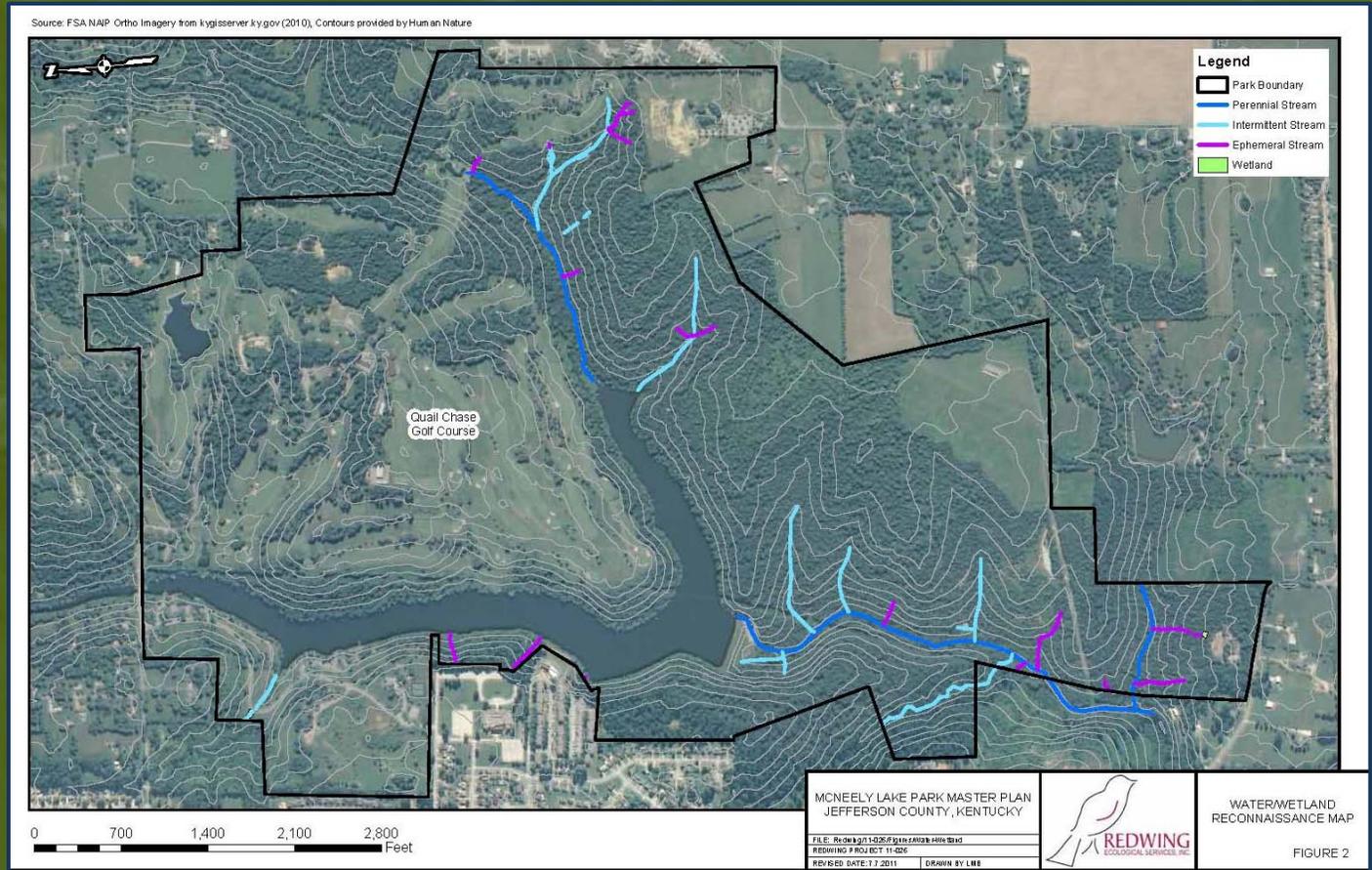




McNeely Lake Park Master Plan Awareness

Water and Wetlands

- Some intermittent streams are connected to sinkholes and seeps
- Wetlands are small and uncommon within the park
- Focus restoration / preservation efforts (including trash and honeysuckle removal) on perennial streams (higher quality)
- Retain wooded riparian corridors

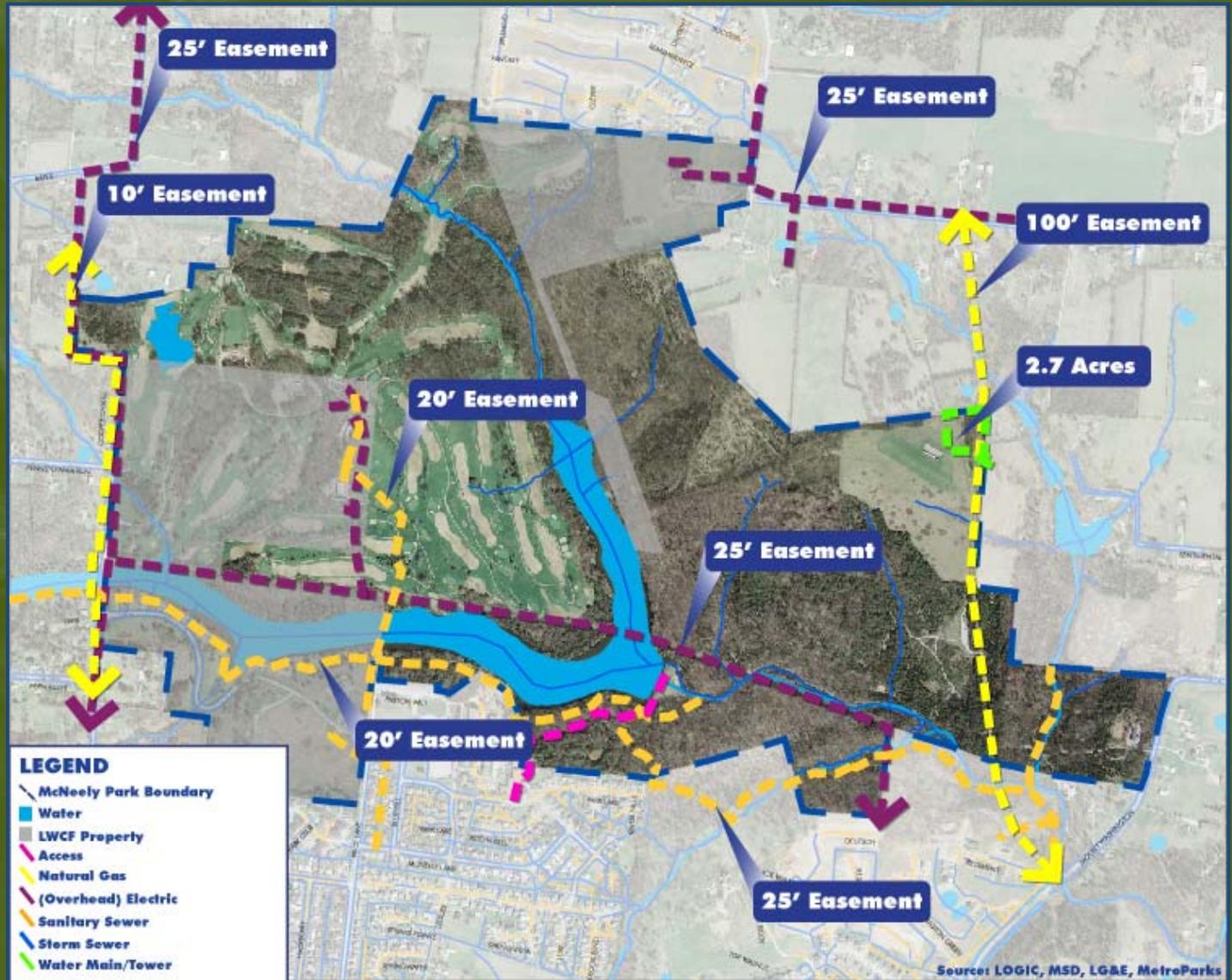




Awareness

Easements

- Several utility easements cross the site affecting its appearance and usage
- 2.7 acres to be purchased by Louisville Water Company for proposed water tower
- LWCF property

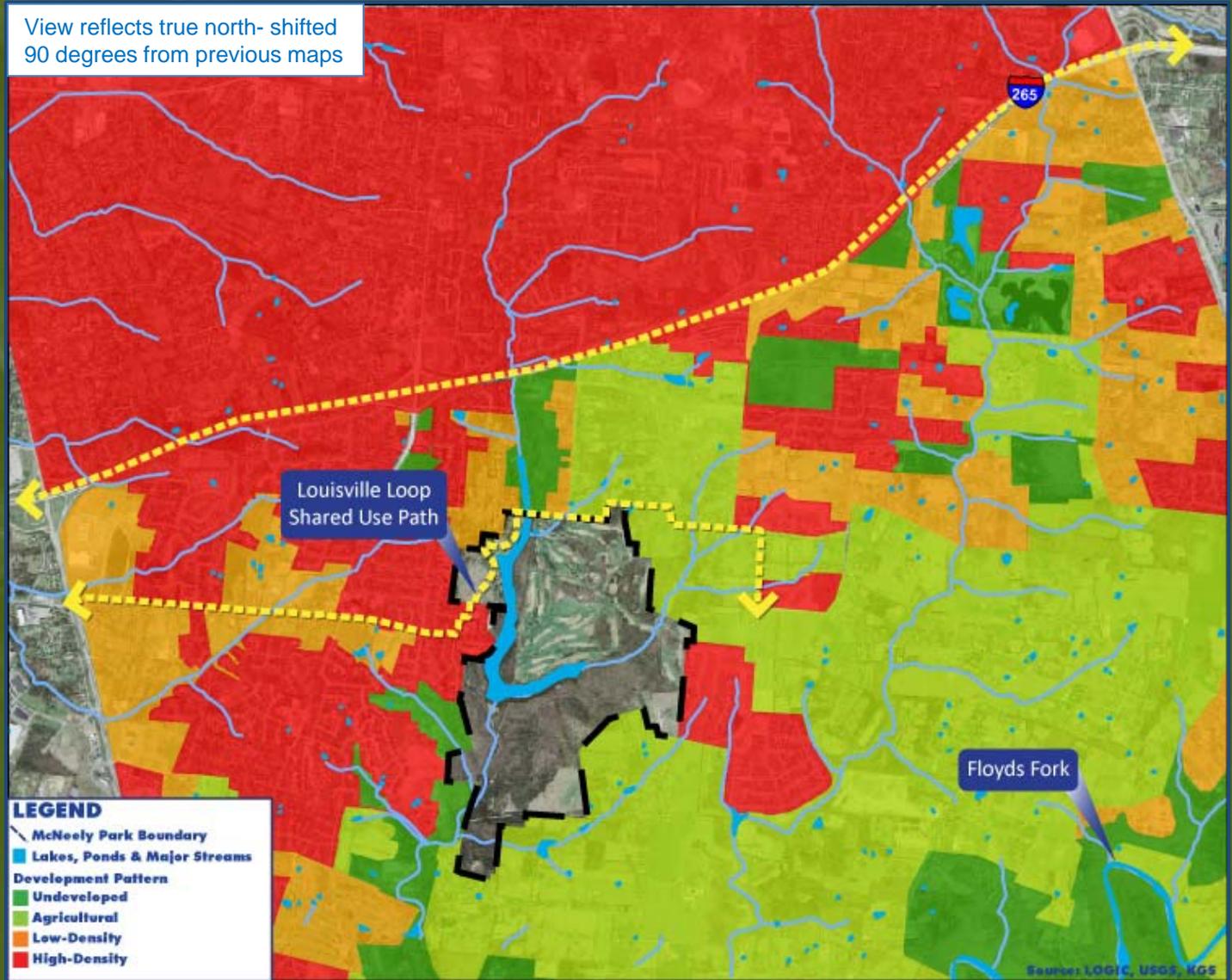




Awareness

Development Patterns

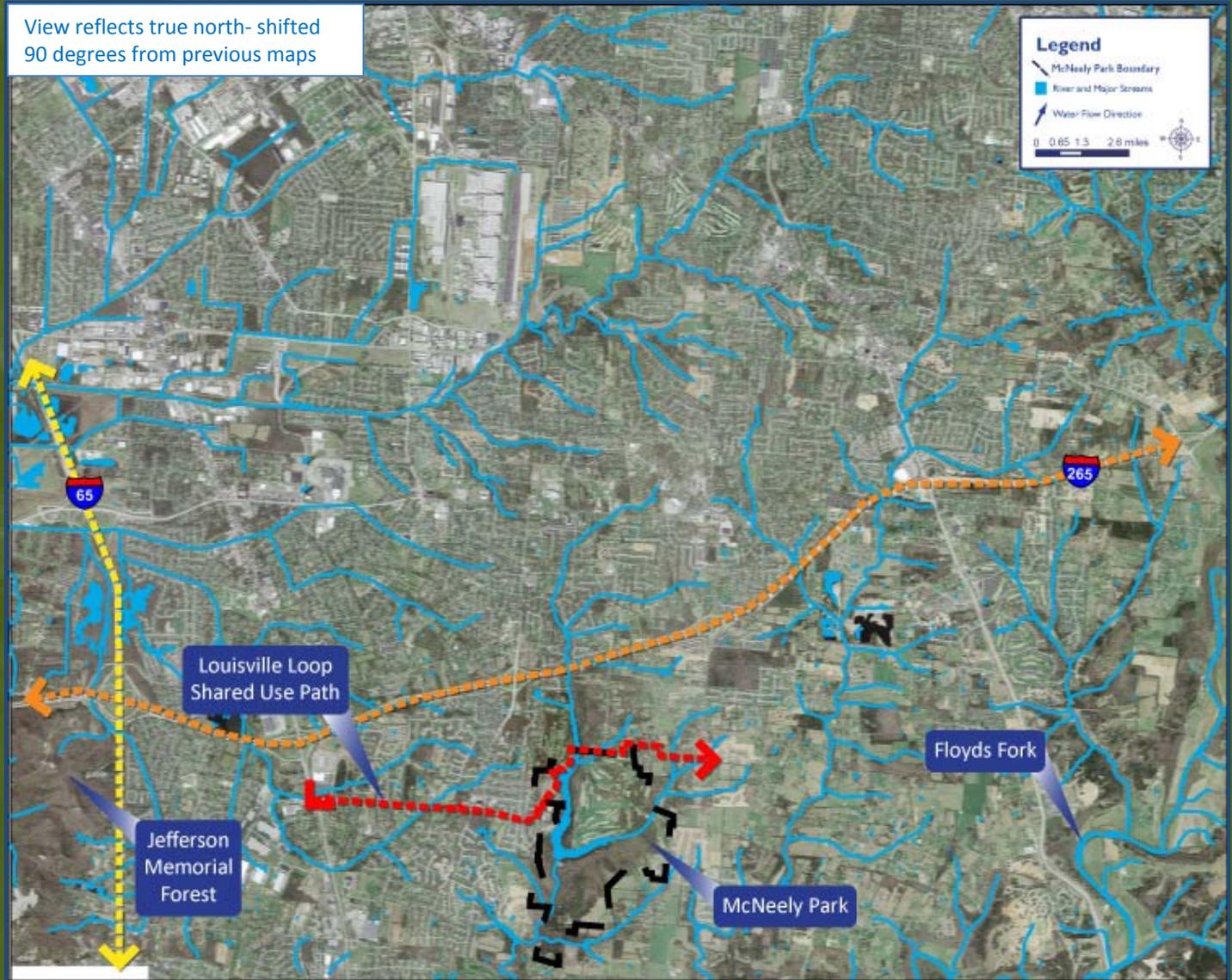
The park is on the edge of evolving land use patterns, between higher density residential development and lower density agricultural lands.





Awareness

View reflects true north- shifted 90 degrees from previous maps



Context

- McNeely Lake Park could serve as an ecological stepping stone between Jefferson Memorial Forest and the Floyds Fork watershed.
- The park is part of a chain of parks along the proposed Louisville Loop Shared Use Path.





Inventory and Analysis: Cultural Resources



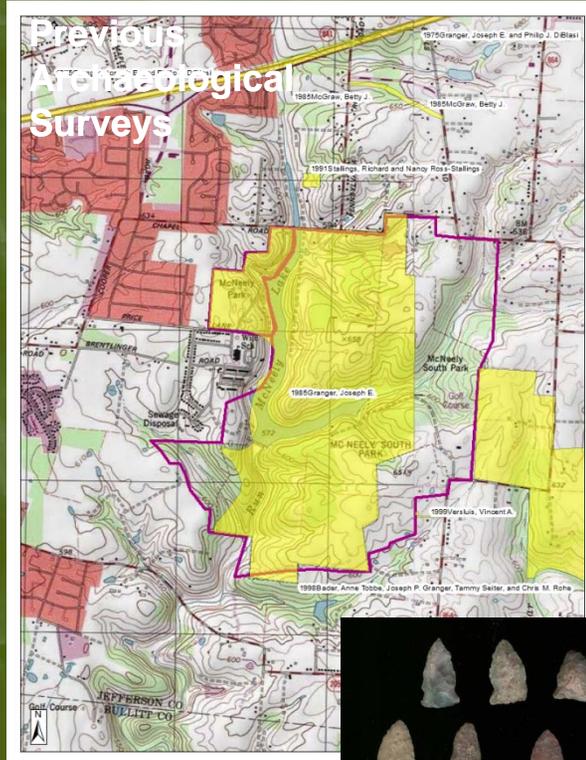


McNeely Lake Park Master Plan Awareness

Archaeological Features

- McNeely Lake Cave (15JF200)
- Durrett Cave/ Rockshelter (15JF201)
- Cooper Cave/ Rockshelter (15JR537)

Several archaeological studies indicate that the caves and rockshelters in the area were used by Native Americans for centuries for shelter, resources, storage and burials.



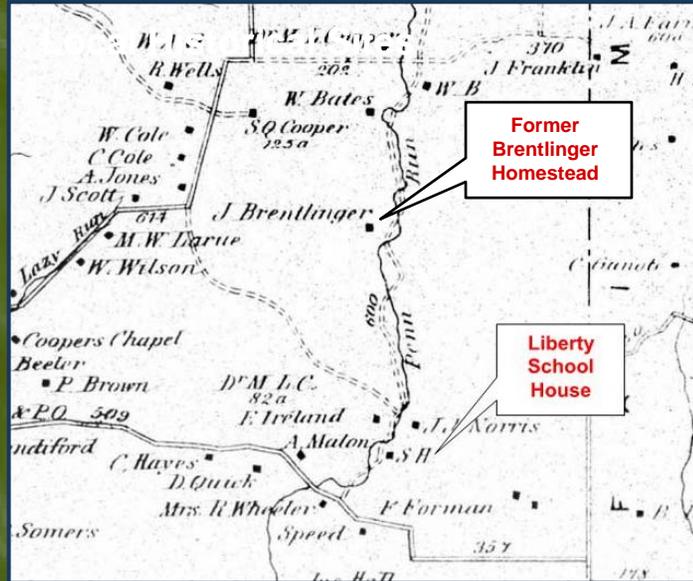


McNeely Lake Park Master Plan Awareness

Cultural Resources

- Old Liberty Number One School
- Former Brentlinger homestead
- Former limestone bridge abutments
- Korean War Memorial

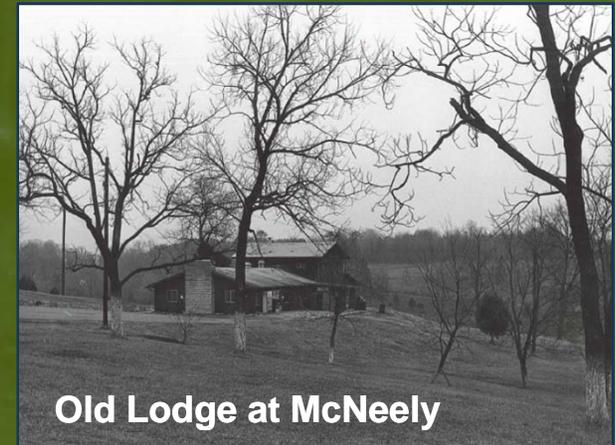
No significant intact historical structures remain within the park. Some homestead ruins and bridge abutments are of some interest and may suggest some interpretive opportunities.



