



FOREST PRESERVE DISTRICT OF DUPAGE COUNTY

DISCOVERY & ANALYSIS

FOR BLACKWELL, GREENE VALLEY AND WATERFALL GLEN

OCTOBER 2021

ACKNOWLEDGMENTS

Forest Preserve District Of DuPage County

Technical Advisory Committee

Jessica Ortega – Landscape Architect, Supervisor, Project Manager
Anamari Dorgan – Director of Community Engagement Services
Tony Martinez – Director of Community Relations
Mark Decker – Landscape Architect
Dan Zinnen – Director of Resource Management and Development
Marty Jandura – Site Operations Division
Brock Lovelace – Manager of Engineering and Environmental Services
Scott Meister – Manager of Natural Resources
Kevin Horsfall – Manager of Planning
Jason Berger – Facilities Manager

Board of Commissioners

Daniel Hebreard, Forest Preserve District President
Marsha Murphy, District 1 Commissioner
Tina Tyson-Dunne, District 2 Commissioner
Linda Painter, District 3 Commissioner
Jeff Gahriss, District 4 Commissioner
Barbara O'Meara, District 5 Commissioner
Al Murphy, District 6 Commissioner

Prepared for:



**Forest Preserve District
of DuPage County**

Prepared by:

Stantec Consulting, Inc.

TABLE OF CONTENTS

Executive Summary	4
Background & Process	6
 CHAPTER 01	
Market Analysis	16
 CHAPTER 02	
Public Engagement Summary	80
 CHAPTER 03	
Blackwell Discovery & Analysis	100
 CHAPTER 04	
Greene Valley Discovery & Analysis	154
 CHAPTER 05	
Waterfall Glen Discovery & Analysis	200
 APPENDIX	258

EXECUTIVE SUMMARY

Master Plans for Blackwell, Greene Valley and Waterfall Glen | Discovery & Analysis Executive Summary

The Forest Preserve District of DuPage County (District) was established in June of 1915 and is governed by a seven (7) member Board of Commissioners. Six (6) Commissioners are elected from individual districts, and the President is elected at large by the voters within DuPage County. The purpose of the Forest Preserve District of DuPage County, as stated in the 2014 Strategic Plan, is "...to acquire, preserve, protect and restore the natural resources in DuPage County while providing opportunities for people to connect with nature". Each year millions of people visit the preserves to hike, bike, picnic, fish, boat, camp, golf, and attend naturalist and ranger-led programs.

In 2019, the District completed an overall master plan for all of its land holdings, which includes 26,000 acres over 60 different preserves. This plan was formulated by incorporating public outreach, survey efforts and reviews of research, national trends, and state and regional priorities. It was determined that the Forest Preserve District should invest in improving existing natural resources and mission-aligned facilities and experiences. One of the recommendations to come out of the 2019 plan was to prepare master plans for key, specific preserves that are both large in scale and receive the greatest number of visitors each year.

The preserves selected for this effort include Blackwell, Greene Valley and Waterfall Glen. The planning process was split into two (2) work efforts. The first is the Discovery & Analysis stage of work, which included gathering background data, site visits, stakeholder engagement, a market & demographic study and site analysis. The second is the planning stage which will be idea generation, refinement and final recommendations that are vetted with District staff and the Commissioners and summarized in a report document. The master plans will serve as a plan of action or 'road map' for future development at the forest preserves and shall be directly tied to the mission of the Forest Preserve District.

The plans will be responsive to the surrounding environment, current and future needs, and interests of the public. Each plan will establish mission-aligned goals and objectives based on demographic and economic trends, physical and natural resources, and specific information gathered during the stakeholder engagement process. The plans will emphasize each preserve's natural and physical resources and unique character. The plans will evaluate how each preserve fits into the larger open space network and will evaluate site access, circulation, recreational resources and use, agreements and easements and linkages as well as conservation, ecological restoration and education initiatives.