Liberty School



Korean War Memorial



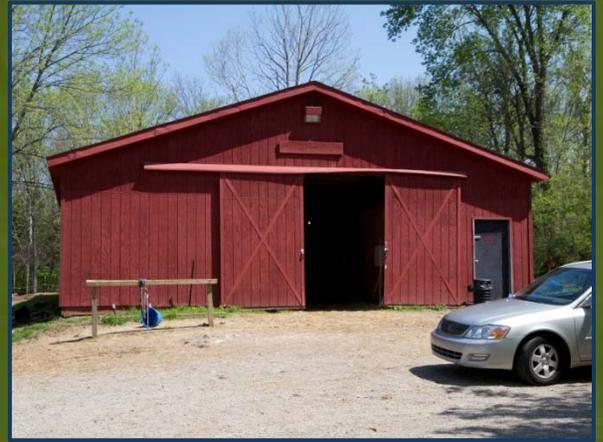
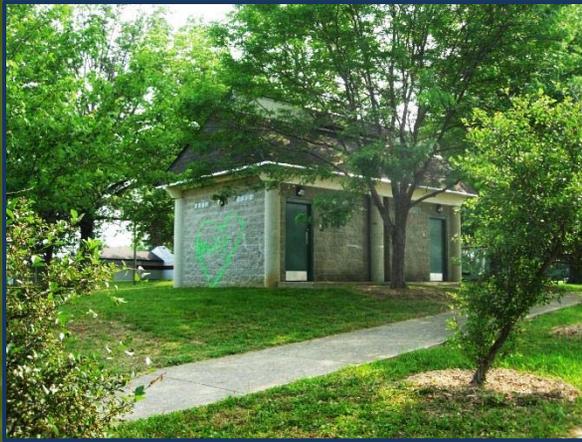
Old Lodge at McNeely





McNeely Lake Park Master Plan Awareness

Site Character: Built Elements

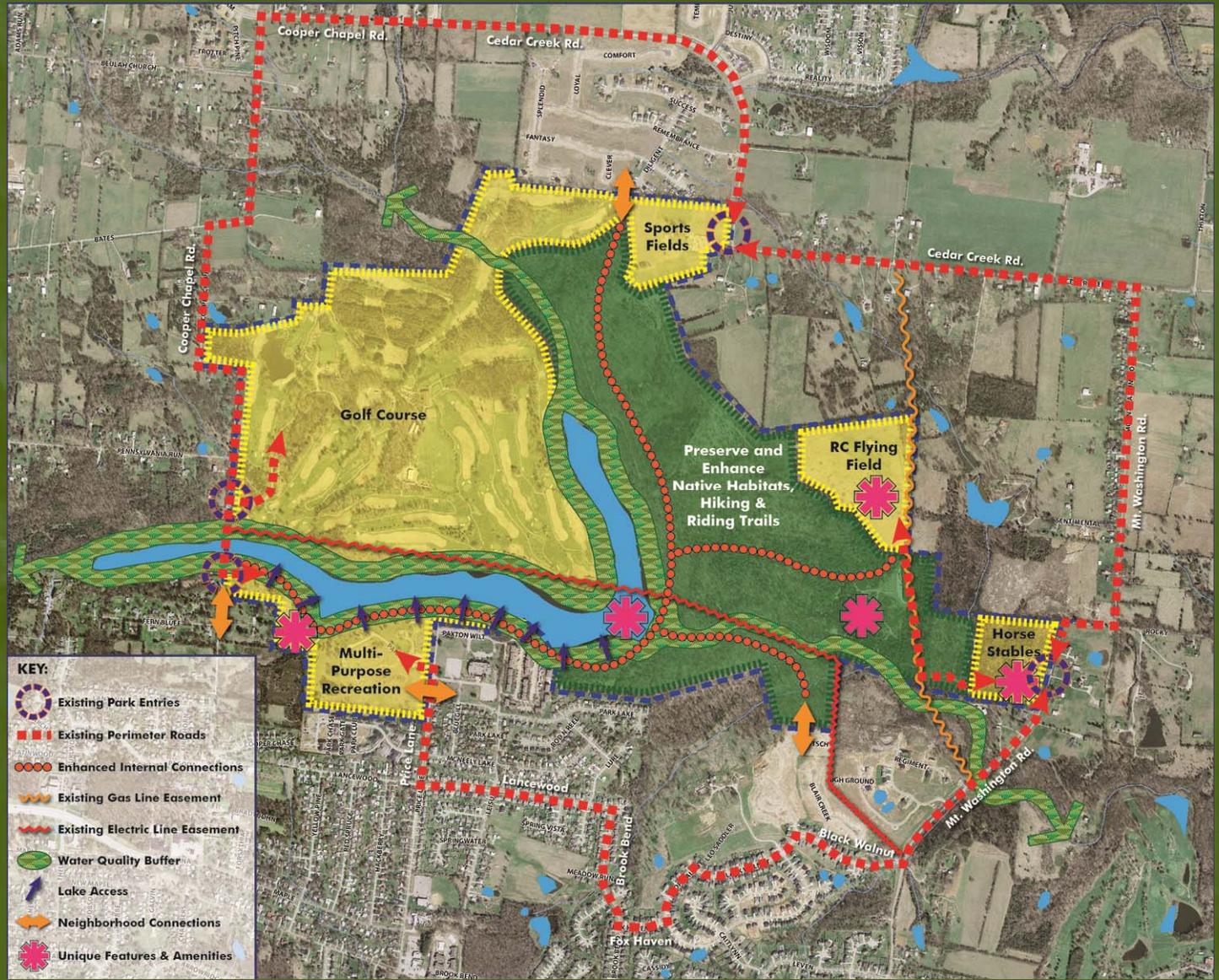




McNeely Lake Park Master Plan Awareness

Site Analysis

- The lake is a major asset that needs to be protected and enhanced.
- The Park is fragmented into several parts, without good access from one side to the other.
- A broad spectrum of cultural and natural features should be celebrated. The lake, glade cress and karst features are some of the things that make this park unique in the system





Stakeholder Meetings & Public Meeting #1





Awareness

To better understand the needs and desires of people and organizations that use McNeely Lake Park, the design team held interviews with several stakeholder groups and hosted the first of three public meetings.

The design team and Metro Parks interviewed the following stakeholder groups in October of 2011:

- Motocross advocates
- Cross Country advocates
- Okolona Soccer Club
- Louisville Radio Control Club (Flying Field)
- Equestrian advocates

Each group provided a list of their specific needs and requests for what the master plan could include to support their activities in the future. For example, the soccer club requested more parking because their existing parking lot is too small to accommodate weekend and special event needs. As the team progressed toward exploring design alternatives, all of the interview comments were considered and evaluated in relation to the larger community feedback.

The first public meeting was held on September 13, 2011 at Wilt Elementary School, and all community members were invited to attend. During this meeting, the design team gave a presentation where they shared their findings related to natural and cultural resources, history, and potential community connections. The attendees shared their concerns about current challenges at the park and their needs and visions for what the park could be in the future. Participants filled out a survey, which provided a record of their feedback.

In general, the feedback focused on:

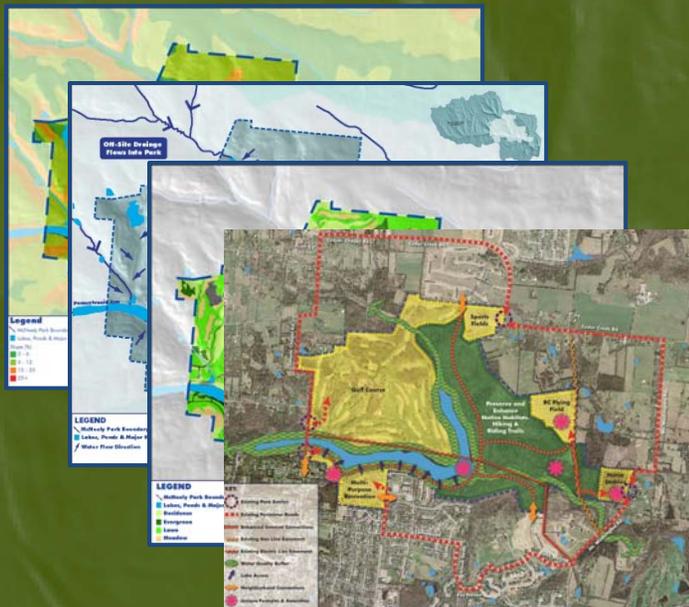
- Reducing the impacts of vandalism on park features
- Preserving and enhancing the existing lake edge, forests, and caves as special elements within the park
- Maintaining the rustic/rural character of the site
- Connecting the different areas of the park together with trails, especially around the entire lake
- Adding more shelters and parking for park users



Awareness

Sharing Information

Site Cultural & Natural Resources



Community Surveys





Awareness

Stakeholder Meetings

In addition to the first public meeting, the Design Team met separately with each of the following specific stakeholders and user groups:

- Kentucky Department of Fish and Wildlife
- Kentucky Transportation Cabinet
- Motocross/Dirt Bike Advocates
- Cross Country Advocates
- Soccer Advocates
- Flying Field Advocates
- Equestrian Facilities Advocates
- Disc Golf Advocates





Awareness

Community Input Highlights

The first public meeting, surveys and subsequent stakeholder meetings yielded the following key recommendations:

- Provide more **walking/hiking trails**, especially a **lake loop trail**
- Provide **security lighting** and more shelters, restrooms, and drinking fountains
- Upgrade/expand **playgrounds** and possibly add a sprayground
- Strive for a balance of **active** and **passive/pastoral** areas
- Preserve/enhance **forest diversity & natural habitat** areas
- Improve **equestrian facilities** and trails
- Improve **soccer facilities**, access, and parking
- Provide interpretive and directional **signage**





EXPLORATION





Exploration

The goals of the Exploration phase were to:

- Take the site-specific knowledge gained during the Awareness phase and the ideas and comments from the first public meeting and use them to generate conceptual alternatives for the park.
- Explore a range of concepts that test relationships between park elements, aesthetic improvements to the park, and the comfort level of the community for change.
- Present the conceptual alternatives to the community and get feedback on the strengths and weaknesses of each concept. The resulting comments would be used to develop the preliminary master plan during the Vision phase.

Some of the park-wide improvements that participants voiced during the first public meeting included the creation of a lake loop trail and more vehicular and pedestrian connectivity between park use areas. A park-wide trails concept illustrated a lake loop trail that would encircle the entire lake and significantly enhance hiking and on-shore fishing opportunities.

The trails concept also envisioned a potential shared use path connection across the dam/spillway, up the forested hillside, and connected to the Soccer facilities (East Park).

Because the lake is the primary attraction at the park, the community felt that it should be protected and enhanced. Rather than developing a specific concept to address this concern, the Design Team proposed three recommendations:

- Protect the water quality of the lake by capturing and cleansing park runoff before it enters the lake. The primary strategy would be the integration of stormwater best management practices (BMPs) into existing and proposed park facilities
- Reduce or eliminate bank erosion by replacing mown lawn with low maintenance native plantings. This strategy would have the side benefit of creating additional wildlife habitat adjacent to the lake
- Manage views to make the lake more visible to pedestrians and vehicular traffic.



Exploration

Next, the Design Team studied three specific use areas of the park in more detail: North Park (the primary active and passive recreational hub of the park), East Park (the Soccer facilities), and South Park (the Equestrian facilities).

North Park Use Area

Some of the challenges facing the North Park are lack of connectivity between the lakeside use areas and the ridgetop use areas, scattered facilities without a unified core, unsafe pedestrian crossings, lack of shelters, and lack of parking. Some of the opportunities include the existing lakeside path, multiple fishing spots, and the cross-country course.

With these items in mind, the Team explored four concepts for the North Park use area:

- Building on existing assets
- Creating a consolidated core
- Strengthening the connection between the core area and the lake
- Defining two distinct hubs—one for active recreation and the other for passive recreation

The concepts are described in more detail later in this chapter.

East Park Use Area

Some of the challenges at the East Park area include a dangerous access point at a sharp curve on Cedar Creek Road, insufficient parking for events, restroom usage exceeds septic system capacity, and the lack of concessions for visitors. Some of the opportunities include a well-defined core and access to utility infrastructure.

It became obvious early on that there would not be many conceptual alternatives for this area due to the need to preserve the number of soccer fields and due to the limited number of access points for a new park entry road that would not negatively impact the usage of the complex. Therefore, the team generated a single concept for the East Park area.

The concept proposed a new entry road on the eastern edge of the area that would 1) create a safer entry point away from the sharp curve on Cedar Creek Road and 2) it would help define a barrier to potential vandalism from the adjacent subdivisions.



Exploration

The concept also proposed a new walking path around the perimeter of the soccer fields that would provide an additional recreational opportunity for this area. Finally, a new concessions building and other amenities strengthened the core, providing a pleasant place to gather and play.

This concept is illustrated and described in more detail later in this chapter.

South Park Use Area

The existing equestrian facilities and trails are unique features of McNeely Lake Park, and many people in the community requested that these features be enhanced and enlarged. Currently, the entry road cuts through the middle of the finger of land where the horse barn and training ring are located, making it difficult to create more extensive facilities. In addition, the barn and training ring are small and in need of revitalization. Luckily, they are surrounded by moderately sloping land that could easily accommodate new, expanded facilities.

Like East Park, the South Park area has limited opportunities for exploring multiple conceptual alternatives. Therefore, only one concept was developed to address the challenges and opportunities discussed above. For this concept, the goal was to create a full-service, equestrian hub that builds on the existing facilities by proposing a new indoor training ring, additional parking, and several fenced paddocks where horses can be turned out to graze. The entry road was proposed to be moved east to the existing sharp curve on Mount Washington Road, but improved to create a new, three-way stop that slows down traffic and increases roadway safety. (Later in the process, while working on the McNeely Lake Park Road project, this entry was relocated to avoid the sharp curve.) The proposed tree-lined entry road is lined with rows of trees that create a more formal entry into the park.

The concept is illustrated and described in more detail later in this chapter.



Exploration

Park Aesthetics

Existing site structures and furnishings within the park represent a diverse mixture of design styles, materials, and craftsmanship that contribute little to creating a coherent identity for the park. Both Metro Parks and the Design Team thought that it was important to explore and express a unique aesthetic character for the park. After spending some time in the park, a palette of locally sourced materials began to emerge—limestone and cedar (wood). These materials could inform the character of shelters, comfort stations, signage, bridges, and site furnishings. It also became increasingly evident that a rustic character could influence these same site elements and fit in quite nicely with the semi-rural character of the park.

To capture the essence of the potential new park aesthetic, the Design Team developed a series of character sketches for bridges, entry signs, and shelters. These sketches, as well as some representative images of nature-inspired playgrounds, were shared with participants at the second public meeting.

Other Issues

In addition to specific site-based concepts, the Team introduced several other issues related to the long-term success of the park, such as:

- Integration of sustainable technologies and practices into new and existing park facilities (i.e. alternate energy and landscape regeneration)
- Sensitive management of park resources (i.e. caves, lake edges, and views)
- Interpretation and education (i.e. signage and outdoor classrooms)
- Volunteer opportunities to engage the public in the on-going health of the park (i.e. tree plantings and litter removal)

The second public meeting was held in April 2012, and the participants were asked to evaluate the strengths and weaknesses of each concept. They were also asked to comment on the overall aesthetic for the park structures—ranging from rustic/traditional to contemporary.

The results of this meeting are summarized at the end of this chapter.



Park-Wide Trail System and Lake Improvements

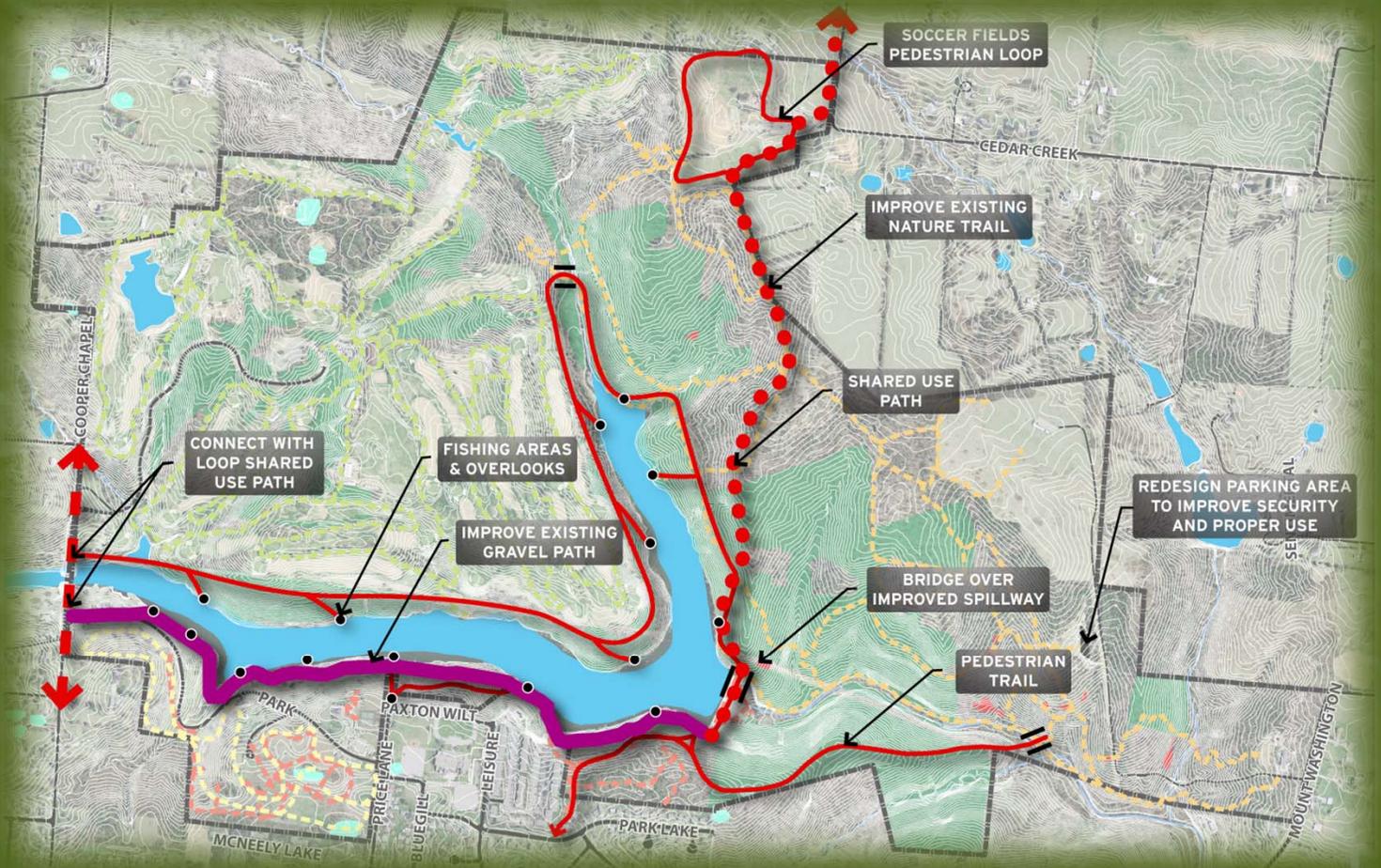




McNeely Lake Park Master Plan Exploration

Trail Principles

- Build on existing trail network
- Change trail surface and width based on usage and location
- Provide more linkages to surrounding neighborhoods and within the park
- Create multiple loop trails, including a lake loop
- Provide multiple opportunities to overlook or access McNeely Lake





McNeely Lake Park Master Plan Exploration

Lake Edge Enhancements

- Bioretention and filtration to capture and treat runoff before it enters the lake



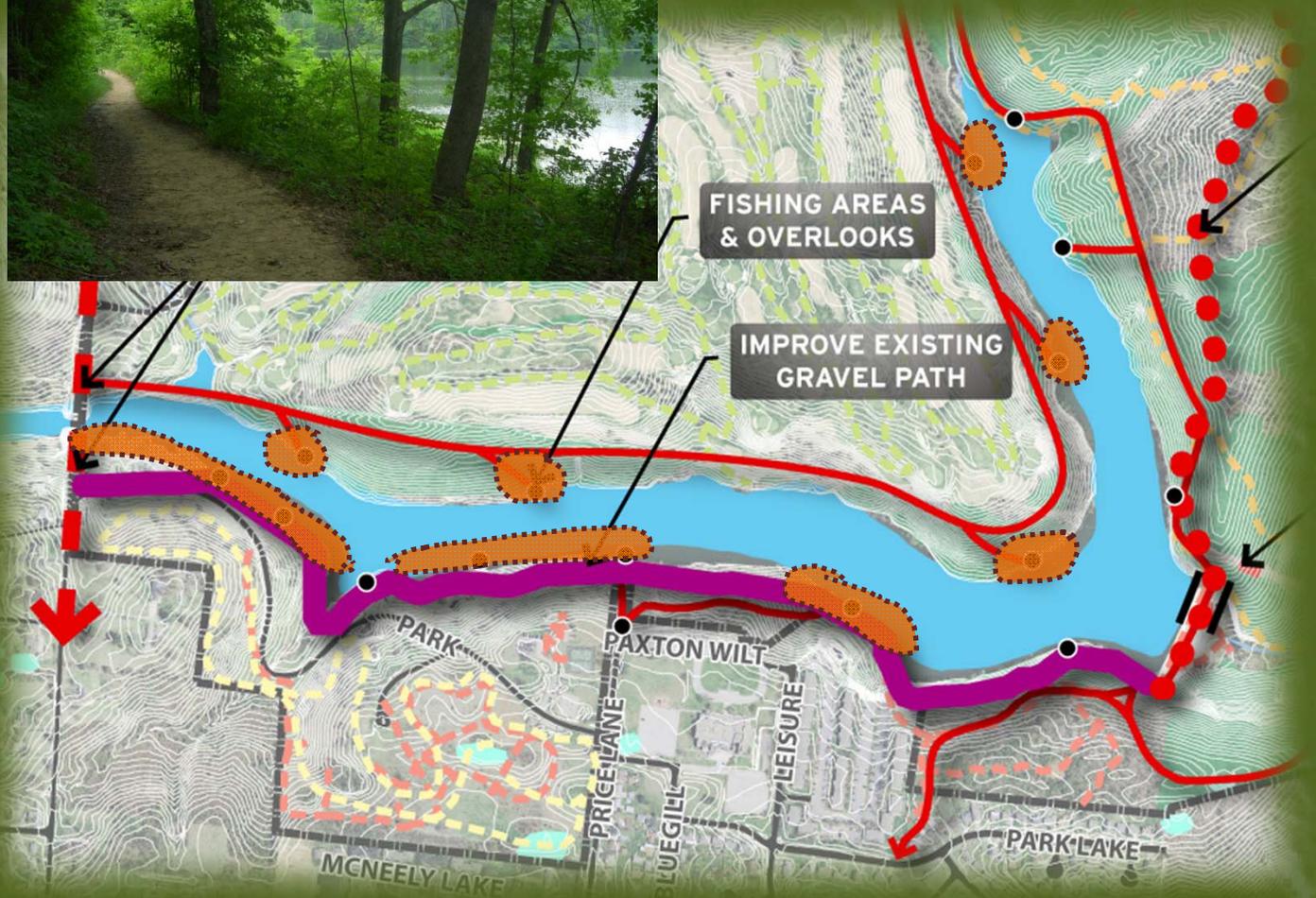


Exploration



Lake Edge Enhancements

- Lake edge habitat restoration of impacted areas to minimize erosion and maximize habitat regeneration



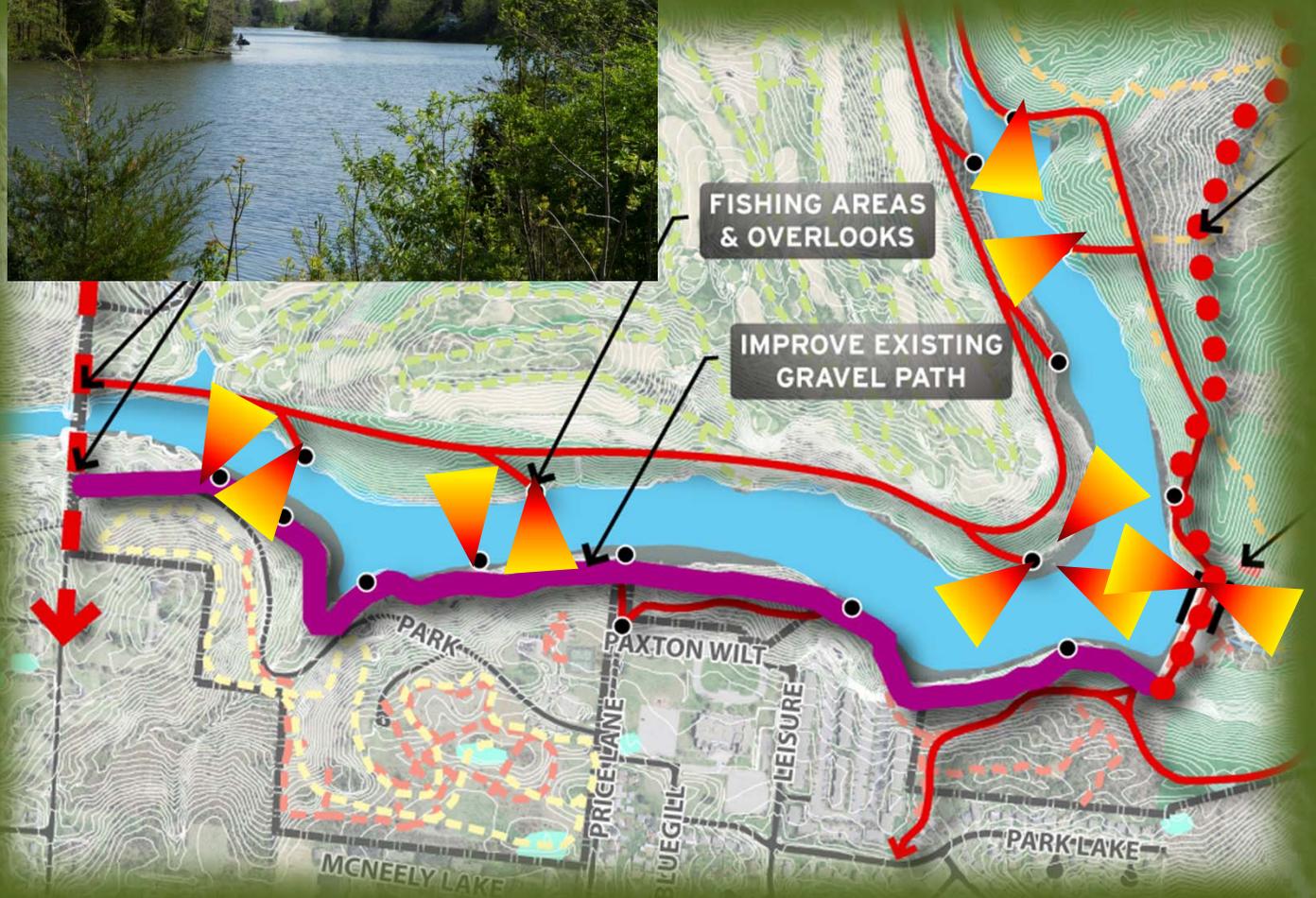


Exploration



Lake Edge Enhancements

- Managed views along the roadway and pedestrian trails to take advantage of the beautiful landscape





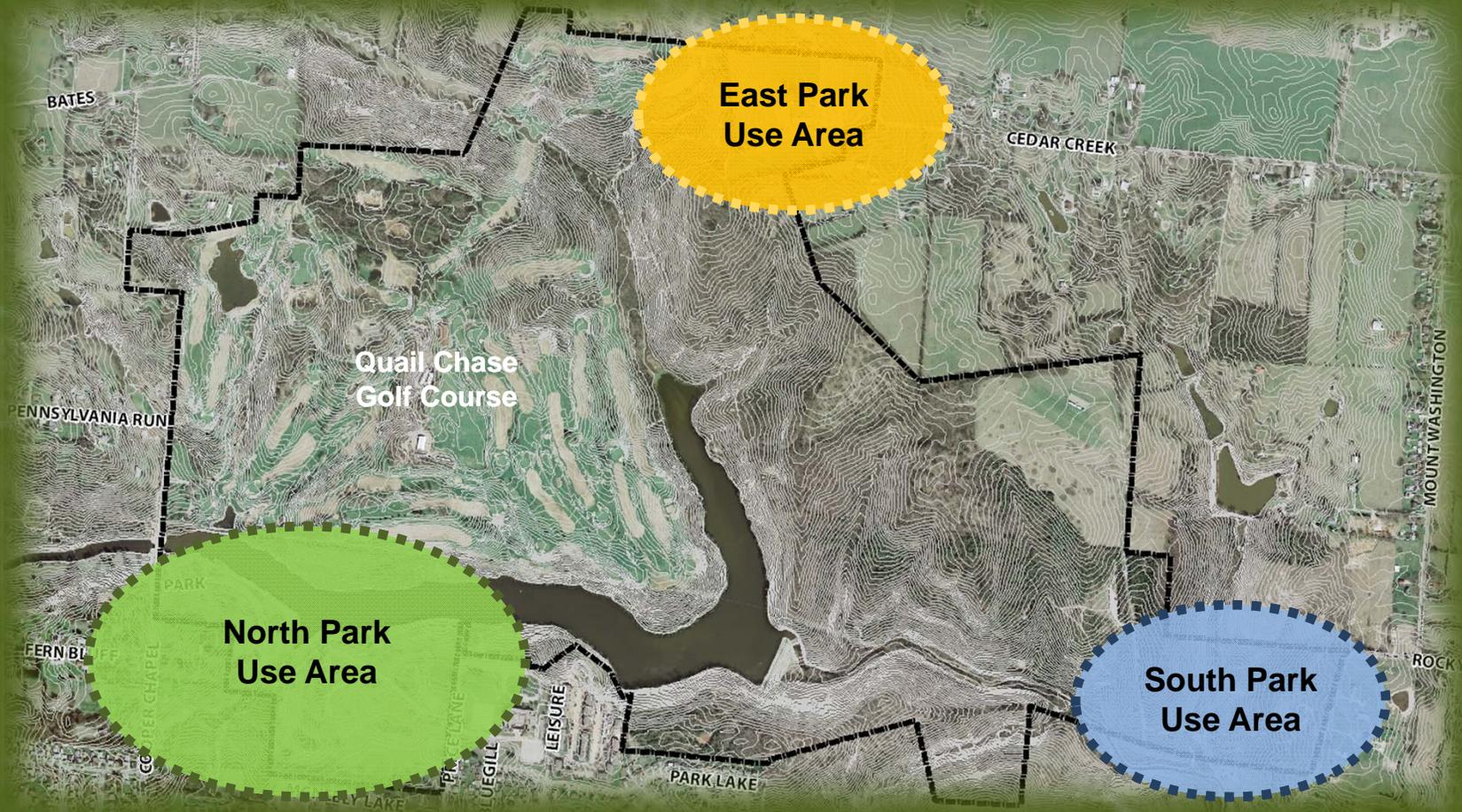
Conceptual Exploration: Park Use Areas





Exploration

Areas of Detailed Exploration





North Park Use Area





Exploration – North Park Use Area

Context & Connectivity



Connect Park Trail System to Future Louisville Loop Shared Use Path

Potential Future Conservation Easement in Coordination With Adjacent Landowner(s)

North Park Use Area

Create Stronger Connection Between Park and School





Exploration – North Park Use Area

Existing North Park Conditions

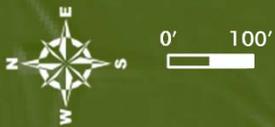




Exploration – North Park Use Area

Concept 1: Enhanced Existing Assets

- 1 New Shelters
- 2 New Playground/
Sprayground
- 3 Sand Volleyball
- 4 More Parking with
Bioretention
- 5 Relocated and/or
Improved Entries
- 6 Large, Informal
Multipurpose Lawn
- 7 Walking Loops and Trails

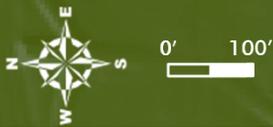




Exploration – North Park Use Area

Concept 2: Consolidated Core

- 1 New Shelters
- 2 New Playground/
Sprayground
- 3 Sand Volleyball
- 4 More Parking with
Bioretention
- 5 Relocated and/or
Improved Entries
- 6 Informal Multipurpose
Lawn
- 7 Walking Loops and Trails
- 8 "Winner's Circle"





Exploration – North Park Use Area

Concept 3: Hub-to-Lake Connection

- 1 New Shelter
- 2 New Playground/
Sprayground
- 3 Meeting Facility
- 4 More Parking with
Bioretention
- 5 Relocated and/or
Improved Entries
- 6 Formal Multipurpose
Lawn
- 7 Walking Loops and Trails





Exploration – North Park Use Area

Concept 4: Active & Passive Recreation Hubs

- 1 New Shelters
- 2 New Playground/
Sprayground
- 3 Sand Volleyball
- 4 More Parking with
Bioretention
- 5 Relocated and/or
Improved Entries
- 6 Formal Multipurpose
Lawn
- 7 Walking Loops and Trails
- 8 New Restroom





East Park Use Area





Exploration – East Park Use Area

Existing East Park Conditions





Exploration – East Park Use Area

Strengthened Sports Hub

- 1 New Entry Location and Park Road
- 2 Enlarged Parking
- 3 Special Event Lawn with Seating
- 4 Enhanced Playground
- 5 New Concessions Building
- 6 Walking Loops and Trails





South Park Use Area





Exploration – South Park Use Area

Existing South Park Conditions





Exploration – South Park Use Area

Improved Equestrian Hub

- 1 New Indoor Training Ring and Offices
- 2 Existing Barn and Training Ring
- 3 Fenced Paddocks
- 4 New Entry and Park Road
- 5 Car and Trailer Parking
- 6 Cedar Glade Views
- 7 Equestrian Trails





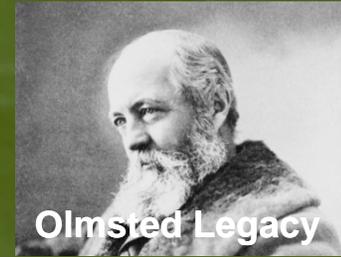
Park Structures





McNeely Lake Park Master Plan

Exploration Park Structures Inspiration



Olmsted Legacy



Rustic Site Features



Cedar Glades

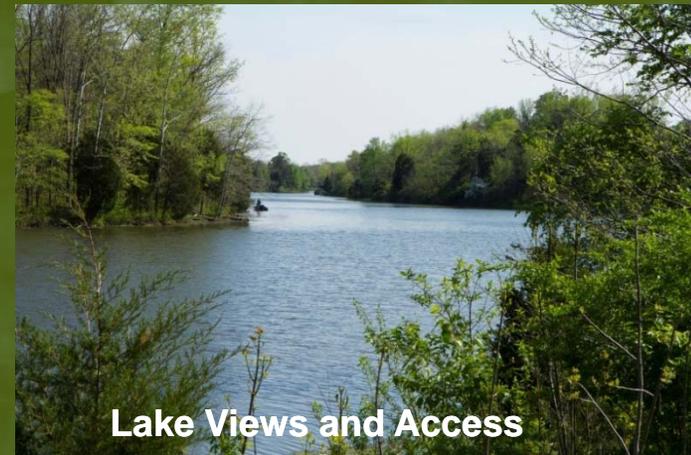


Caves & Karst



Weathered Stone Bridges

What Should the Character of the Park Elements be on the Continuum from Historical to Contemporary?

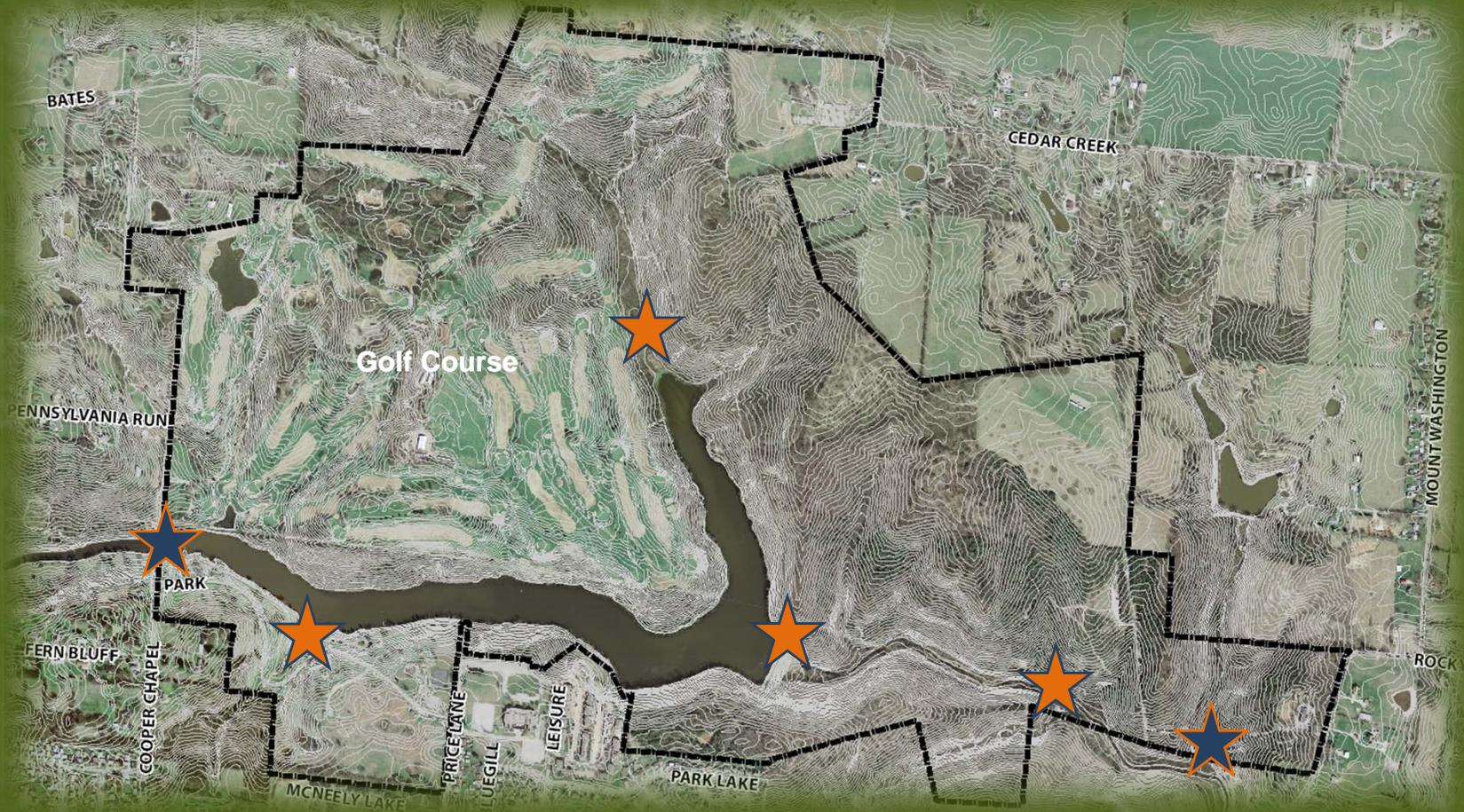


Lake Views and Access



McNeely Lake Park Master Plan
Exploration
Potential Bridge Locations

-  Vehicular Bridge
-  Pedestrian Bridge





Exploration

Vehicular Bridges (Cooper Chapel Road)





Exploration

Pedestrian Bridges at Spillway





McNeely Lake Park Master Plan

Exploration

Pedestrian Bridges





McNeely Lake Park Master Plan
Exploration

Fishing Spots





Exploration

Existing Shelters

- Columns could be moved farther apart to create more room and could be clad in stone to improve their character
- An attractive ceiling could be installed to minimize pests
- Roof could be replaced with cedar shakes to create a rustic appearance
- Landscape and patio around shelter could be improved to create a stronger sense of place





McNeely Lake Park Master Plan
Exploration

**Modified
Existing
Shelter**

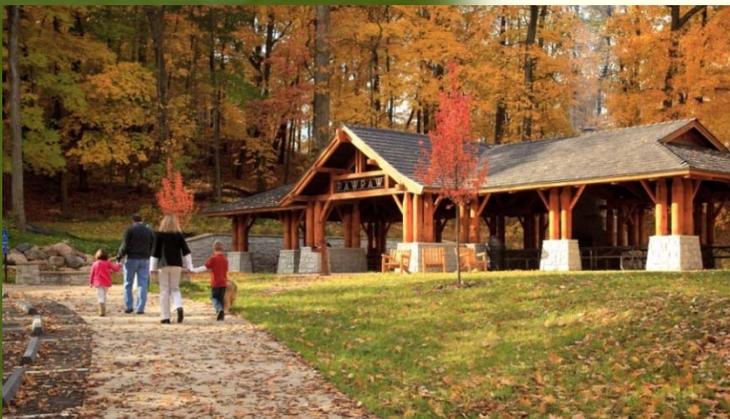
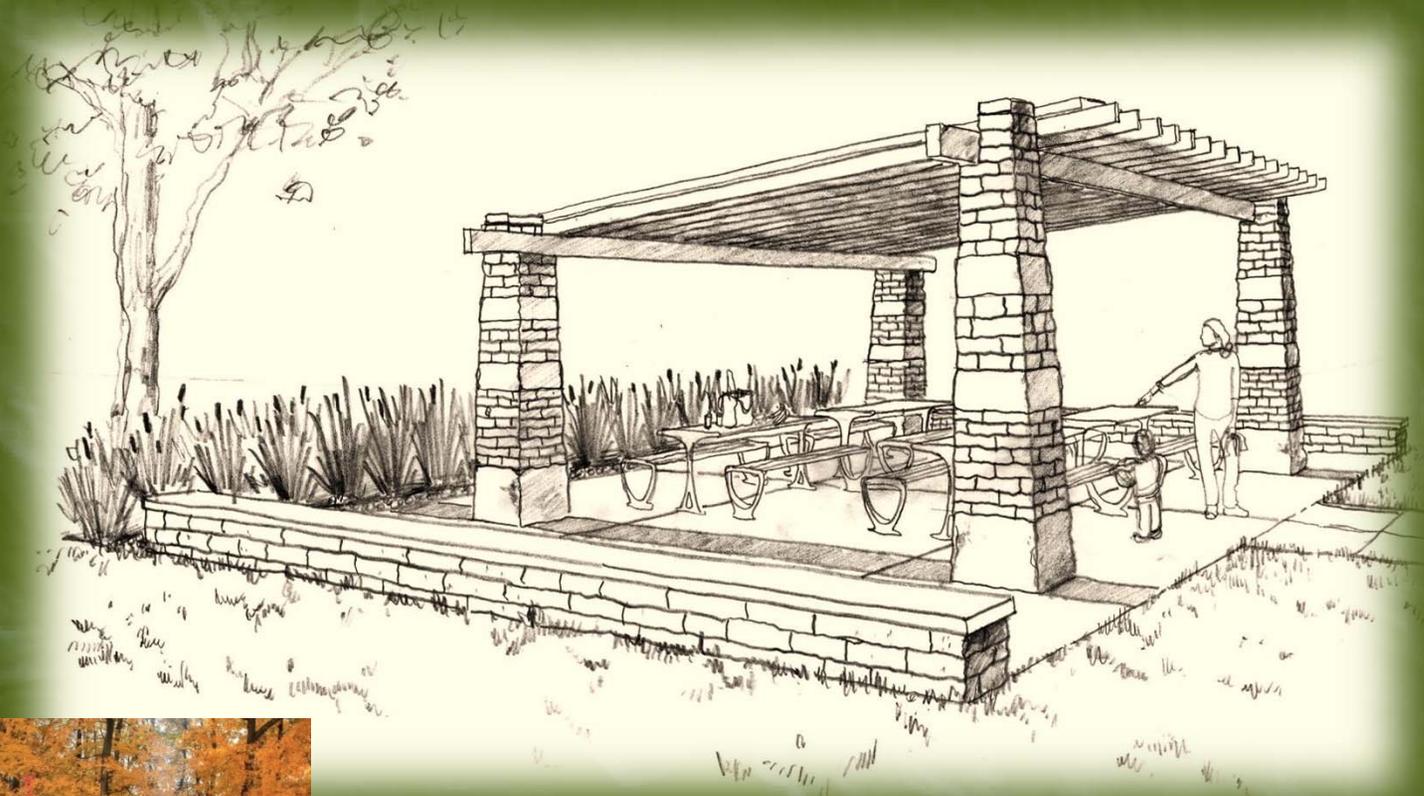




McNeely Lake Park Master Plan

Exploration

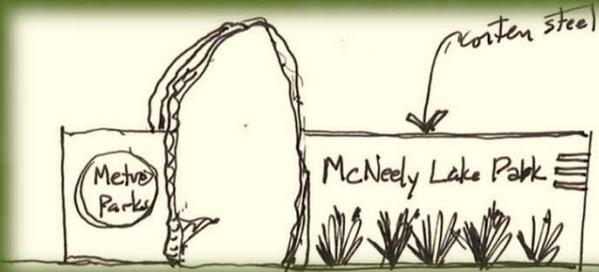
Develop A New Design for Shelters?



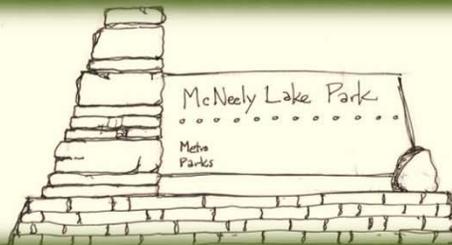


McNeely Lake Park Master Plan Exploration

Signage



Existing Entry Sign





McNeely Lake Park Master Plan

Exploration Existing Playground Locations



HUMAN NATURE, INC. ★

CORN ISLAND ARCHAEOLOGY, LLC ★

REDWING ECOLOGICAL SERVICES, INC. ★

STRAND ASSOCIATES, INC.