Blackwell Forest Preserve

Blackwell Forest Preserve, located in Warrenville, is 1,366 acres and is one of the District's most popular forest preserves. It offers trails, fishing, picnicking, boating, an off-leash dog area, the District's only family campground as well as a youth-group campground. Mount Hoy serves as a winter sports area where visitors can rent snow tubes to sled down the hill and snowshoes to explore the area. Nearby, a recreational area exists featuring a trailhead, archery range, fishing pier, picnic shelter and restrooms. Silver Lake is a popular destination for boating and fishing.

In addition to these recreational amenities, Blackwell contains many natural areas including McKee Marsh and a large-scale restoration project along Spring Brook. This restoration project will create significant natural resource improvements including re-meandering of the waterway, reconnecting the creek to the floodplain, dam removal and improving habitat. The project will also make improvements to the segment of the West Branch DuPage River Trail that passes through the area. Blackwell is home to satellite offices and work areas for the District's Grounds Management, Natural Resources Management, Site Operations, Facilities Management and Fleet Management divisions.

It is recognized that a fresh look at Blackwell is needed to identify separate pedestrian connectors between the many amenities that have developed over the years as well as opportunities



Kayak Rentals at Blackwell

to improve vehicular circulation. Additionally, other opportunities should be evaluated such as providing separate access to the family campground, additional amenities for campers, trail connections to nearby preserves, modifying the boat launch facilities and eliminating those amenities that are underutilized. With the major natural resource work being done on site, there are great opportunities to capitalize on this work and to enhance the visitor experience.

It is also recognized that support infrastructure such as restrooms, showers, concession buildings, picnic shelters, site utilities and ADA accommodations need upgrades. A separate study will be undertaken to consider options to

EXECUTIVE SUMMARY

remedy deficiencies at the Grounds Management and Natural Resources Facility within Blackwell, however the overall preserve master plan will integrate the results of that study.

Greene Valley

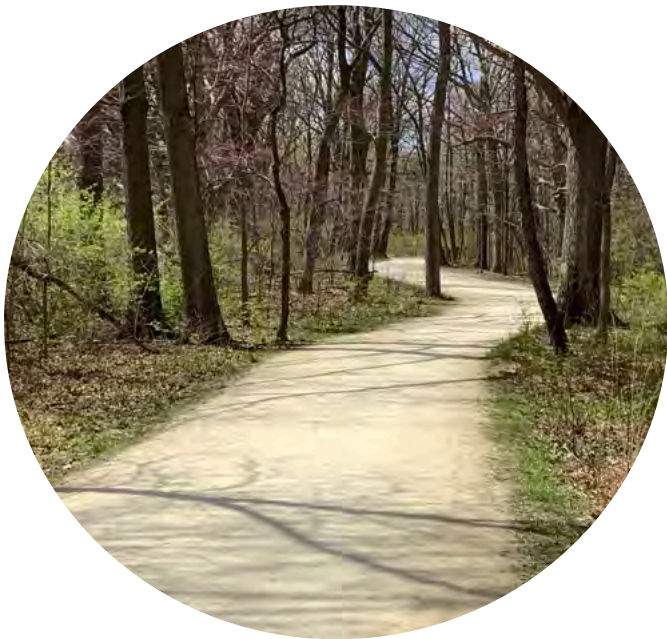
Greene Valley Forest Preserve in Naperville, is 1,388 acres and features a reclaimed landfill which may be accessed on weekends from May through October as a scenic overlook. The preserve also offers 12 miles of marked trails, picnic shelters, an off-leash dog area, a model aircraft area, and a youth campground. In 2019, the Forest Preserve District Board of Commissioners created an ad hoc committee to explore the best public use for the Greene Farm Barn located at the north end of the property. The committee's recommendation was to create "a unique multi-functional gathering space within a natural, historical setting that helps community members pursue individual growth and personal relationships through exploration and shared experiences at the Greene Farm Barn". An important component of the master planning effort has been to link the committee's work to the preserve as a whole and make recommendations for improvements that align with the District's mission, 2019 Master Plan and comments from stakeholder engagement sessions.



View from the Hill in Greene Valley

In addition to integrating the work of the ad hoc committee, the preserve is in need of a new vision for the future to identify and capitalize on its many assets. This includes evaluating and refining recreational amenities such as the youth group campground, trails, off-leash dog area and picnic areas while exploring opportunities for new amenities such as a canoe launch. It is also recognized that preserve access needs to be re-evaluated and support infrastructure like parking lots, restrooms, site utilities and past ADA accommodations need significant upgrades.