McNeely Lake Park Master Plan Exploration

Nature-Inspired Play



Hills-n-Dales Park Kettering, Ohio





McNeely Lake Park Master Plan
Exploration

Nature-Inspired Play

**Twin Lakes Playground
Cincinnati, Ohio**





Exploration

Sustainable Practices



Glade Management



Porous Pavements



Native Landscape Restoration



Reforestation



Wind Power



Bioretention



Solar Power





McNeely Lake Park Master Plan
Exploration



**Watershed Protection
& Lake Management**

**Resource
Management**



View Management



Stream Restoration



**Sinkhole &
Cave Protection**



**Forest Management &
Invasive Species Removal**



Glade Management





McNeely Lake Park Master Plan Exploration

Interpretation & Education





McNeely Lake Park Master Plan Exploration

Volunteer Opportunities



Trail Maintenance



Habitat Restoration & Management



Interpretive Programs & Ambassadors



Litter Cleanup



Public Meeting #2





Exploration

The second public meeting was held at Wilt Elementary School on April 24, 2012. Again, all community members were invited. At this meeting, the design team presented a range of design concepts for the entire park and for the three primary use areas—North Park (active and passive core), East Park (soccer facilities), and South Park (equestrian facilities). The conceptual alternatives explored different amenities and their arrangements, based on specific themes or levels of change. For example, at the North Park Use Area, the proposed concepts ranged from minimal changes to the existing facilities to extensive changes that included a new multipurpose lawn, nature-base playgrounds, and a new, lakeside nature education center. The overall park plan recommended a network of trails that would provide pedestrian connections throughout the park and around the lake.

The presentation also included sketches of bridges, shelters, and other park structures that embodied the rustic character preferred by participants at the first public meeting. The general consensus was that these sketches represented a design vocabulary that would be unique to McNeely Lake Park.

The community feedback was varied with regard to the conceptual alternatives, but some distinct patterns began to emerge. Key preferences included the following:

- Provide a trail network that connects the park's different use areas and lake together
- Preserve/enhance/expand the existing equestrian trail network
- Strengthen the civic nature of the North Park Use Area by improving existing amenities and creating new ones that meet participants' needs
- Improve the safety and access to the soccer facilities at the East Park Use Area and provide a stronger core that supports the use of that area
- Create a regionally significant equestrian facility at the South Park Use Area
- Enhance access to the lake

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VISION





McNeely Lake Park Master Plan

Vision

The goals of the Vision phase were to:

- Integrate the strengths of the conceptual alternatives, as identified by attendees at the second public meeting, into a preliminary master plan.
- Share the preliminary master plan with the community one last time and gather feedback on any potential improvements to the plan.
- Generate the final master plan vision that will be used by Metro Parks to improve park amenities as funding becomes available.
- Provide Metro Parks an Opinion of Probable Cost and a Phasing strategy that will help them with planning for the implementation of the vision.

At the second public meeting, the design team listened to and gathered feedback on the conceptual alternatives for McNeely Lake Park. This information was synthesized into a single preliminary master plan. At the same time, a separate but significantly related concept was being developed for a new park roadway that would connect the South and East Park Use Areas. The new roadway concept was incorporated into the Preliminary Master Plan as a key element for improving internal park connections and access.

At the third public meeting (November 29, 2012 at Wilt Elementary School), stakeholders again had the opportunity to provide feedback on the park concepts, the park master plan was further refined to reflect their input. In addition, an Opinion of Probable Cost was generated to help establish a budget for park improvements and to help Metro Parks develop a phasing and priorities plan for implementation.

The rest of this section describes the key components of the Park Master Plan. Due to the size of the park, the overall park master plan primarily illustrates the proposed trail network and new park road. However, the North, South, and East Park Use Areas are described and illustrated in a more detail later in this section.

Trail Network

During the public meetings, many of the participants requested a better trail system that would improve connections to the different park areas and provide a walking loop around the McNeely Lake. In response to their requests, the Master Plan recommends the development of an extensive trail system. This network of trails will significantly improve pedestrian connections to the surrounding communities and between use areas within the park.



McNeely Lake Park Master Plan

Vision

The proposed trail network includes the following features:

- An improved lakeside promenade along the west side of the lake at the North Park Use Area. This 10' wide, concrete shared use path will be fully accessible and will include pedestrian scale lighting, site furnishings, and other amenities. Access to the lake is encouraged through the development of informal fishing spots and an improved dock.
- A network of 10' wide, asphalt shared use paths will connect to the lakeside promenade at the dam and enable visitors to easily circumnavigate the lake and connect to the shared use path that will parallel the new park road.
- An informal 6' wide, gravel trail will complete the lake loop and provide access to the east side of the lake along the edge of the Quail Chase Golf Course.
- A 10' wide, asphalt shared use path will run parallel to the proposed new park road and will connect the South Park Use Area (Equestrian Facilities) to the East Park Use Area (Soccer Facilities). This path will accommodate both pedestrian and bicycle traffic and include site furnishings and formal trailheads with interpretive signage.

Before the shared use path connection to other parts of the park can be implemented, the dam spillway needs to be repaired, and a new bridge needs to be built across the spillway to enable safe access to the rest of the park. The new bridge will also create an incredible vantage point for visitors to view McNeely Lake.

In addition to connecting use areas within the park, the trail network has the potential to play a vital role in the implementation of the Louisville Loop Shared Use Path. This opportunity would enable users of the Loop shared use path to pass through and enjoy the park, rather than simply paralleling the roadway on its journey between Jefferson Memorial Forest and Floyds Fork.

New Park Connector Road

The proposed park connector road, which is being designed as a separate but integrated project, is meant to accomplish two primary goals:

- Provide a vehicular connection between East and South Park Use Areas, thus making the park feel more like a single park rather than three separate parks.
- Provide an important neighborhood connector between Mt. Washington Road and Cedar Creek Road.



McNeely Lake Park Master Plan

Vision

During separate public meetings for the roadway design, participants indicated that they wanted the road to have a parkway character and be a low speed, scenic throughway for local traffic and park visitors. The scale of the road has been kept intentionally modest, trying to minimize impact on the park's various ecosystem communities along the route. Associated bridges, guardrails, and other structures will have a rustic character to match the preferred aesthetic voiced by the community—consisting of local stone and wood when possible.

North Park Use Area

Since the park's inception, the North Park Use Area has primarily focused on passive recreation with small areas for active recreation (basketball and tennis). The Master Plan envisions a new role for this area as the civic heart of the surrounding communities. Here, in addition to supporting traditional active and passive recreation, the North Park will be home to a new, large multipurpose lawn that can host a wide variety of community-based activities and events—from kite flying competitions to pick-up touch football games. A concrete sidewalk with seating areas surrounds and defines the extent of the multipurpose lawn.

In addition to the new civic lawn, the North Park will include the following new features:

- Improved vehicular access and entrances along Cooper Chapel and Price Lane. The internal road has been aligned with Park Road at Price Lane to create a safer intersection. A secondary entrance at the end of Price Lane allows better ingress/egress during special events.
- An active recreation hub is proposed along the north edge of Price Lane. This area will include basketball courts, tennis courts, a multi-age play and workout zone, a picnic lawn, a new shelter, a new restroom building, and parking.
- A passive recreation hub is proposed between the active hub at the multipurpose lawn. This area will include a new shelter, a nature-based play environment, a picnic lawn, a port-o-let shelter, and parking.
- Low stone walls at both of the hubs provide seating and help create a unique, place-based aesthetic for the park.
- A Winner's Circle is located at the south end of the multipurpose lawn. This space will be used during cross country racing events, and it includes architectural elements for erecting a shelter during those events.



McNeely Lake Park Master Plan

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Vision

- A nature education center and meeting facility is proposed along the lakeside promenade. This semi-underground building will house interpretive displays describing local flora, fauna, ecosystems, and human history. The interior space can also be used for classes, workshops, and other meetings. The building will also provide restrooms and storage space for the park. An accessible green roof will cover the top of the building, allowing the structure to blend in with its surroundings, mitigate stormwater runoff, and create habitat.
- A new dock will be accessible to all and provide access to the lake for fishing and scenic enjoyment.
- In addition to the overall park trail system, several additional smaller scale trails will safely connect parts of the North Park together.
- Interpretive signage will appear throughout the park and describe features that make McNeely Lake Park unique. For example, the Master Plan proposes an interpretive sign for McNeely Cave, describing its geology and importance to pre-historic and historic cultures.

- Parking has been increased from 110 to 165 cars and from 10 to 13 trailer spaces.
- The existing cross country trails remain but have been modified to accommodate proposed features and trails.

South Park Use Area

The South Park area, apart from a small horse barn and training ring, is relatively undeveloped and underutilized. The Park Master Plan envisions an extensive, horse-centric facility that would be unique within the Metro Parks system of parks and create a regional destination for equestrian activities.

Some of the key features include:

- A new indoor horse training ring with offices, restrooms, and other support spaces
- The existing barn will be refurbished with high quality stables and other equine care amenities
- Several new, fenced paddocks will provide outdoor exercise and grazing for horses.
- A proposed parking lot for both cars and horse trailers will serve the new facilities and provide access to the network of existing and new horse trails.



Vision

East Park Use Area

The current East Park area is a heavily used youth soccer complex. One of the existing challenges for this area is vehicular access and parking. The access point is located on a dangerous curve on Cedar Creek Road, making it difficult for visitors to enter and leave the complex. The short access drive to the parking spaces does not provide a long enough stack-up distance, and this often prevents the movement of cars within the parking lot. In addition, the parking lot does not have enough parking spaces to accommodate the number of visitors when several games are in progress at the same time.

The Park Master Plan recommends several improvements to the East Park Use Area:

- With the implementation of the park connector road, a new, safer access drive is proposed that removes the dangerous entry condition and enables longer stack-up distances outside the parking lot.
- The existing restroom facility will be connected to a new sewer line. This project will correct existing sanitary sewer problems.
- The existing basketball court will remain in its current location.
- The existing parking lot will be increased in size from 139 to 168 spaces, and a new overflow parking lot, consisting of a reinforced turf field, will be able to accommodate 132 additional cars.
- In addition to the existing comfort station, the core of the complex will be enhanced to include a new concessions building, stone seatwalls, gathering spaces, and an enlarged playground.
- A walking loop trail provides a recreational alternative to playing soccer. This trail connects to the proposed shared-use path that is part of the connector road project.
- A corner of the area has been set aside for a small archery range. This facility will consist of a grassy field, targets, and elements to ensure the safety of park users, such as netting, berms and plantings to minimize the chances of a stray arrow.



Vision

Park Structures

Both Metro Parks and the Design Team thought that it was important to explore and express a unique aesthetic character for the park. After spending some time in the park, a palette of locally sourced materials began to emerge—limestone and cedar (wood). These materials could inform the character of shelters, comfort stations, signage, bridges, and site furnishings. It also became increasingly evident that a rustic character could influence these same site elements and fit in quite nicely with the semi-rural character of the park.

To capture the essence of the potential new park aesthetic, a series of character sketches for bridges, entry signs, shelters and trailheads, as well as some representative images of nature-inspired playgrounds, were created and collected to share with participants at the third public meeting. The general consensus was that this aesthetic vocabulary should inform all future improvements to McNeely Lake Park in order to create a cohesive and unique character for the park.

The following guidelines outline specific elements of the new park aesthetic:

- Building massing should be simple and relate to the architectural vernacular of the area.
- Roofs should be covered with cedar shakes or with manufactured versions of shakes. Roof geometries should also be simple (i.e. shed, hip, or gable).
- Building structure should consist of wood members, when possible, and they should have a rough hewn character. The use of on-site or local wood products is preferred.
- Local limestone accents should be incorporated into all structures. The stone should be laid to suggest rock strata, as shown in the sketches.



McNeely Lake Park Master Plan

Vision

Site Furnishings

Rather than invest in entirely new styles of site furnishings for McNeely Lake Park, Metro Parks has recommended that they continue to use their standard furnishings. This will maintain consistency across the Metro Parks system. One new feature, however, will help create a unique identity for the park: the limestone seatwalls that appear throughout the Master Plan. These walls help define spaces and edges and embody a place-specific response to the need for seating and spatial definition. In addition, the Master Plan suggests the use of four-board fencing to define the street edges of the park.

The following furnishings are part of the Metro Parks standards:

- Bench: Dumor, Inc., Model 98-60 with wood slats
- Trash Receptacle: Dumor, Inc., Model 84-32-FTO

Street and pedestrian scale lighting fixtures have not been determined at this time, but when the opportunity arises to include these in the park, it is recommended that they match the color and character of other site furnishings.

Nature-Base Playground

Instead of relying solely on the use of off-the-shelf play equipment, the Master Plan recommends the use of nature-based play, which can include a range of play experiences from the use of totally natural materials to a mix of manufactured equipment and natural materials. This strategy provides the opportunity to create a play environment that is place-specific and that feeds the innate human desire to interact with nature. Some potential play features include:

- Local stone for climbing, sitting, and walking.
- Local wood for climbing, shelter, and the construction of structures by children
- Custom play equipment that looks like natural trees, logs, and rocks and that encourages sliding, balance, climbing, socializing, and other skills.
- Incorporation of plantings in and around the play surfacing to inspire and teach children about native plants and wildlife and about nature's textures, patterns, and forms.



Master Plan





Vision Overall Plan

The Master Plan recommends that the primary park activity use areas be updated to reflect community needs and values. An extensive trail network and a proposed new connector road create new connections between the use areas and to previously inaccessible assets.





Trail System

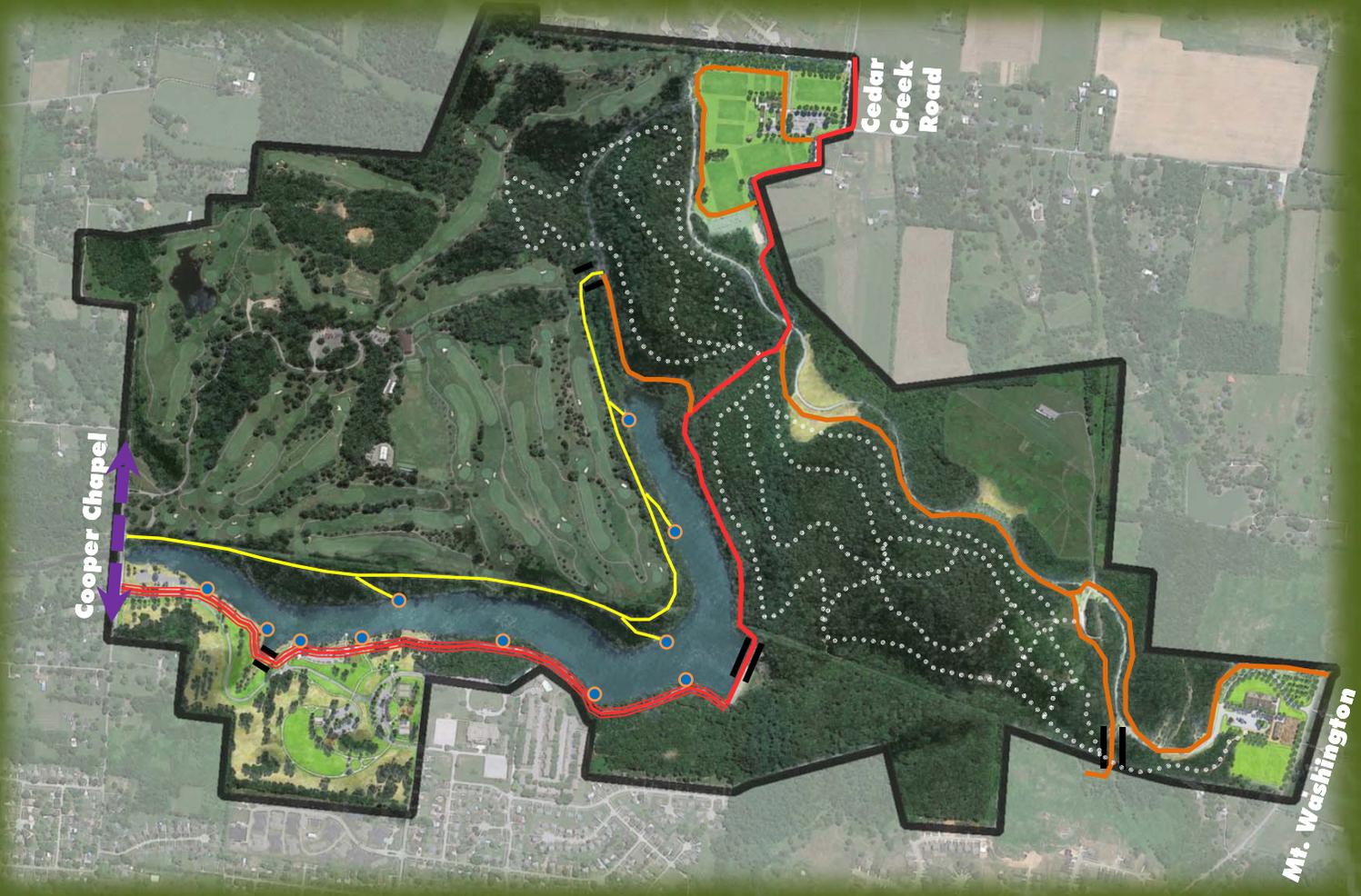




Vision

Enhanced Trails Network

-  Lakeside Promenade
-  Louisville Loop
-  Shared Use Path
-  Soft Surface Trail
-  Shared Use Path
-  Equestrian Trail
-  Lake Access Point





Vision

Louisville Loop Trail Connection

The Louisville Loop Shared Use Path was designed in southern Louisville Metro to connect Jefferson Memorial Forest to the Floyds Fork watershed. With the proposed new trail network within McNeely Lake Park, there is the opportunity to route a portion of the Loop through the park to take advantage of the park's assets and amenities.





Vision

Trail Types

The proposed trail system consists of several different types of trails that offer a range of challenges and experiences throughout the park.

The characteristics shown on this page can assist in providing clarity to some of the proposed trails, and the Louisville Loop Shared Use Path guidelines should be utilized for that portion of the trails network.

Type 1 Trails

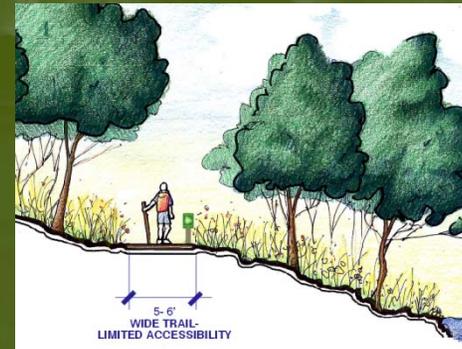
- 0% - 5% Slopes
- 10' -12' Width
- Asphalt, Concrete, Unit Paving, or Natural Stone
- Universal Accessibility
- Location(s)
 - Lakeside Promenade
 - Shared Use Path

Type 2 Trails

- 0-10% Slopes
- 6' - 8' Width
- Asphalt or Compacted Gravel
- Limited Accessibility
- Location(s)
 - Walkways Between Park Elements at North Park
 - Walking Loop at East Park

Type 3 Trails

- 10% or Greater Slopes
- 4-5' Width
- May have stairs on steeper slopes
- Gravel or Mulch
- Limited Accessibility
- Location(s)
 - Hiking Trails
 - Access Trails to Fishing Spots





Vision

Trail Materials

Trail materials will vary based on the level of potential impact to sensitive habitats and on accessibility

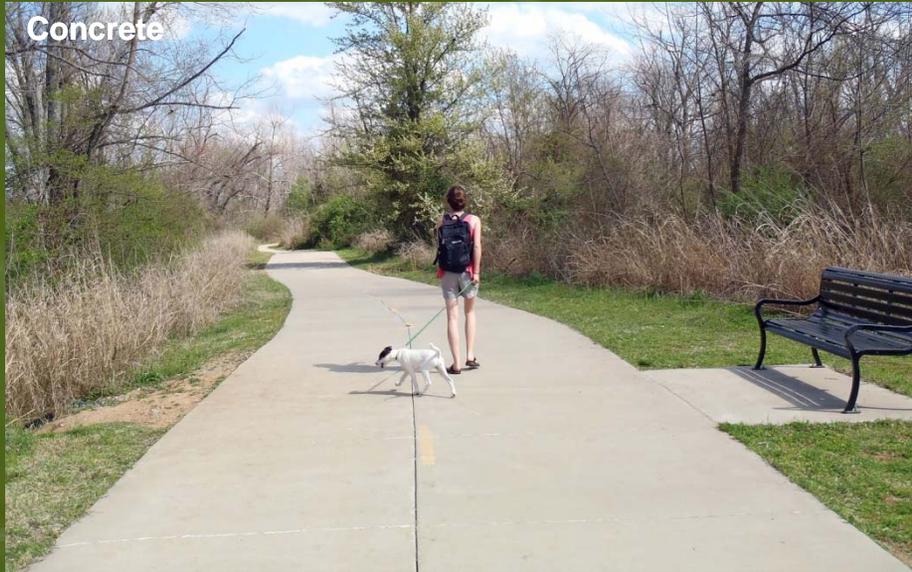
Wood/Recycled Lumber/Plastic



Asphalt



Concrete



Compacted Gravel





Vision

New Scenic Park Connector Road & Trail

 Proposed Roadway Alignment

The proposed connector road will enable park visitors to access the East and South Park Use Areas, the Flying Field, and other amenities without leaving the park. The roadway's geometry will slow traffic and create an enjoyable driving experience.