The preserve would benefit from major habitat improvement projects along the East Branch of the DuPage River and continued stewardship of high-quality woodlands and other natural areas within the preserve. Stakeholders also cited a desire to have better access to the river for boating and fishing activities. Additionally, a vision for how the landfill can feasibly be integrated with the rest of the preserve after it is turned over to District control in the future will be considered.



Part of the Main Trail Loop in Waterfall Glen

Waterfall Glen

The preserve at Waterfall Glen is 2,503 acres and is located in Darien, surrounding the Argonne National Laboratory. It is ecologically diverse with prairies, savannas, oak-maple woodland, pine groves, ravines, bluffs and riparian area along the river. It is a highly popular destination for people of all ages to use over 10 miles of trails for hiking, biking, running, walking, horseback riding and cross-country skiing – many users enjoy the fact that it is loop so they can start and finish in the same location. People come from all over the region to see the Rocky Glen Waterfall and the Sawmill Creek bluff overlook. It also provides opportunities for fishing, an orienteering course model airplane field and a youth campground.

Several key areas were studied as part of the existing operations at the Waterfall Glen preserve. Areas studied include the parking area at the North Gate Road, additional off-street parking at Cass Avenue & Bluff Road to avoid congestion in that area, conversion of the old latrines to restrooms with flush toilets, additional water stations along the trails and safety improvements to try to reduce conflicts between vehicles and trail users. Additional existing operations analyzed include potential relocation and reuse of the natural resource management program support area, potential relocation of the campground to a less ecologically sensitive area, rehabilitation of the trails and waterfall area due to extreme use and continued ecological restoration to remove invasive species such as honeysuckle and buckthorn.

BACKGROUND & PROCESS

FOREST PRESERVE DISTRICT OF DUPAGE COUNTY (FPDDC)

Background

The Forest Preserve District of DuPage County (FPDDC) is a regional open space agency with a preservation focus. The FPDDC works to actively preserve and restore ecosystems and connects people to nature and healthy ecosystems through education and recreational opportunities. From the extensive research completed as part of the 2019 Master Plan, the Forest Preserve District identified key priorities to guide it over the next five years: to protect and restore natural resources; provide and improve nature experiences and outdoor recreation; maintain and improve trails; and invest in existing mission-aligned facilities.

Mission

The Forest Preserve District of DuPage County (FPDDC) mission is:

“...to acquire, preserve, protect, and restore the natural resources of DuPage County while providing opportunities for people to connect with nature”

In order to better accomplish that mission, this planning study will provide a road map for the FPDDC’s initiatives and improvements, and create a comprehensive vision for the preserves as a whole. While a Master Plan was created as a

District-wide vision for the preserves in 1992, much has changed since that document was adopted, and an updated and more focused Plan is needed to inform the changes that will happen over the coming years.

District Guiding Principles



Stewardship



Sustainability



Community Engagement



Innovation



Empowerment



Diversity and Inclusion

The FPDDC’s mission and guiding principles have served as the underlying vision of this planning process.

FPDDC HISTORY

Since its inception in 1915, the Forest Preserve District of DuPage County has been through phases of growth. The FPDDC's history can be broken into three phases:

1 ACQUISITION

During this phase, the focus was to acquire as much land for preservation as feasible, and in a way that made sense for the future of the preserves. Most of this acquisition happened in between 1917 and 1931 when 539 acres were acquired, and in the 1960's and 1970's, when 17,450 acres were acquired.

2 REFINEMENT

Going into the 1980's, the FPDDC realized it was "land rich and facility poor" and decided to focus on rounding out its edges with smaller acquisitions. It also focused on adding recreational facilities, wetlands and stormwater management resources.

3 IMPROVEMENT

In the 1990's, the district continued to add facilities and amenities and focused on restoration and preservation of natural areas.