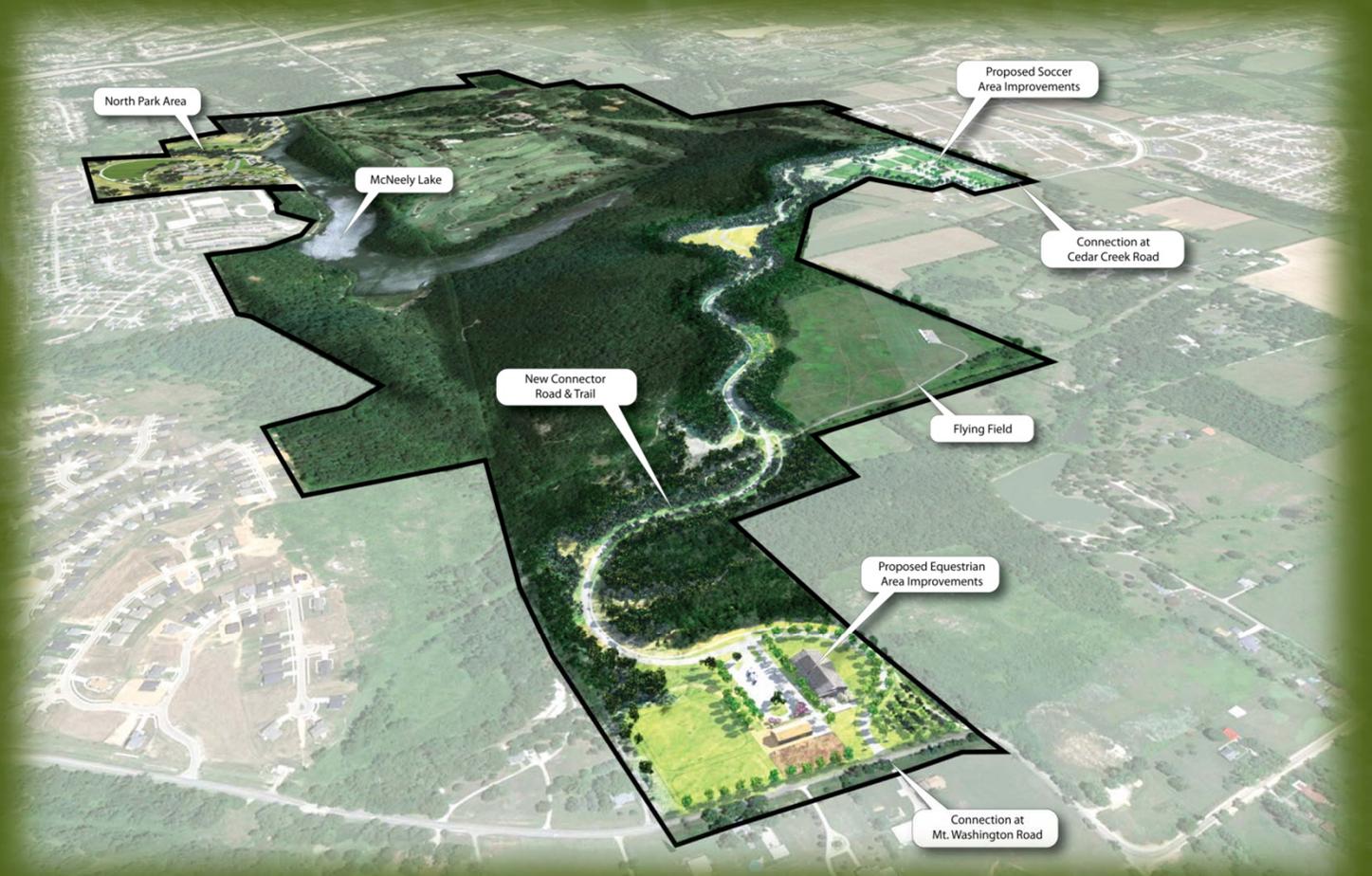




Vision

New Scenic Park Connector Road & Trail

This is a view of the new connector road from the south starting at the South Park Use Area. This image illustrates the relationship of the new roadway to the lake, forested hillsides, and Flying Field. The road will provide a scenic and low-speed linkage between Mt. Washington Road and Cedar Creek Road



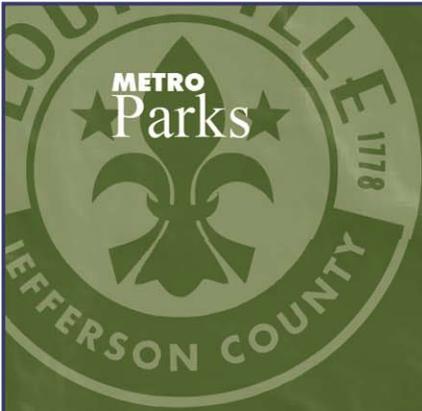


Vision

Detailed Use Areas

The Master Plan illustrates detailed improvements to the North, East, and South Park Use Areas. Each use area supports different recreational activities that enrich the surrounding communities.





McNeely Lake Park Master Plan

North Park Use Area



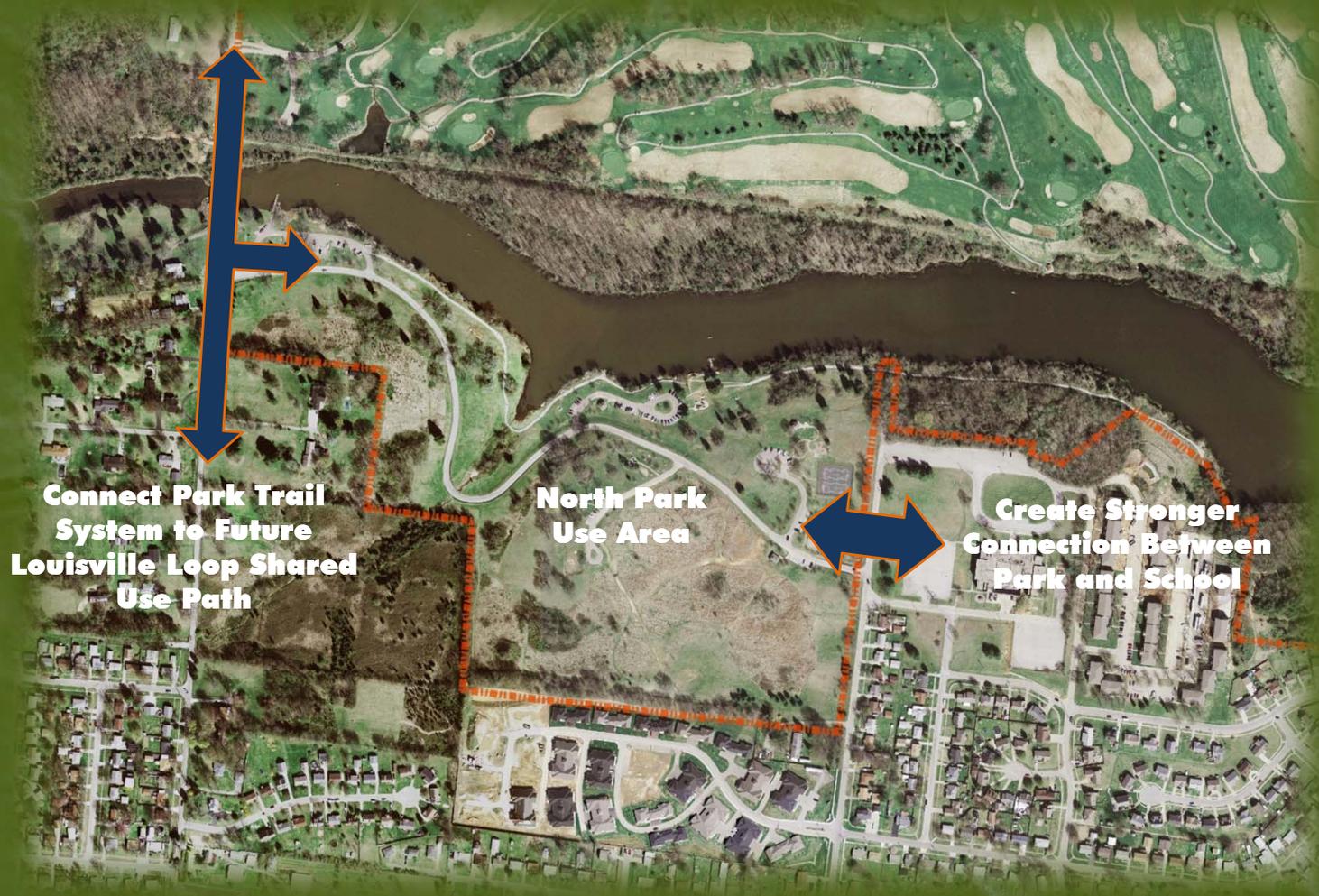


Vision

North Park Use Area

Context & Connectivity

At the North Park Use Area, the Master Plan strengthens connections to the proposed Louisville Loop Shared Use Path, to nearby Wilt Elementary School, and to the neighborhoods adjacent to the park.



Connect Park Trail System to Future Louisville Loop Shared Use Path

North Park Use Area

Create Stronger Connection Between Park and School





Vision

North Park Use Area

Existing Conditions

The North Park Use Area currently includes several valuable assets that the community requested to be preserved and/or enhanced. The lake, cave, sinkhole and Korean War Memorial are features unique to the park that are incorporated into the Master Plan.





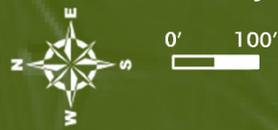
Vision

North Park Use Area

Total Parking: 165 Cars & 13 Trailers

Proposed Plan View

- 1 New Shelters
- 2 New Playground
- 3 Picnic Lawn
- 4 More Parking with Bioretention
- 5 Relocated and/or Improved Entries
- 6 Formal Multipurpose Lawn
- 7 Shared Use Paths and Trails
- 8 New Restroom
- 9 Nature Center/ Meeting Facility





Vision

North Park Use Area

Proposed Aerial View

This view of the North Park Use Area from the South highlights some of the key features of the Passive and Active recreation areas. A new pedestrian trail system connects the park elements and enables visitors to access the lake and the proposed Nature Education Center (shown in more detail on the following page).

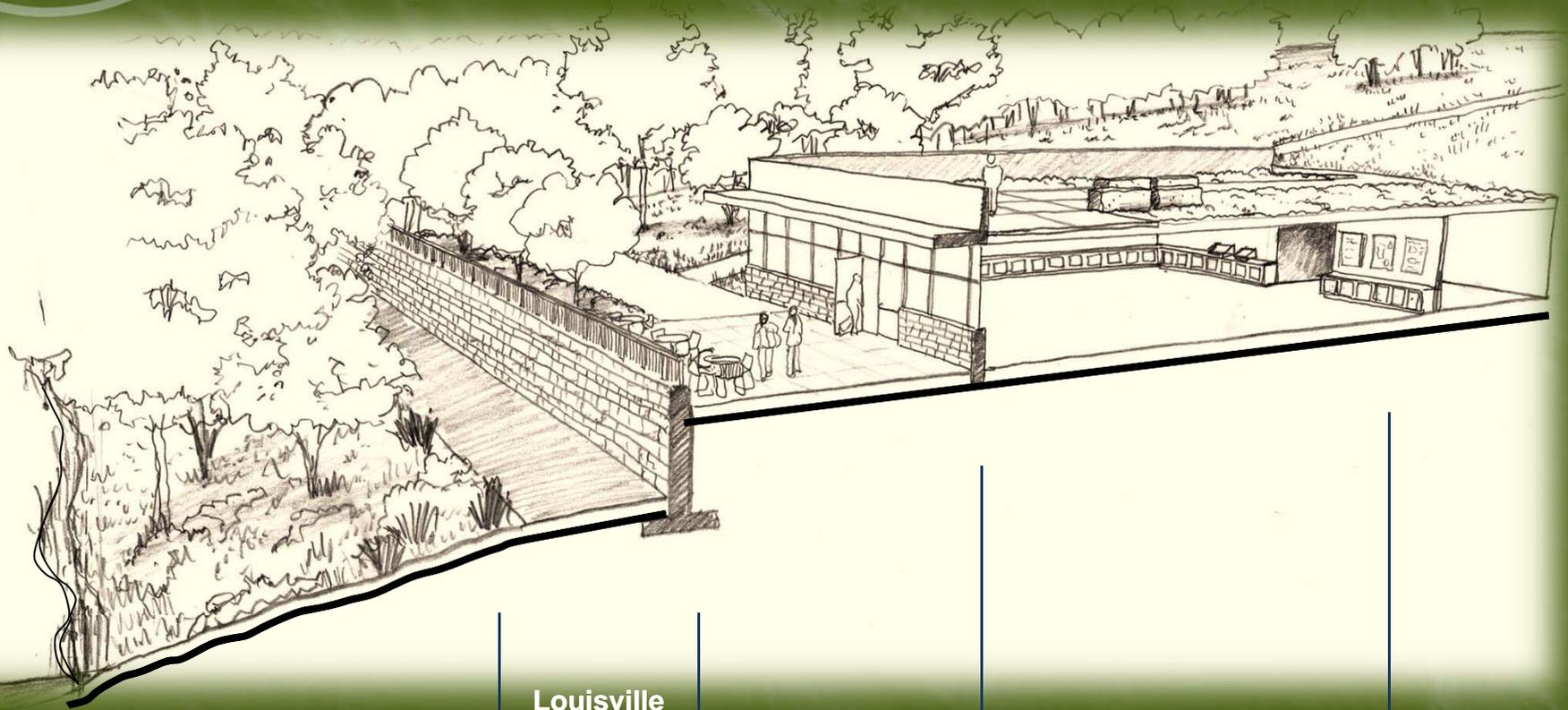




Vision

North Park Use Area

Nature Education Center/Meeting Facility



Lake

Riparian Buffer

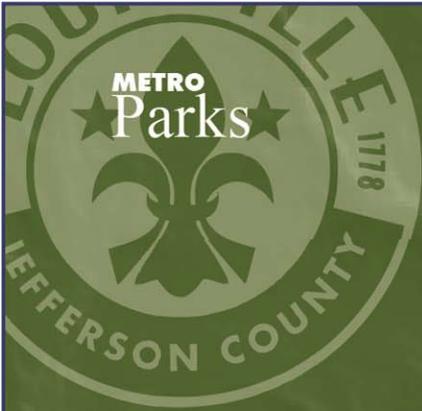
Louisville Loop Shared Use Path & Lakeside Promenade

Lake-View Terrace

Multi-Purpose Space Inside & Green Roof Above

Service, Storage, & Restrooms





McNeely Lake Park Master Plan

East Park Use Area





Vision

East Park Use Area

Existing Conditions

The East Park Use Area currently consists of a well-used soccer complex. The restroom building is unable to handle existing usage and needs a new sewer line connection to Cedar Creek Road to fix the problem. In addition, the existing park access point is located on a dangerous curve and needs to be relocated.





Vision

East Park Use Area

Total Parking: 168 Cars (+ 132 for Special Events)

Proposed Plan View

- 1 New Entry Location and Park Road
- 2 Enlarged Parking
- 3 Special Event Lawn with Seating
- 4 Enhanced Playground
- 5 New Concessions Building
- 6 Shared Use Paths and Trails
- 7 Special Event Overflow Parking
- 8 Potential Archery Range
- 9 Basketball Court





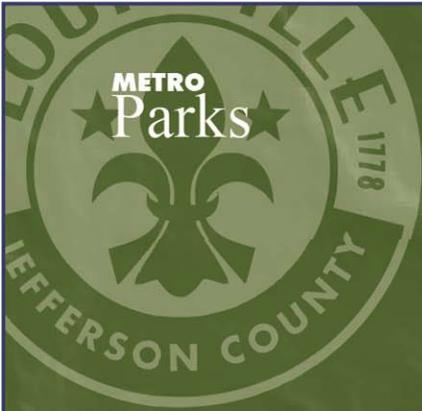
Vision

East Park Use Area

Proposed Aerial View

This view of the East Park Use Area from the South highlights some of the key features of the Soccer complex. Visitors can now safely access the complex via the proposed connector road. Parking has been enlarged, and the core facilities have been enhanced. A small archery range is located near the proposed special event overflow parking area.





McNeely Lake Park Master Plan

South Park Use Area



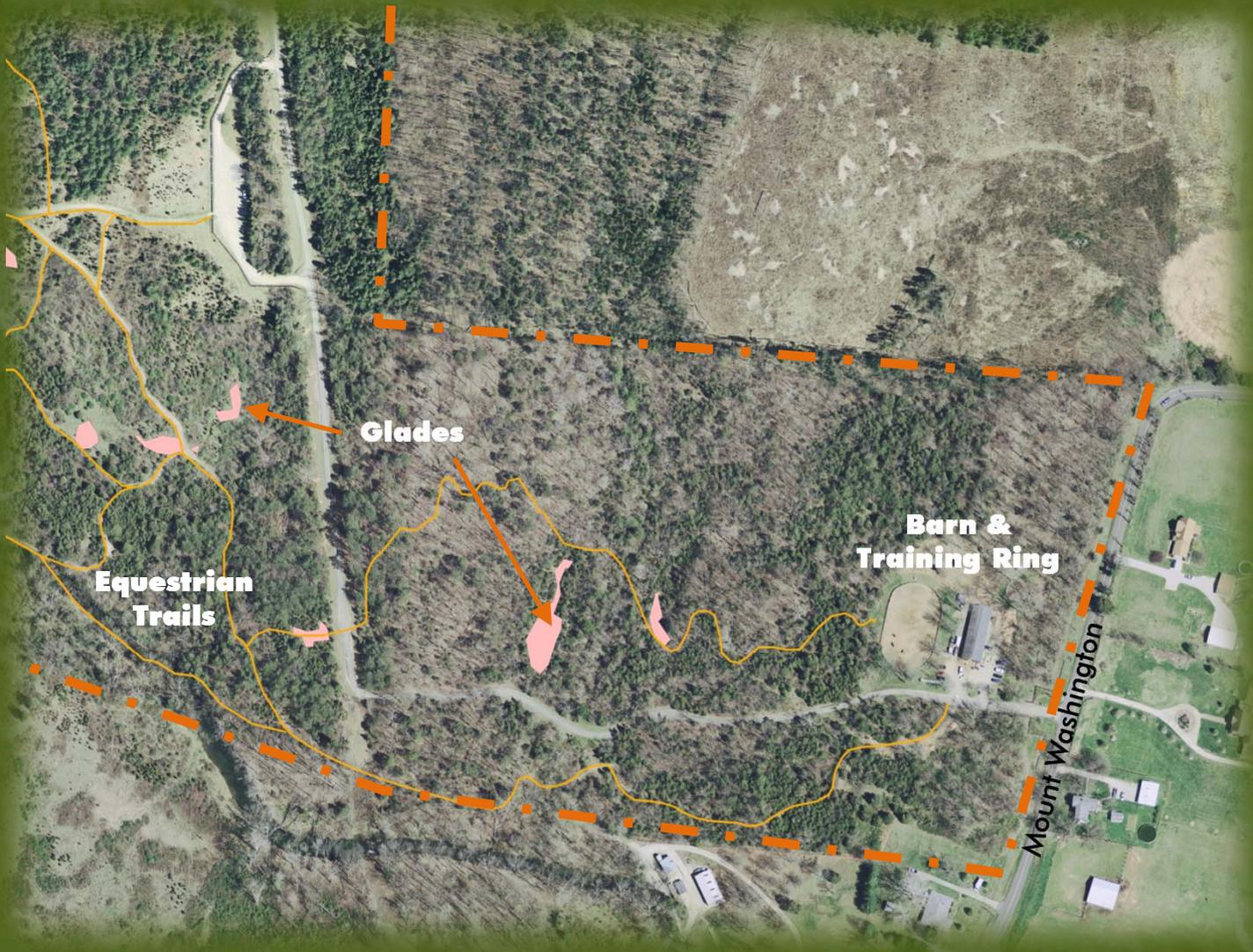


Vision

South Park Use Area

Existing Conditions

The South Park Use Area currently consists of a former horse barn and training ring that are currently not in use. Nearby, several regionally significant cedar glades remain. These rare habitats are home to several endangered species and should be protected from future park improvements and celebrated through interpretive features.





Vision

South Park Use Area

Total Parking: 25 Cars and 11 Trailers

Proposed Plan

- 1 New Indoor Training Ring and Offices
- 2 Existing Barn and Training Ring
- 3 Fenced Paddocks
- 4 New Entry and Park Road
- 5 Car and Trailer Parking
- 6 Cedar Glade Views
- 7 Equestrian Trails
- 8 Shared Use Path





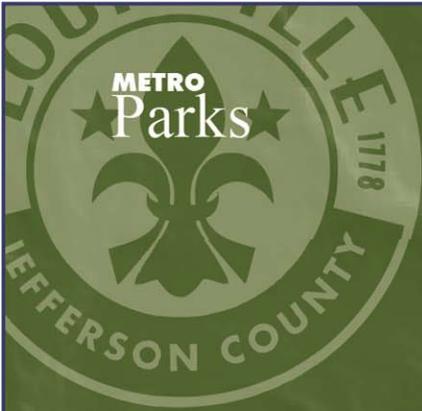
Vision

South Park Use Area

Proposed Aerial View

This view of the South Park Use Area from the South highlights some of the key features of the proposed equestrian facility. The new facilities will be able to accommodate more and different types of riders and be a regional destination for equestrian activities. The complex will provide easy access to the extensive network of existing and proposed horse trails.





McNeely Lake Park Master Plan

PARK STRUCTURES





McNeely Lake Park Master Plan

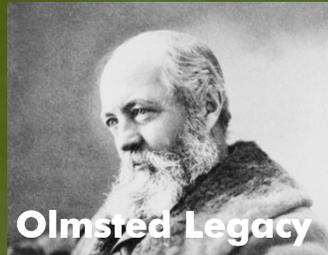
Vision

Park Structures Inspiration

Several site and region specific elements inspired the proposed aesthetic character of the park. On-site caves and other karst features encouraged the use of local limestone blocks for many of the following site structures. The high quality forests and rare cedar glades suggested that wood should be a part of the design components for the park.



Rustic Site Features



Olmsted Legacy



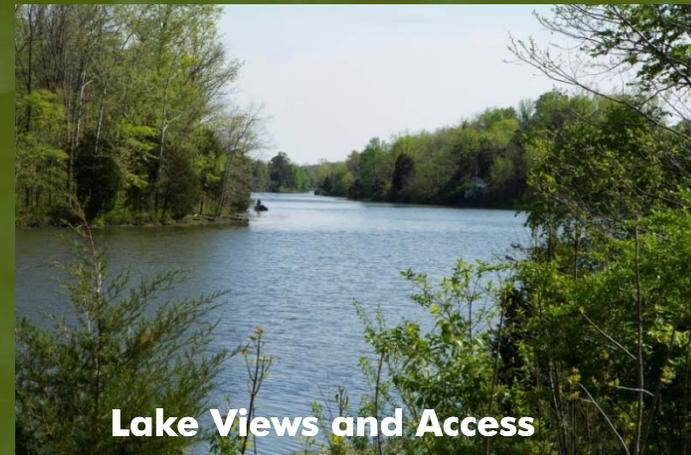
Caves & Karst



Weathered Stone Bridges



Cedar Glades



Lake Views and Access



Vision

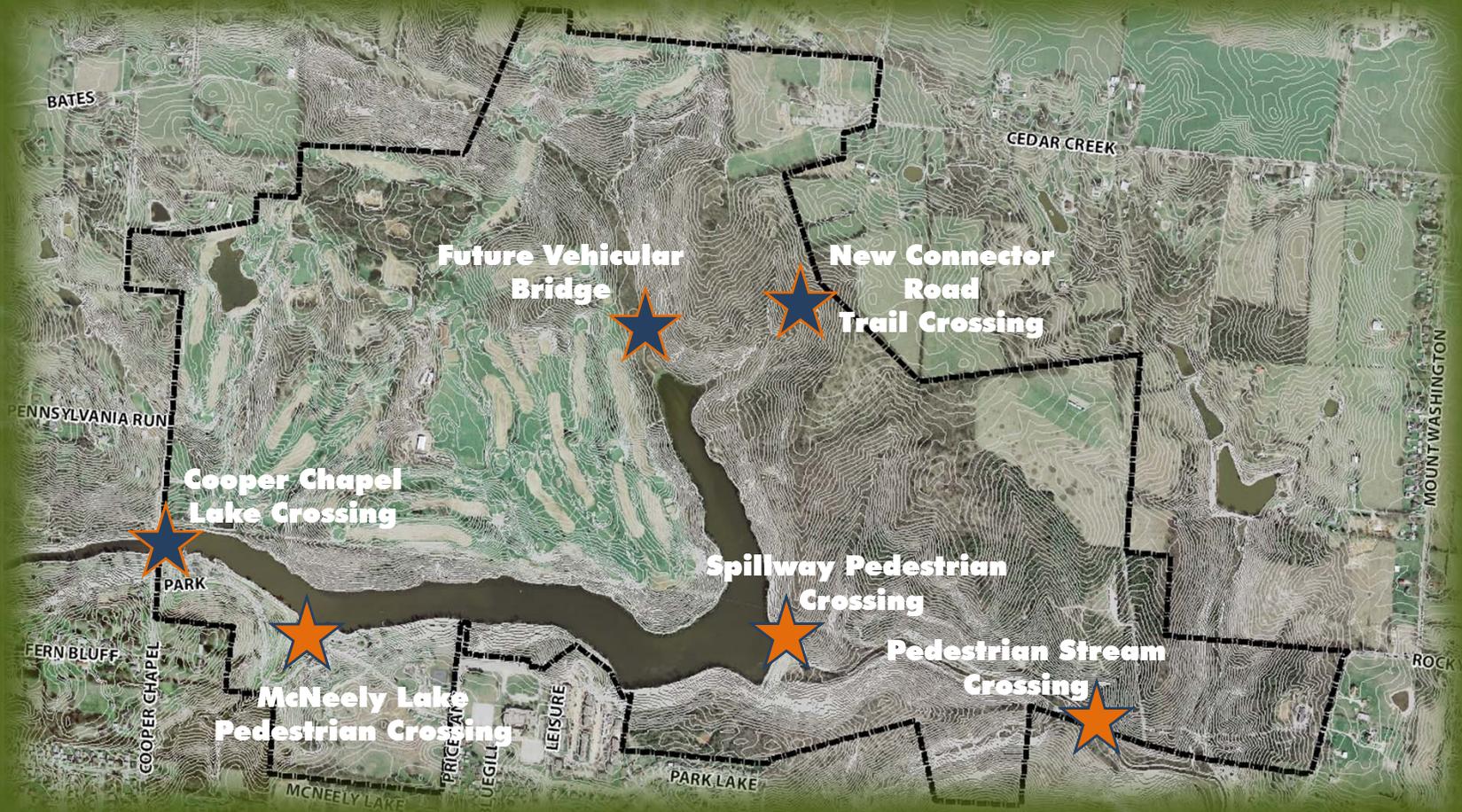
Potential Bridge Locations



Vehicular Bridge



Pedestrian Bridge





Vision

Bridge Character

Cooper Chapel Rd. Lake Crossing

Vehicular Bridges & Crossings

The character of the vehicular bridges builds on the vernacular of other regional park bridges.



Locator Map





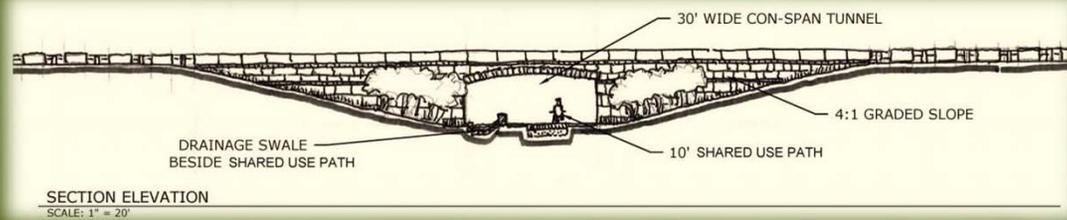
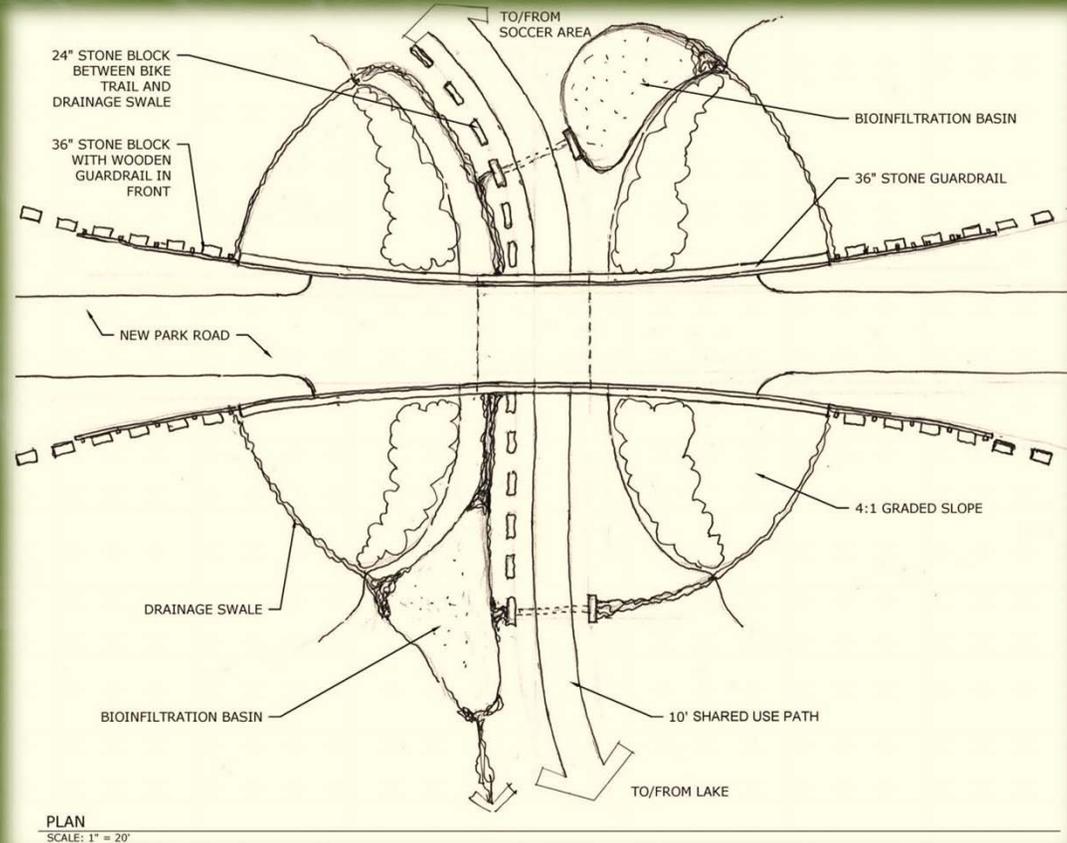
Vision

Bridge Character

East Park Roadway and Trail Crossing

Vehicular Bridges

The façade of the proposed bridge on the new connector road will consist of layers of local limestone. A shared use path will pass below the roadway, eliminating potential conflicts between path users and cars on the road.



Locator Map





Vision

Bridge Character

Multi-Purpose Bridges

All pedestrian bridges will have rustic details mixed with contemporary technology.



Locator Map





Vision

Bridge Character

Pedestrian Foot Bridges



Locator Map





Vision

Fishing Spots

The Master Plan proposes several rustic fishing spots around the perimeter of the lake. Consisting of limestone slabs, these features will provide easier access to the lake and minimize edge erosion.



Locator Map



Vision

Terminus Trailhead At South Park



Trailheads

Trailheads, consisting of low, stone seatwalls, bicycle racks, and an information kiosk/map, will be located near use areas and parking lots. They will provide places for park visitors to access trails and to rest in between activities.



Gateway Trailhead At Equestrian Trailer Parking Lot and Soccer Facilities



Locator Map

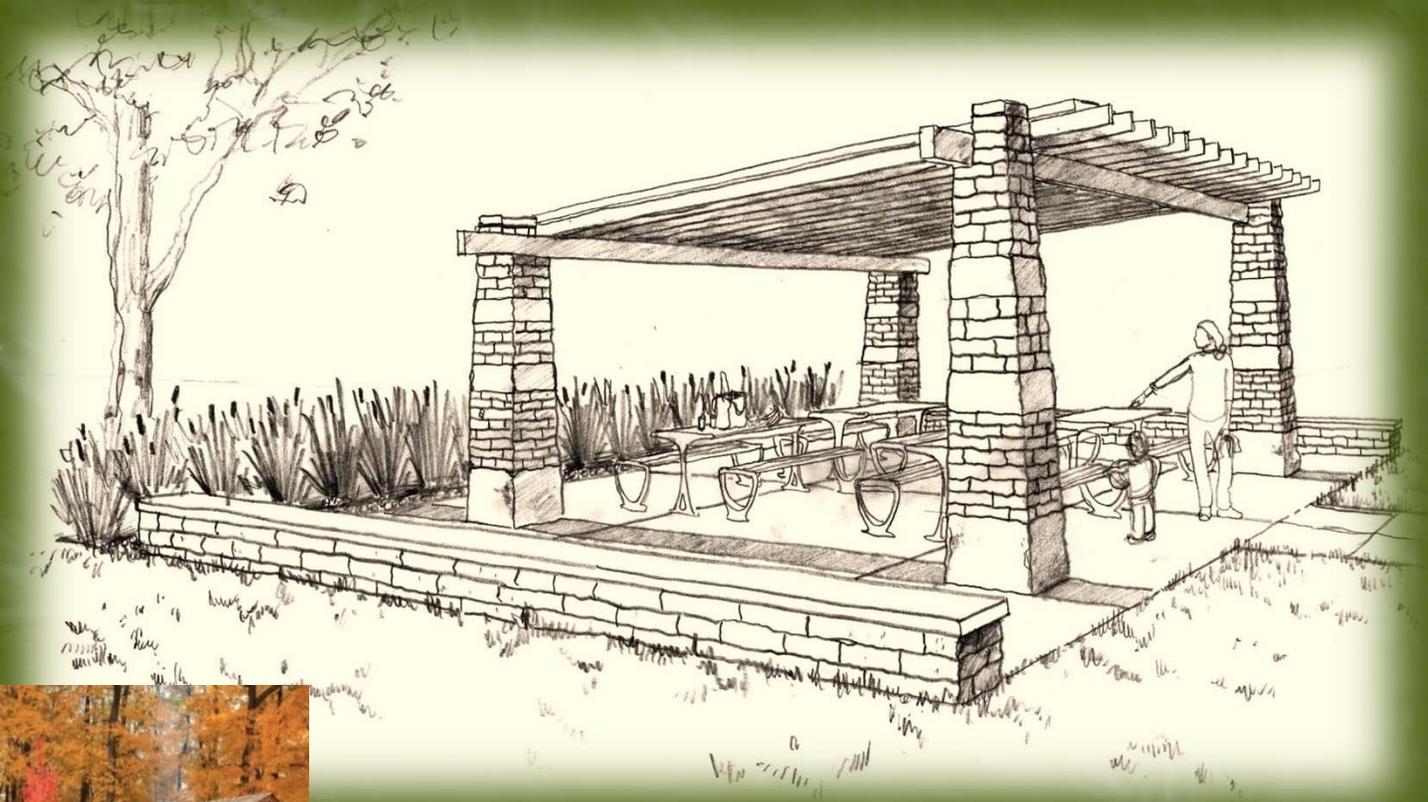




Vision Shelters

New Design For Shelters

The Master Plan proposes new shelters that extend the rustic character of other park features and create a unique brand for the park. Their form and structure will be simple and support a variety of group sizes.



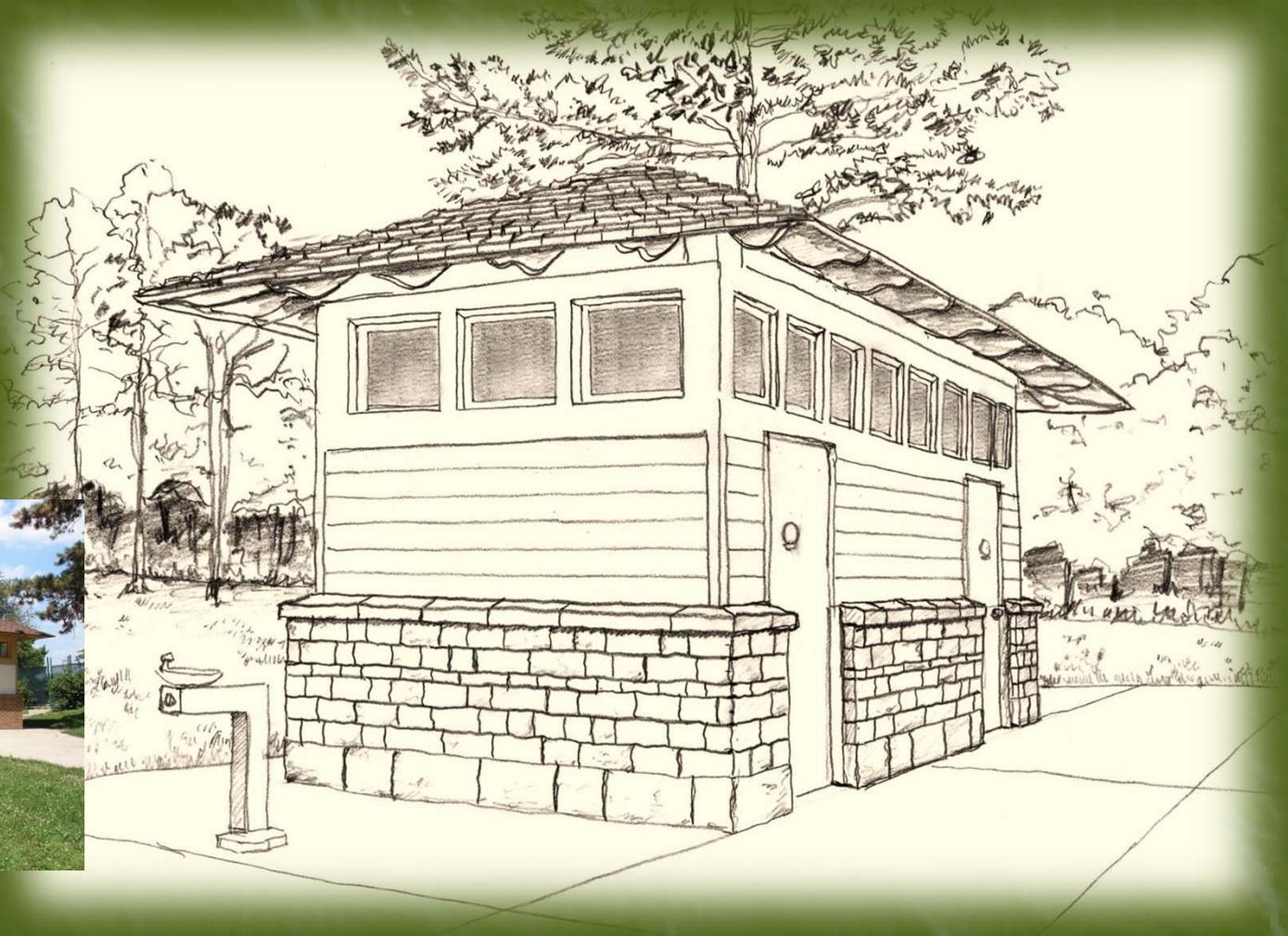


Vision

Modified Restroom Standard

Restrooms

The new park restrooms will adapt Metro Parks' existing model to the local context with a stone masonry base, rough-cut wood trim and a shake roof.





Vision

Signage

The Master Plan recommends new signs at the park entrances that include rustic details similar to the other park structures.



Existing Entry Sign





Vision

Site Furnishings

The Master Plan builds on Metro Parks' existing site furnishings standards to maintain consistency with the rest of their parks.



Benches



Fences



Trash Receptacles



Accessible Dock





Vision

Site Lighting

Appropriate and energy efficient lighting is important to the safe use of the park, especially along roadways and entrances. The Master Plan recommends new light fixtures along the new connector roadway, other park roads and along the Lakeside Promenade that are consistent with the park's rustic character.



THIS SOLAR VISION POLE™ SOAKS UP THE SUN!

Fixture - Aria

- 50 Watt LED Lighting.
- 60,000 Hours of Operation.
- Type III and Type V IES Patterns.

Solar Vision Pole™

- Durable, Wraparound Flex Solar Panels Eliminate the Need for Unsightly Wings.
- Variable-setting Timer Includes Dusk-On/ Dawn-Off.
- Max. Power (Pmax): 68 Watts.
- Voltage at Pmax (Vmp): 16.5 Volts.
- 12 Volt DC Operation.

Base

- Decorative Steel.
- Houses 4 Rechargeable Gel Batteries.
- Hinged Door w/ Tamper-proof Screws.

Batteries

- 6-Hour Charge Powers a Night's Use.
- 40 Hours of Illumination.
- Each Battery: 12VDC, 30.5Ah.
- Solar Controller Protects Batteries From Over/Under Charging.

Benefits

- LED the WAY with Lighting
- Put Light Anywhere. Requires No Wiring, Conduit or Electric Panels.
- All-Out-Wireless Means NO Energy Bills.
- Superior Optics.
- LEED Qualifiable in Several Areas, Including "Innovation in Design."
- 20-Year Solar Panel Warranty.





Vision

Play Environment Locations

Playgrounds are important amenities for family-oriented parks. They teach children social and physical skills and encourage exploration. The Master Plan recommends updated play environments for two uses areas in the park: North Park and East Park





Vision Play Environments

Nature-Inspired Play

Stakeholders preferred play elements inspired by natural features over typical play equipment.





Vision

As the park is implemented, sustainable practices should be used to minimize environmental impact and to further Metro Parks' goal of being a leader in ecological land management.

Sustainable Practices



Wind Power



Native Landscape Restoration



Bioretention



Porous Pavements



Reforestation



Solar Power





McNeely Lake Park Master Plan

Vision

McNeely Lake Park has significant cultural and natural resources. In order to maintain/enhance the quality of these resources, management plans should be implemented.



Watershed Protection & Lake Management

136

Resource Management



Sinkhole & Cave Protection



View Management



Stream Restoration



Forest Management & Invasive Species Removal



Glade Management

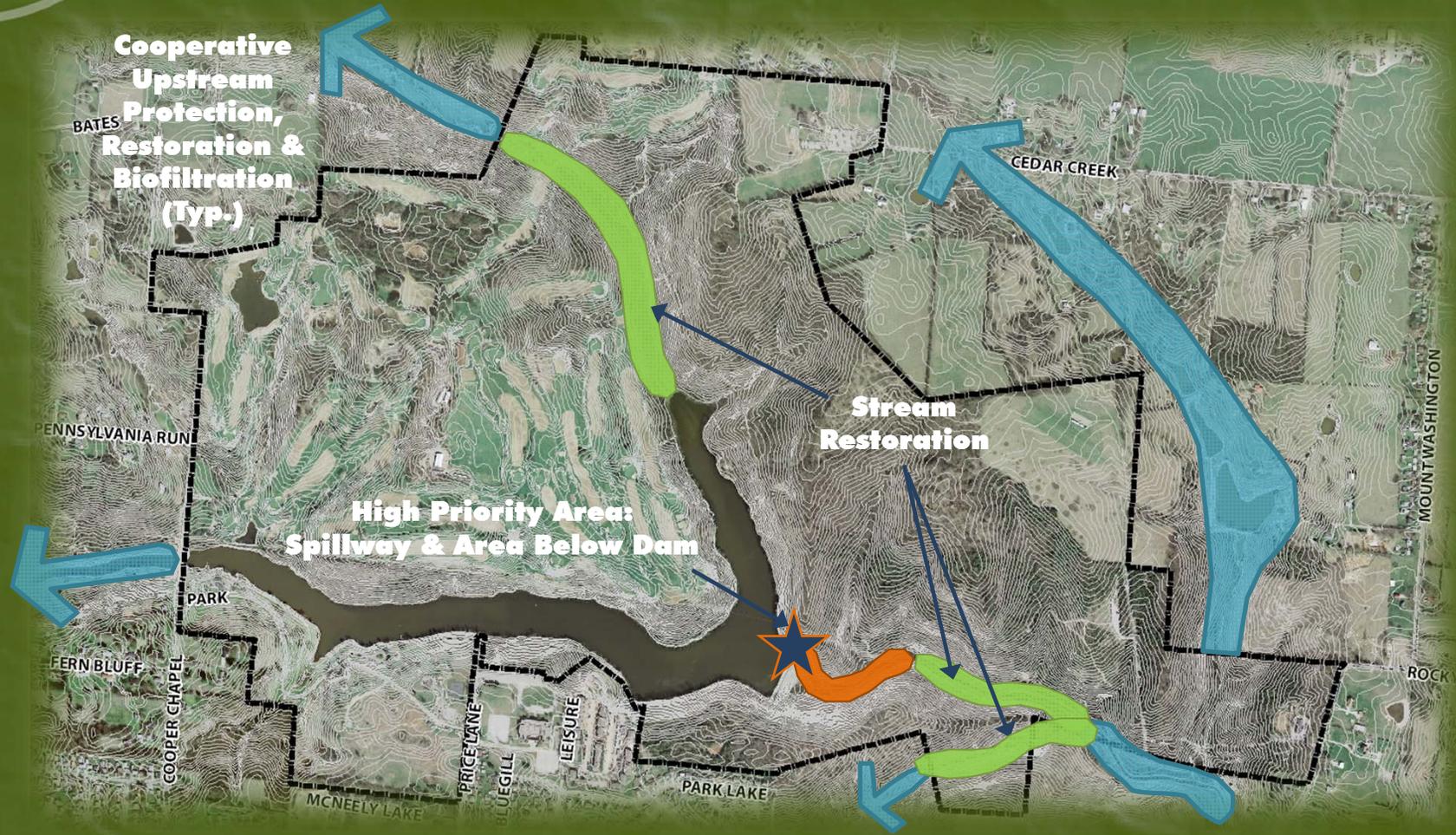




Vision

Watershed Protection & Stream Restoration

To protect the water quality of McNeely Lake, a number of watershed protection and stream restoration strategies should be employed around the lake and along important streams.