(Source: 1992 Forest Preserve District of DuPage County Master Plan)



Bridge in the Preserves

4 INVESTMENT

Recent analysis from the 2019 master plan including reviews of research, national trends, and state and regional priorities indicate that the Forest Preserve District should now invest and improve existing natural resources and mission-aligned facilities and experiences. The Strategic Plan also outlined goals for the preserves, and serves as a vision and guide for how these preserves should continue to be improved.

BACKGROUND & PROCESS

PLAN APPROACH

This plan is a part of a five-phase planning and design process for the Forest Preserve District of DuPage County. The purpose of the process is to create a comprehensive master plan and vision for the Blackwell, Greene Valley and Waterfall Glen preserves and provide clear directive for future improvements and initiatives.

This document is a summary of Phases 1 and 2, Discovery and Analysis. During these phases, the project team *collected and analyzed existing conditions* in each of the three preserves, *completed a market analysis* to better understand gaps in service and future projects, and *facilitated a meaningful public engagement process*. Phases 3 through 5 will be completed upon approval as a part of a subsequent effort, and will provide recommendations and implementation strategies.

PLAN FOCUS

Three Preserves

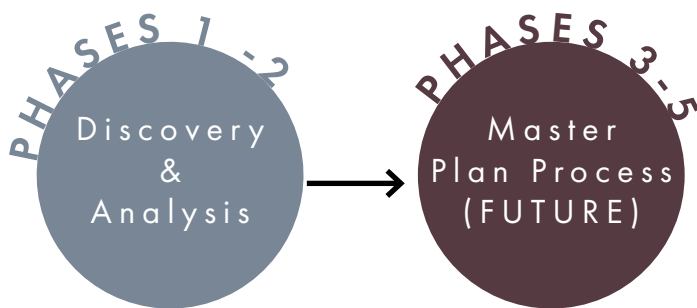
The FPDDC staff has prioritized creating master plans for three of the most used preserves in the District:

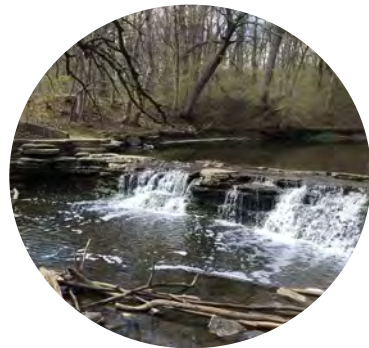
Blackwell

Greene Valley

Waterfall Glen

While these preserves were used heavily prior to the COVID-19 pandemic, visitation increased significantly after the pandemic began, with up to a 200% increase in popular areas. The desire to get outside during lock down made the preserves an even more important amenity. The pandemic has brought into focus a heightened awareness of the importance of parks, open space and natural areas to our physical and mental well being.





BACKGROUND & PROCESS

PHASES 1 & 2

Existing Conditions

Stantec worked closely with FPDDC staff to assess and analyze the preserves. Collaboration and communication was critical, and the staff at the Forest Preserve District were able to provide Stantec with the necessary background data to start the process.

Stantec organized the data from the District and created base maps to show existing conditions of each of the three preserves. They then joined the District staff for a three day site visit at the preserves, spending one day at each of the three preserves. Stantec used this opportunity to take photos and notes, and ask questions to gather the pertinent information and inform the rest of the process.



Project Team Site Visit

Public Engagement

Using a Public Participation Plan created by Stantec and FPDDC Staff, the team conducted 16 public engagement sessions. These sessions included focus group meetings, staff department engagement sessions, public engagement sessions, and two by two interviews with commissioners. The goal was to provide users of the preserves and key stakeholders COVID-safe options to provide their input, so many of the sessions were held virtually. In addition to the sessions, a virtual StoryMap detailing the planning process was available to those interested in finding out more, and a survey was open to the public for response. With over 600 survey responses, more than 2,000 StoryMap views, and nearly 200 attendees in the engagement sessions, the project team was able to collect valuable input and important observations about the three preserves. For a more detailed summary of the engagement process, see chapter 02.