Vision

Interpretation & Education

To fully celebrate and honor the park's assets, it is recommended that new nature education and interpretation opportunities be developed.



Lake Habitats & Fishery



Interpretive Signage



Forest Diversity



Karst Landscapes



Educational Facilities, Exhibits and Programs



Cultural History





Vision

Volunteer Opportunities

The long term care and stewardship of the park will rely on the coordinated efforts of knowledgeable and committed volunteers.



Trail Maintenance



Habitat Restoration & Management



Interpretive Programs & Ambassadors



Litter Cleanup





Additional Recommendations





Additional Recommendations

All of the recommendations outlined in this section are interrelated because they all pertain to actions that affect the potential long-term success and health of McNeely Lake Park.

Landscape Management Practices

The McNeely Lake Park site contains several unique landscape features that help create a regional identity for the park. The karst geology has yielded several caves and sinkholes that are of significant historical and geological interest. These features are very attractive to visitors, but they can be simultaneously dangerous to enter and sensitive to disturbance. Currently, McNeely Lake Cave shows evidence of vandalism, and it is home to numerous feral cats that pose a health risk to park visitors. At the same time, the cave is highly visible and intriguing to the public. With these issues in mind, the Design Team proposes the following recommendations:

- Sensitively remove debris and graffiti
- Find new homes for the cats

- Create an interpretive space near the cave for viewing it from a safe distance. Include interpretive signage describing the geology and history of the cave
- Discourage physical access to the cave through the integration of low visual impact barriers and signage
- Develop a management plan outlining periodic activities for maintaining the appearance and safety of the cave environs

The sinkholes require most of the same recommendations, especially the use of physical barriers and signage to discourage park users from entering. At least one of the sinkhole sites should have interpretive signage to describe how sinkholes develop in a karst landscape.

In addition to protecting the site's geological features, the lake and important landscape vegetation zones will require a regular monitoring and management regime to maintain their ecological health and aesthetic appearance over time.



Additional Recommendations

Because McNeely Lake is the primary focal point and attractor in the park, it is vital that visitors perceive the lake as being clean and cared for. Therefore, the Design Team proposes the following recommendations:

- Minimize erosion of the banks/shore of the lake by creating a native plant vegetated buffer between lawn areas and the lake edge. Access points and fishing spots should be strategically located to allow water access without compromising the erosion control of the vegetated buffer
- Assess the water quality of the streams feeding the lake to determine whether watershed wide actions need to be taken to protect the lake
- Develop a management plan outlining periodic activities for maintaining the appearance and monitoring the health of the lake's ecology (for example: biological oxygen demand, total suspended solids, nutrient load, and temperature)

Several vegetative communities contribute to the unique character of the park. The existing mature forest on the south side of the lake has high ecological value, providing habitat for a wide array of plant and animal species. The cedar glades are singular features of the McNeely Lake Park landscape, and they typically occur only when geologic, hydrologic, and solar aspect conditions are right. And finally, the proposed meadow areas in the master plan will significantly increase the habitat value of the park by providing additional food, forage, and shelter for local animal species.

All of these landscapes need care to ensure their viability and future presence in the park; therefore, the Design Team proposes the following recommendations:

- Maintain the health and integrity of the mature forest by minimizing impacts during the construction of any future trails and roadways. Key trees and/or habitats should be surveyed and protected before any construction begins



Additional Recommendations

- Restore, enlarge, or create new cedar glades to support conditions conducive to the growth and health of Kentucky Glade Cress and Eggleston's Violet populations.
- Selectively and sustainably harvest wood from the site for future park-related construction
- Develop a management plan outlining periodic activities for maintaining the appearance and health of these three vegetative communities (for example: removal of invasive species, prescribed burns, and access control)

Sustainable Site Practices

The landscape character, structures, and maintenance strategies for parks often reflect the cultural values of a community in a specific time and place. The new vision for McNeely Lake Park is no exception. At the beginning of the twenty-first century, our society is becoming increasingly aware of the ecological impacts of what we do and how we do it. As a result, interest in creating sustainable buildings and sites and engaging our home places using sustainable practices has grown exponentially. These values, as a reflection of our time and our larger understanding of our role in affecting the health of the planet, should permeate and inform all future changes to McNeely Lake Park. Therefore, the Design Team proposes the following recommendations for the sustainable transformation of the park:

- Landscape Restoration: The replacement of mown lawn with native plantings will substantially reduce fuel usage and rain water runoff and increase habitat value and carbon sequestration. Restoration projects are especially effective as volunteer opportunities, instilling ownership and pride through first hand experience in healing the landscape.



Additional Recommendations

- Runoff Management: Polluted stormwater can severely impact the water quality of the lake. To mitigate this potential problem, the runoff from all impervious surfaces (structures, trails, roadways, and parking lots) should be captured and treated before being released to the lake. Given the shallow bedrock in the park, the opportunities for infiltration might be minimal. However, the use of shallow bioretention swales and rain gardens that contain native plants and special biofiltration soils can cleanse the runoff and slowly release it into the lake. Reforestation and replacing lawn areas with meadows could also provide significant water quality benefits. Cisterns could be installed in all new restroom facilities to collect rainwater from their roofs, and that water could be used to flush toilets.
- Materials Selection, Sourcing, and Recycling: As new park structures and paved surfaces are designed and built, consideration should be given to materials that are the most sustainable in the long run and that are sourced as near as possible so as to minimize the carbon footprint of each project. Materials with low embodied carbon are preferred over those that require more processing, shipping, or labor intensive extraction practices.

In addition, many materials contain chemicals that are toxic to humans and wildlife, and the use of these substances should be minimized.



Additional Recommendations

Some of the toxic building materials and chemicals that should be avoided include:

- Asbestos
- Cadmium
- Chlorinated Polyethelene and Chlorosulfonated Polyethelene
- Chlorofluorocarbons (CFCs)
- Chlorprene
- Formaldehyde
- Halogenated Flame Retardants
- Lead
- Mercury
- Petrochemical Fertilizers and Pesticides
- Phthalates
- Polyvinyl Chloride (PVC)
- Creosote, Arsenic, or Pentachlorophenol Wood Treatments

(Source: International Living Future Institute)

Using recycled materials and reusing existing construction materials or on-site resources are also good strategies for making future park structures and elements more sustainable. For example, if the proposed park roadway requires the removal of existing mature trees, the wood from those trees could be used to construct fences, bridges, and docks. In addition, simply providing numerous and convenient access to recycling receptacles could encourage park visitors to recycle more waste that otherwise would end up in a landfill.

- Efficient Water and Energy Use: With modern green technology, it has become much easier to build highly efficient buildings. Any new restroom or meeting facilities that are constructed in McNeely Lake Park should strive to be as water and energy efficient as possible.



Additional Recommendations

There are many options now for low flow water fixtures in buildings that can dramatically reduce water usage during normal operation. Waterless urinals have steadily improved in their operations and ease of maintenance and would be an excellent choice for any new restroom facilities. If there is interest in making new facilities as water efficient as possible, roof water could be captured in a cistern and used for all non-potable water needs, such as flushing toilets. Out-going blackwater is typically piped to the municipal sewage treatment plant, but a more sustainable option could be to direct the blackwater to a constructed wetland adjacent to the restroom facility. These systems naturally treat and clean sewage before infiltrating it with a septic field. The wetland plants would also create a garden that could enhance the appearance of building environs and create additional wildlife habitat.

The energy efficiency of all new indoor structures is vital to reducing their carbon emissions and minimizing the long term economic burden on Metro Parks and the community. Like water efficiency, there are multiple layers of actions that can be taken to increase energy efficiency, from creating a highly insulated building envelope and maximizing daylighting to installing triple pane glazing and specifying Energy Star fixtures.

For indoor buildings requiring climate control, geothermal heating and cooling could be used to reduce energy loads. Energy recovery units could further increase efficiency by pre-cooling/ heating and (de)humidifying air before it enters the building.

Beyond basic efficiency, new structures could generate their own energy with solar panels and/or wind turbines (depending on the local average wind speed). Integrating these technologies into the buildings could establish a unique visual identity for the park.



Additional Recommendations

Volunteer Opportunities

Volunteers are often key to the long term viability of a park. Through their vested interest and stewardship, they can serve as extensions of Metro Parks operations and maintenance staff. Some of the services that volunteers could provide include:

- Periodic clean-up events to keep the lake and the park free of litter and debris
- Trail construction and maintenance
- Reforestation and stream/meadow restoration
- Nature education workshops, tours, and special events

Recently, a Friends of McNeely Lake Park volunteer group has been forming to initiate some of the activities listed above. The Design Team recommends that Metro Parks engage with this organization (or a similar one) to coordinate and avoid duplicated efforts in the care and maintenance of the park.

Interpretive and Educational Opportunities

The landscape of McNeely Lake Park contains several important features that deserve to be celebrated and interpreted, such as the lake, cave, sinkholes, mature forest and cedar glades. The most basic level of interpretation could be informational signs located near the respective features and along trails. A second level of interpretation could be the establishment of volunteer or Metro Park staff ambassadors who provide one-on-one and group presentations and nature education. The next and most extensive level of interpretation could be the creation of a permanent, on-site nature education facility that would contain interactive displays and exhibits and provide full-time staff to answer visitor questions.



Additional Recommendations

Adjacent Project Coordination

With the visitor arrival experience in mind and the desire to establish a recognizable identity for the park, it is important that Metro Parks closely coordinate with any future construction projects that affect the edges of the park. In particular, future improvements to Cooper Chapel Road, which could include a roadway and a bikeway, will probably require a new bridge to be constructed over the northern arm of McNeely Lake. Because a new bridge would be visible from the park, it would be desirable for the bridge to be faced with local stone that matches the proposed rustic vehicular and pedestrian bridges in the rest of the park. Other coordination considerations might include fencing styles, light fixtures, signage, and plant species.

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OPINION OF PROBABLE COST





Cost Estimate – Overall Summary

McNeely Lake Park Master Plan	
Opinion of Probable Cost	
DRAFT	
November 2012	
	Total Project Value
MASTER PLAN COST ESTIMATE	
Park Trail System	\$ 6,442,560
North Park Use Area	\$ 11,318,941
South Park Use Area (Equestrian Facilities)	\$ 5,033,313
East Park Use Area (Soccer Facilities)	\$ 2,232,153
Flying Field	\$ 240,603
TOTALS	
McNEELY LAKE PARK TOTAL \$ 25,267,569	

Exclusions:

- Cost associated with Recommendations from Cultural Resource Plan & Natural Resource Plan
- Permitting
- Environmental Remediation
- Conservation Easements/Watershed Protection
- Roadway and Roadway Trail



Cost Estimate – Park Trail System

McNeely Lake Park Master Plan					
Opinion of Probable Cost					
DRAFT					
October 2012					
Item #		Qty	Unit	Cost / Unit	Total Project Value
PARK TRAIL SYSTEM					
Hardscape					
1	Concrete Walk - Lakeside Promenade (Portion of Shared Use Path)	51,070	SF	\$7.00	\$ 357,490
2	Asphalt Trail (8' wide)	9,189	LF	\$200.00	\$ 1,837,800
3	Gravel Trail (8' wide)	8,298	LF	\$20.00	\$ 165,960
4	Fishing Spots (Limestone slabs steps)	12	EA	\$5,000.00	\$ 60,000
5	Equestrian Trail (Gravel, 4' wide max.)	29,475	LF	\$10.00	\$ 294,750
Hardscape Subtotal					\$ 2,716,000
Structures					
6	Pedestrian Bridge	3	AL	\$300,000.00	\$ 900,000
7	Pedestrian Bridge over spillway	1	AL	\$500,000.00	\$ 500,000
8	Accessible Deck/Dock (Recycled Material)	1	EA	\$150,000.00	\$ 150,000
Misc. Subtotal					\$ 1,550,000
Electrical					
9	Promenade Pedestrian Lighting (80' o.c.)	26	EA	\$4,000.00	\$ 104,000
Electrical Subtotal					\$ 104,000
Site Furnishings					
10	Trash Receptacles	6	EA	\$1,000.00	\$ 6,000
11	Benches	8	EA	\$1,500.00	\$ 12,000
12	Drinking Fountain	1	EA	\$5,000.00	\$ 5,000
13	Picnic Tables	14	EA	\$2,000.00	\$ 28,000
14	Pet Waste Bag Dispenser	3	EA	\$1,000.00	\$ 3,000
Site Furnishings Subtotal					\$ 54,000



Cost Estimate – Park Trail System

McNeely Lake Park Master Plan					
Opinion of Probable Cost					
DRAFT					
October 2012					
Item #		Qty	Unit	Cost / Unit	Total Project Value
Amenities					
15	Trail Signage	1	LS	\$50,000.00	\$ 50,000
Amenities Subtotal					\$ 50,000
TOTALS					
SUBTOTAL					\$ 4,474,000
20% ESTIMATING CONTINGENCY:					\$ 894,800
PARK TRAIL SYSTEM SUBTOTAL					\$ 5,368,800
10% GENERAL CONTRACTOR MARKUP:					\$ 536,880
10% DESIGN AND ENGINEERING SERVICES:					\$ 536,880
PARK TRAIL SYSTEM TOTAL					\$ 6,442,560
Exclusions:					
<ul style="list-style-type: none"> • Cost associated with Recommendations from Cultural Resource Plan & Natural Resource Plan • Permitting • Environmental Remediation • Conservation Easements/Watershed Protection • Roadway and Roadway Trail 					



Cost Estimate – North Park Use Area

McNeely Lake Park Master Plan					
Opinion of Probable Cost					
DRAFT					
November 2012					
Item #		Qty	Unit	Cost / Unit	Total Project Value
NORTH PARK USE AREA					
CIVIC LAWN AREA					
Site Demolition					
1	Tree Preservation/Clearing and Grubbing	1	AL	\$5,000.00	\$ 5,000
2	Roadway and Basketball Court Demolition	11870	SF	\$1.00	\$ 11,870
3	Site Demolition and Preparation	1	AL	\$5,000.00	\$ 5,000
Demolition Subtotal					\$ 21,870
Grading/Earthwork					
4	Earthwork (Assumes 1' average grade change)	16,580	CY	\$4.00	\$ 66,321
Earthwork Subtotal					\$ 66,321
Hardscape					
5	Concrete Walks - Service Access (6" Thick)	33,473	SF	\$6.00	\$ 200,838
6	Asphalt Roadway and Parking Lots	2,925	SY	\$35.00	\$ 102,391
7	Wheel Stops (precast)	52	EA	\$200.00	\$ 10,400
8	Special Paving for Crosswalks	192	SF	\$25.00	\$ 4,800
9	Playground Safety Surfacing	7,592	SF	\$20.00	\$ 151,840
Hardscape Subtotal					\$ 470,269
Structures					
10	Stone Seatwalls (18" Ht. x 18" D)	531	LF	\$200.00	\$ 106,200
11	Port-a-let Enclosure	1	LS	\$20,000.00	\$ 20,000
12	"Winner's Circle" Temporary Canopy Framework & Feature	1	LS	\$50,000.00	\$ 50,000
13	30'x50' Picnic Shelter	1	LS	\$100,000.00	\$ 100,000
14	Interpretive/Directional/Regulatory Signage	1	LS	\$10,000.00	\$ 10,000
15	Bioinfiltration Basin Headwall	2	LS	\$5,000.00	\$ 10,000
Structures Subtotal					\$ 296,200



Cost Estimate – North Park Use Area

Item #		Qty	Unit	Cost / Unit	Total Project Value
Recreational Amenities					
16	Nature-Inspired Playground (Ages 2 through 12)	1	LS	\$300,000.00	\$ 300,000
Recreational Subtotal					\$ 300,000
Site Furnishings					
17	Trash Receptacles	4	EA	\$1,000.00	\$ 4,000
18	Recycling Receptacles	4	EA	\$1,000.00	\$ 4,000
19	Picnic Tables	5	EA	\$1,000.00	\$ 5,000
20	Dog Waste Cleanup Mitt Dispenser	1	EA	\$500.00	\$ 500
21	Benches	8	EA	\$1,500.00	\$ 12,000
22	Parking and Pedestrian Lighting	16	EA	\$6,000.00	\$ 96,000
23	Drinking Fountain	3	EA	\$5,000.00	\$ 15,000
Site Furnishings Subtotal					\$ 136,500
Landscape					
24	Deciduous Trees (2.5" Caliper)	29	EA	\$300.00	\$ 8,700
25	Flowering Trees (2" Caliper)	16	EA	\$250.00	\$ 4,000
26	Seeded Meadow	13	AC	\$5,000.00	\$ 66,071
27	Seeded Lawn	23,361	SY	\$0.75	\$ 17,521
28	Bioretention & Filtration Basin	17,120	SF	\$20.00	\$ 342,400
29	Irrigation	153,703	SF	\$0.60	\$ 92,222
30	Topsoil	2,519	CY	\$30.00	\$ 75,574
Landscape Subtotal					\$ 606,488
CIVIC LAWN AREA SUBTOTAL					\$ 1,897,648
EDUCATION CENTER AREA					
Site Demolition					
31	Tree Preservation/Clearing and Grubbing	1	AL	\$5,000.00	\$ 5,000
32	Parking Lot Demolition	14,065	LS	\$1.00	\$ 14,065
33	Site Demolition and Preparation	1	AL	\$10,000.00	\$ 10,000
Demolition Subtotal					\$ 29,065
Grading/Earthwork					
34	Earthwork (Assume 1' average grade change)	2,291	CY	\$4.00	\$ 9,163
Earthwork Subtotal					\$ 9,163



Cost Estimate – North Park Use Area

Item #		Qty	Unit	Cost / Unit	Total Project Value
Hardscape					
35	Concrete Walks (excludes Lake Promenade)	4,240	SF	\$6.00	\$ 25,440
36	Concrete Steps (6' W)	1,280	SF	\$25.00	\$ 32,000
37	Education Center Terrace Porous Paving	2,734	SF	\$20.00	\$ 54,680
38	Asphalt Parking Lots	1,589	SY	\$35.00	\$ 55,615
39	Wheel Stops (precast)	38	EA	\$200.00	\$ 7,600
Hardscape Subtotal					\$ 175,335
Structures					
40	Stone Retaining Walls with safety rail	125	LF	\$575.00	\$ 71,875
41	Pedestrian Bridge (along Lakeside Promenade)	1	LS	\$300,000.00	\$ 300,000
42	Refurbish Existing Picnic Shelters	2	LS	\$20,000.00	\$ 40,000
43	Below-Ground Nature Education Center/Meeting Facility with Green Roof	1	LS	\$3,000,000.00	\$ 3,000,000
44	Interpretive/Directional/Regulatory Signage	1	AL	\$20,000.00	\$ 20,000
Structures Subtotal					\$ 3,431,875
Site Furnishings					
45	Trash Receptacles	4	EA	\$1,000.00	\$ 4,000
46	Recycling Receptacles	4	EA	\$1,000.00	\$ 4,000
47	Picnic Tables	5	EA	\$1,000.00	\$ 5,000
48	Dog Waste Cleanup Mitt Dispenser	1	EA	\$5,000.00	\$ 5,000
49	Benches	6	EA	\$1,500.00	\$ 9,000
50	Parking and Pedestrian Lighting	6	EA	\$6,000.00	\$ 36,000
51	Drinking Fountain	1	EA	\$5,000.00	\$ 5,000
Site Furnishings Subtotal					\$ 68,000
Landscape					
52	Trees (2.5" Caliper or 8' ht.)	8	EA	\$300.00	\$ 2,400
53	Flowering Trees (2" Caliper)	12	EA	\$250.00	\$ 3,000
54	Seeded Lawn	29,295	SY	\$0.75	\$ 21,971
55	Step Pools	9,400	SF	\$25.00	\$ 235,000
Landscape Subtotal					\$ 262,371
EDUCATION CENTER AREA SUBTOTAL					\$ 3,975,809



Cost Estimate – North Park Use Area

Item #		Qty	Unit	Cost / Unit	Total Project Value
ACTIVE CORE AREA					
Site Demolition					
56	Tree Preservation/Clearing Grubbing	1	AL	\$5,000.00	\$ 5,000
57	Roadway, Parking Lot, and Basketball Court Demolition	50584	SF	\$1.00	\$ 50,584
Demolition Subtotal					\$ 55,584
Grading/Earthwork					
58	Earthwork (Assume 1' average grade change)	6,755	CY	\$4.00	\$ 27,018
Earthwork Subtotal					\$ 27,018
Hardscape					
59	Concrete Walks	9,370	SF	\$6.00	\$ 56,220
60	Asphalt Roadway and Parking Lots	2,469	SY	\$35.00	\$ 86,427
61	Wheel Stops (precast)	61	EA	\$200.00	\$ 12,200
62	At-Grade Curbs for Crosswalks	132	LF	\$10.00	\$ 1,320
63	Special Paving for Crosswalks	539	SF	\$25.00	\$ 13,475
64	Playground Safety Surfacing	14,132	SF	\$20.00	\$ 282,640
Hardscape Subtotal					\$ 452,282
Structures					
65	Stone Seatwalls (18" Ht. x 18" D)	330	LF	\$200.00	\$ 66,000
66	Sustainable Restroom Building	1	LS	\$300,000.00	\$ 300,000
67	30'x50' Picnic Shelter	1	LS	\$100,000.00	\$ 100,000
68	Interpretive/Directional/Regulatory Signage	1	LS	\$10,000.00	\$ 10,000
Structures Subtotal					\$ 476,000
Recreational Amenities					
69	Asphalt Basketball Court (color-coded)	14,822	SF	\$6.00	\$ 88,932
70	Basketball Court Fencing (vinyl coated chain link)	488	LF	\$25.00	\$ 12,200
71	Basketball Goals	4	EA	\$3,500.00	\$ 14,000
72	Climbing Wall/Structures for All Ages	1	LS		\$ 25,000
73	Parcourse Workout Equipment for All Ages	2	EA	\$2,000.00	\$ 4,000
74	Small Playground (Ages 2 through 12)	1	LS	\$150,000.00	\$ 150,000
Recreational Subtotal					\$ 294,132



Cost Estimate – North Park Use Area

Item #		Qty	Unit	Cost / Unit	Total Project Value
Site Furnishings					
75	Four Board Wood Fence	968	LF	\$40.00	\$ 38,720
76	Stone Columns at Fence	8	EA	\$1,000.00	\$ 8,000
77	Trash Receptacles	4	EA	\$1,000.00	\$ 4,000
78	Recycling Receptacles	4	EA	\$1,000.00	\$ 4,000
79	Picnic Tables	5	EA	\$1,000.00	\$ 5,000
80	Dog Waste Cleanup Mitt Dispenser	1	EA	\$5,000.00	\$ 5,000
81	Benches	4	EA	\$1,500.00	\$ 6,000
82	Parking and Pedestrian Lighting	8	EA	\$6,000.00	\$ 48,000
83	Drinking Fountain	1	EA	\$5,000.00	\$ 5,000
Site Furnishings Subtotal					\$ 123,720
Landscape					
84	Trees (2.5" Caliper or 8' ht.)	42	EA	\$300.00	\$ 12,600
85	Flowering Trees (2" Caliper)	12	EA	\$250.00	\$ 3,000
86	Seeded Meadow	0.37	AC	\$5,000.00	\$ 1,841
87	Seeded Lawn	8,280	SY	\$0.75	\$ 6,210
88	Irrigation (picnic area only)	12,789	SF	\$0.60	\$ 7,673
89	Topsoil	237	CY	\$30.00	\$ 7,105
Landscape Subtotal					\$ 38,429
ACTIVE CORE AREA SUBTOTAL					\$ 1,467,165
NORTH PARK ENTRY AREA					
Site Demolition					
90	Tree Preservation/Clearing Grubbing	375	LF	\$2.00	\$ 750
91	Roadway, Parking Lot, and Basketball Court Demolition	39,714	SF	\$1.00	\$ 39,714
Demolition Subtotal					\$ 40,464
Grading/Earthwork					
92	Earthwork (Assume 1' average grade change)	4,001	CY	\$2.00	\$ 8,002
Earthwork Subtotal					\$ 8,002



Cost Estimate – North Park Use Area

Item #		Qty	Unit	Cost / Unit	Total Project Value
Hardscape					
93	Concrete Walks	1,128	SF	\$6.00	\$ 6,768
94	Asphalt Roadway and Parking Lots	5,090	SY	\$35.00	\$ 178,146
95	At-Grade Curbs for Crosswalks	64	LF	\$10.00	\$ 640
96	Special Paving for Crosswalks	193	SF	\$25.00	\$ 4,825
Hardscape Subtotal					\$ 190,379
Structures					
97	Entry Sign	1	LS	\$25,000.00	\$ 25,000
98	Bioinfiltration Basin Headwall	2	LS	\$5,000.00	\$ 10,000
Structures Subtotal					\$ 35,000
Site Furnishings					
99	Four Board Wood Fence	222	LF	\$40.00	\$ 8,880
100	Stone Columns at Fence	2	EA	\$1,000.00	\$ 2,000
101	Trash Receptacles	4	EA	\$1,000.00	\$ 4,000
102	Recycling Receptacles	4	EA	\$1,000.00	\$ 4,000
103	Picnic Tables	5	EA	\$1,000.00	\$ 5,000
104	Dog Waste Cleanup Mitt Dispenser	1	EA	\$5,000.00	\$ 5,000
105	Benches	4	EA	\$1,500.00	\$ 6,000
106	Roadway and Pedestrian Lighting	18	EA	\$6,000.00	\$ 108,000
107	Drinking Fountain	1	EA	\$5,000.00	\$ 5,000
Site Furnishings Subtotal					\$ 147,880
Landscape					
108	Deciduous Trees (2.5" Caliper)	11	EA	\$300.00	\$ 3,300
109	Seeded Lawn	6,305	SY	\$0.75	\$ 4,729
Landscape Subtotal					\$ 8,029
NORTH PARK ENTRY AREA SUBTOTAL					\$ 429,754



Cost Estimate – North Park Use Area

Item #		Qty	Unit	Cost / Unit	Total Project Value
UTILITIES					
110	PVC Sewer Service Connections	650	LF	\$40.00	\$ 26,000
111	Sewer Cleanouts	3	EA	\$500.00	\$ 1,500
112	PVC Waterline	1,300	LF	\$25.00	\$ 32,500
113	Electrical Connection	1,200	SF	\$25.00	\$ 30,000
NORTH PARK UTILITIES SUBTOTAL					\$ 90,000
TOTALS					
SUBTOTAL					\$ 7,860,376
20% ESTIMATING CONTINGENCY:					\$ 1,572,075
NORTH PARK SUBTOTAL					\$ 9,432,451
10% GENERAL CONTRACTOR MARKUP:					\$ 943,245
10% DESIGN AND ENGINEERING SERVICES:					\$ 943,245
NORTH PARK USE AREA TOTAL					\$ 11,318,941
<p>Exclusions:</p> <ul style="list-style-type: none"> • Cost associated with Recommendations from Cultural Resource Plan & Natural Resource Plan • Permitting • Environmental Remediation • Conservation Easements/Watershed Protection • Roadway and Roadway Trail 					



Cost Estimate – South Park Use Area

McNeely Lake Park Master Plan					
Opinion of Probable Cost					
DRAFT					
November 2012					
Item #		Qty	Unit	Cost / Unit	Total Project Value
SOUTH PARK USE AREA (EQUESTRIAN FACILITIES)					
Site Demolition					
1	Tree Preservation/Clearing and Grubbing	1	AL	\$5,000.00	\$ 5,000
2	Roadway Demolition	19396	SF	\$1.00	\$ 19,396
Demolition Subtotal					\$ 24,396
Grading/Earthwork					
3	Earthwork (Assume 1' average grade change)	15,876	CY	\$4.00	\$ 63,504
Earthwork Subtotal					\$ 63,504
Hardscape					
4	Concrete Walks (6" thick)	2,991	SF	\$6.00	\$ 17,946
5	Asphalt Driveway and Parking Lot	3,872	SY	\$35.00	\$ 135,520
6	Concrete Curb (6" Ht.)	1,403	LF	\$50.00	\$ 70,150
7	At-Grade Curb for Crosswalks	50	LF	\$10.00	\$ 500
8	Special Paving for Crosswalks	531	SF	\$25.00	\$ 13,275
9	Recycled Rubber Pavers	19,104	SF	\$15.00	\$ 286,560
10	Compacted Gravel with Fines for Horse Trailer Loading/Unloading Area	19,507	SF	\$1.50	\$ 29,261
11	Sand for Training Ring(s)	24,411	SF	\$2.25	\$ 54,925
Hardscape Subtotal					\$ 608,136



Cost Estimate – South Park Use Area

Item #		Qty	Unit	Cost / Unit	Total Project Value
Structures					
12	Indoor Training Ring and Offices	1	LS	\$2,000,000.00	\$ 2,000,000
13	Refurbish Existing Barn	1	LS	\$200,000.00	\$ 200,000
14	Stone Columns (6' Ht. x 2' W x 2' D)	9	EA	\$6,000.00	\$ 54,000
15	Stone Seatwalls (18" Ht. x 18" D)	424	LF	\$250.00	\$ 106,000
16	Park Entry Sign	1	EA	\$25,000.00	\$ 25,000
17	Interpretive/Directional/Regulatory Signage	1	LS	\$10,000.00	\$ 10,000
18	Trailhead Plaza (including signange)	1	LS	\$50,000.00	\$ 50,000
Structures Subtotal					\$ 2,445,000
Site Furnishings					
19	Four-Board Wood Fencing	5718	LF	\$40.00	\$ 228,720
20	Gate at Entry	1	EA	\$20,000.00	\$ 20,000
21	Trash Receptacles	2	EA	\$1,000.00	\$ 2,000
22	Recycling Receptacles	2	EA	\$1,000.00	\$ 2,000
23	Drinking Fountain	1	EA	\$1,000.00	\$ 1,000
24	Picnic Table	2	EA	\$1,000.00	\$ 2,000
25	Benches	4	EA	\$1,500.00	\$ 6,000
26	Parking and Pedestrian Lighting	4	LS	\$6,000.00	\$ 24,000
Site Furnishings Subtotal					\$ 285,720



Cost Estimate – South Park Use Area

Item #		Qty	Unit	Cost / Unit	Total Project Value
Landscape					
27	Deciduous Trees (2.5" Caliper or 8' ht.)	99.0	EA	\$300.00	\$ 29,700
28	Flowering Trees (2" Caliper)	15	EA	\$250.00	\$ 3,750
29	Seeded Meadow	2	AC	\$5,000.00	\$ 8,500
30	Seeded Lawn	35,533	SY	\$0.75	\$ 26,650
Landscape Subtotal					\$ 68,600
TOTALS					
SUBTOTAL					\$ 3,495,356
20% ESTIMATING CONTINGENCY:					\$ 699,071
SOUTH PARK SUBTOTAL					\$ 4,194,427
10% GENERAL CONTRACTOR MARKUP:					\$ 419,443
10% DESIGN AND ENGINEERING SERVICES:					\$ 419,443
SOUTH PARK USE AREA TOTAL					\$ 5,033,313

Exclusions:

- Cost associated with Recommendations from Cultural Resource Plan & Natural Resource Plan
- Permitting
- Environmental Remediation
- Conservation Easements/Watershed Protection
- Roadway and Roadway Trail



Cost Estimate – East Park Use Area

McNeely Lake Park Master Plan					
Opinion of Probable Cost					
DRAFT					
November 2012					
Item #		Qty	Unit	Cost / Unit	Total Project Value
EAST PARK USE AREA (SOCCER FACILITIES)					
Site Demolition					
1	Tree Preservation/Clearing and Grubbing	1	AL	\$5,000.00	\$ 5,000
2	Parking Lot and Access Drive Demolition	12027	SF	\$1.00	\$ 12,027
3	Concrete Sidewalk Demolition	4089	SF	\$1.00	\$ 4,089
Demolition Subtotal					\$ 21,116
Grading/Earthwork					
4	Earthwork (Assume 1' average grade change)	6,527	CY	\$4.00	\$ 26,108
Earthwork Subtotal					\$ 26,108
Hardscape					
5	Concrete Walks - Pedestrian Only (4" thick)	13,937	SF	\$6.00	\$ 83,622
6	Concrete Walks - Service Vehicles (6" thick)	7,880	SF	\$6.00	\$ 47,280
7	Asphalt Access Drive and Parking Lot Addition	2,218	SY	\$35.00	\$ 77,630
8	Asphalt Walking Path Loop	2,116	SY	\$35.00	\$ 74,060
9	Concrete Curb (6" Ht.)	1,196	LF	\$50.00	\$ 59,800
10	At-Grade Curb for Crosswalks	58	LF	\$10.00	\$ 580
11	Special Paving for Crosswalks	720	SF	\$25.00	\$ 18,000
12	Playground Safety Surfacing	7,482	SF	\$20.00	\$ 149,640
Hardscape Subtotal					\$ 510,612



Cost Estimate – East Park Use Area

Item #		Qty	Unit	Cost / Unit	Total Project Value
Structures					
13	New Concessions Building	1	LS	\$250,000.00	\$ 250,000
14	Stone Seatwalls (18" Ht. x 18" D)	80	LF	\$250.00	\$ 20,000
15	Stone Columns (6' Ht. x 2' W x 2' D)	9	EA	\$6,000.00	\$ 54,000
16	Park Entry Sign	1	EA	\$25,000.00	\$ 25,000
17	Interpretive/Directional/Regulatory Signage	1	LS	\$10,000.00	\$ 10,000
Structures Subtotal					\$ 359,000
Site Furnishings					
18	Four Board Wood Fencing with Wire Mesh	2,400	LF	\$60.00	\$ 144,000
19	Gate at Entry	1	EA	\$20,000.00	\$ 20,000
20	Trash Receptacles	8	EA	\$1,000.00	\$ 8,000
21	Recycling Receptacles	8	EA	\$1,000.00	\$ 8,000
22	Benches	6	EA	\$1,500.00	\$ 9,000
23	Picnic Tables	6	EA	\$1,000.00	\$ 6,000
24	Drinking Fountain	2	EA	\$5,000.00	\$ 10,000
25	Parking and Pedestrian Lighting	6	EA	\$6,000.00	\$ 36,000
26	Trailhead Plaza (including signange)	1	LS	\$50,000.00	\$ 50,000
Site Furnishings Subtotal					\$ 291,000
Amenities					
27	Playground Equipment	1	LS	\$150,000.00	\$ 150,000
Amenities Subtotal					\$ 150,000
Landscape					
28	Deciduous Trees (2.5" Caliper)	80	EA	\$300.00	\$ 24,000
29	Flowering Trees (2" Caliper)	21	SY	\$250.00	\$ 5,250
30	Seeded Lawn	2,627.0	SY	\$0.75	\$ 1,970
31	Reinforced Seeded Lawn at Overflow Parking Area	1.0	AC	\$5,000.00	\$ 5,000
Landscape Subtotal					\$ 36,220



Cost Estimate – East Park Use Area

Item #		Qty	Unit	Cost / Unit	Total Project Value
Utilities					
32	PVC Sewer Service Connections	220	LF	\$40.00	\$ 8,800
33	Sewer Cleanouts	3	EA	\$500.00	\$ 1,500
34	PVC Sewer	1750	LF	\$50.00	\$ 87,500
35	Sanitary Sewer Manhold	7	EA	\$3,500.00	\$ 24,500
36	Asphalt Pavement Restoration at Sewer	800	LF	\$25.00	\$ 20,000
37	PVC Waterline	350	LF	\$25.00	\$ 8,750
38	Electrical Connection	200	LF	\$25.00	\$ 5,000
Landscape Subtotal					\$ 156,050
TOTALS					
SUBTOTAL					\$ 1,550,106
20% ESTIMATING CONTINGENCY:					\$ 310,021
EAST PARK SUBTOTAL					\$ 1,860,128
10% GENERAL CONTRACTOR MARKUP:					\$ 186,013
10% DESIGN AND ENGINEERING SERVICES:					\$ 186,013
EAST PARK USE AREA TOTAL					\$ 2,232,153

Exclusions:

- Cost associated with Recommendations from Cultural Resource Plan & Natural Resource Plan
- Permitting
- Environmental Remediation
- Conservation Easements/Watershed Protection
- Roadway and Roadway Trail



Cost Estimate – Flying Field Area

McNeely Lake Park Master Plan					
Opinion of Probable Cost					
DRAFT					
November 2012					
Item #		Qty	Unit	Cost / Unit	Total Project Value
FLYING FIELD AREA					
Hardscape					
1	Road widening (add 8' asphalt width)	1,363	SY	\$35.00	\$ 47,705
2	Resurface entire existing drive & parking lot	25,801	SF	\$3.00	\$ 77,403
3	Widen parking lot with turnaround	574	SY	\$35.00	\$ 20,090
Hardscape Subtotal					\$ 145,198
Site Furnishings					
4	Bleachers	1	EA	\$10,000.00	\$ 10,000
5	Interpretive/Directional/Regulatory Signage	1	EA	\$5,000.00	\$ 5,000
6	Gate at Entry	3	EA	\$2,000.00	\$ 6,000
Site Furnishings Subtotal					\$ 21,000
Landscape					
7	Seeded Lawn	1,183.0	SY	\$0.75	\$ 887
Landscape Subtotal					\$ 887



Cost Estimate – Flying Field Area

Item #		Qty	Unit	Cost / Unit	Total Project Value
TOTALS					
	FLYING FIELD SUBTOTAL			\$	167,085
	20% ESTIMATING CONTINGENCY:			\$	33,417
	FLYING FIELD SUBTOTAL			\$	200,502
	10% GENERAL CONTRACTOR MARKUP:			\$	20,050
	10% DESIGN AND ENGINEERING SERVICES:			\$	20,050
	FLYING FIELD AREA TOTAL			\$	240,603

Exclusions:

- Cost associated with Recommendations from Cultural Resource Plan & Natural Resource Plan
- Permitting
- Environmental Remediation
- Conservation Easements/Watershed Protection
- Roadway and Roadway Trail

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PHASING AND IMPLEMENTATION





Phasing and Implementation

The McNeely Lake Park Master Plan represents a long term vision for the park, and implementation will require a phased approach to allow for funding to be found and in place when a project is set as a priority. Given the scope of the proposed improvements to the park, continued collaboration, leadership, and commitment will be necessary to implement the recommendations over time and to maintain the vision described by the Park Master Plan.

Two types of priorities will need to be addressed to ensure the implementation of the Park Master Plan: strategic and capital.

Strategic priorities consist of those partnerships, policies, and organizations that need to be supported and developed to foster the development and stewardship of the park.

Capital priorities consist of park elements that should be implemented short, medium, and long term to have the most significant impact with the available capital funds.

The following pages list both strategic and capital priorities for the successful implementation of the McNeely Lake Park Master Plan.



Phasing and Implementation

Strategic Priorities

1. Officially approve and adopt the McNeely Lake Park Master Plan as a document to guide policy and improvements to the park over time. Allocate and commit the necessary staffing and funds to continue advancing implementation of the Master Plan as outlined below.
2. Continue leadership and collaboration with Kentucky Transportation Cabinet (KYTC) on the park connector roadway and trail project through implementation.
3. Continue collaboration with District 23 Councilperson James Peden to implement small projects, consistent with the Master Plan and his priorities, on a phase-by-phase basis via his available discretionary funds and any additional funds that he can secure.
4. Continue the coordination, integration, and implementation of the Louisville Loop into the park as recommended in the Master Plan.
5. Continue to collaborate with different park user groups on specific use area improvements (i.e. equestrian facilities, soccer facilities, flying field, cross-country course, etc.). We recommend continuing regular interaction with each group. We also suggest that it would be beneficial to establish a more formal park advisory council (or extend the efforts of the nascent Friends of McNeely Lake Park group) that would coordinate and direct volunteer activities, public events, advocacy, and support for funding. Each of these active user groups could be represented.
6. Continue to collaborate with the Kentucky Department of Fish and Wildlife on funding and implementation of elements/features related to the lake environs, such as the lake loop trail, additional fishing spots, the bridge over the spillway, dam and spillway improvements, and the environmental education center/meeting facility.
7. Establish a working group and strategic framework to address watershed protection and stream restoration in and around the park, particularly the streams/drainageways leading into the lake. Potential partners include the Metropolitan Sewer District, Kentucky Department of Fish and Wildlife, and adjacent developers/property owners.
8. Create more detailed stewardship plans for the park's unique resources, including a natural resource management plan, a cultural resource management plan, and an integrated education plan that builds upon the recommendations of the Master Plan and provides greater depth and specific tools/actions in each area. Glade management and protection of caves and sinkholes should be of highest priority.



Phasing and Implementation

Capital Priorities

Short Term

- Park connector road and shared use path. It would be advantageous to implement the soccer restroom sewer connection, the other soccer field changes/refinements (per the Master Plan), the overflow parking area, and the Archery facility at the same time. More detailed design and engineering is needed for these things to be implemented in concert with one another.
- Civic Green at the North Park use area. We recommend that this project be further refined through schematic design and cost estimating, making sure to “right size” the project with currently available funds and to prepare for subsequent phases, consistent with the Master Plan.
- Trail system, including the Louisville Loop, Equestrian trails, and Lake Loop
- Roadway widening, parking, and bleachers at the Flying Field
- Environmental Education Center, lake promenade, and associated parking

Medium Term

- Remainder of North Park use area per the Master Plan
- Architectural features, such as the bridges, shelters, and restrooms

Long Term

- Equestrian facilities
- Connector road and future reuse of golf course



APPENDIX





Appendix

Related Documents

During the research and preparation of the McNeely Lake Park Master Plan, several relevant documents were used or created to support the work. These are available upon request from Metro Parks and include the following:

- Meeting Notes
- Cultural Resource Inventory Report
- Natural Resource Inventory Report
- Park Connector Road Drawings from KYTC
- Other
- Other

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HUMAN NATURE, INC.



CORN ISLAND ARCHAEOLOGY, LLC



REDWING ECOLOGICAL SERVICES, INC.



STRAND ASSOCIATES, INC.