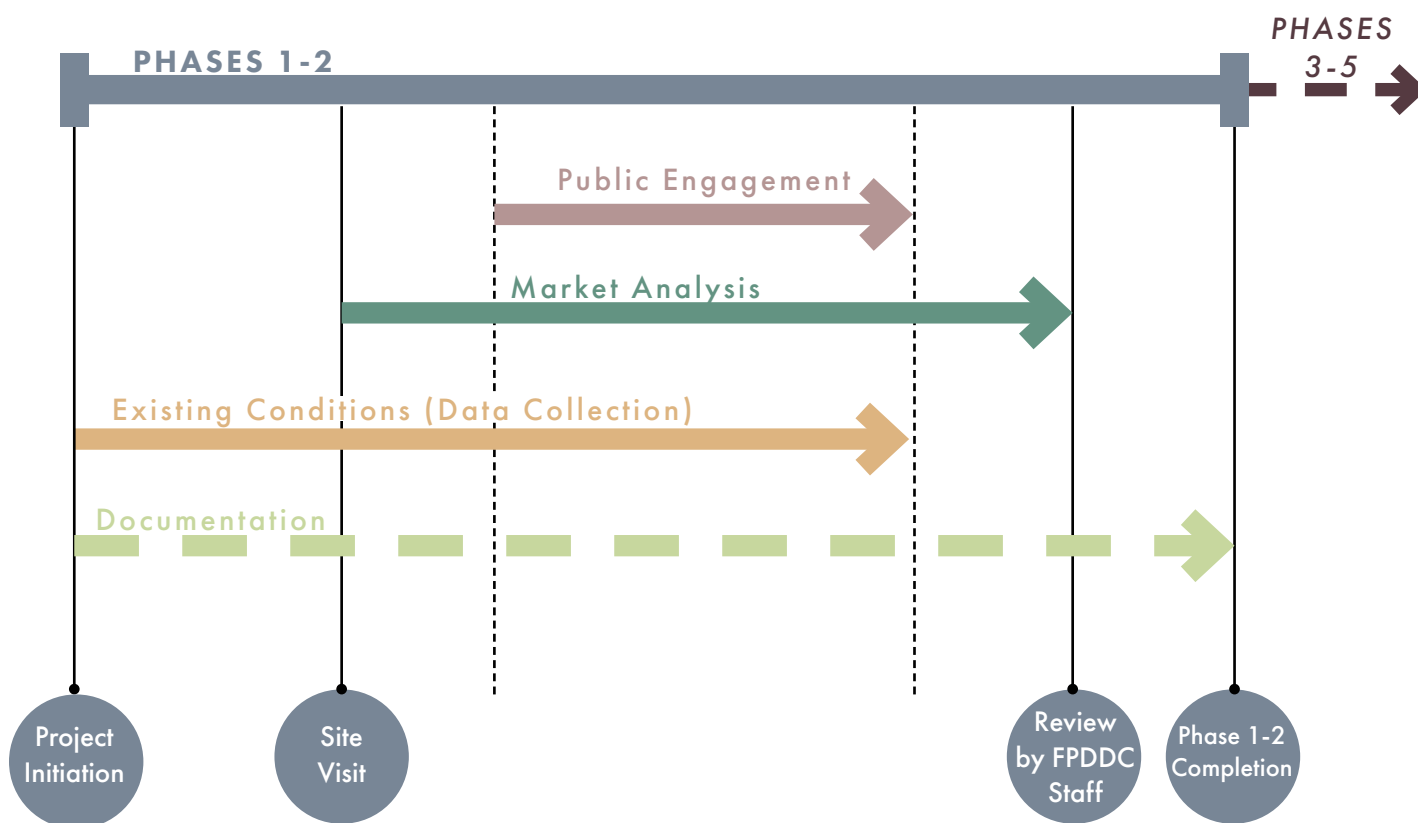
Word Art



Public Engagement Word Cloud

Market Analysis

The market analysis piece of this process was conducted to understand the users of the preserves: who they are, where they live, and how they spend their leisure time and disposable income. This analysis may be useful in the future to determine what types of facilities and amenities to provide and where. To read the more detailed analysis, see chapter 01.



BACKGROUND & PROCESS

DOCUMENT REVIEW

Before beginning any planning process, it is critical to review and understand the previous efforts. The documents that come out of these efforts reflect important observations and recommendations that should inform this process. Stantec conducted a thorough review of past planning documents and has included a summary of those believed to be the most relevant to this process below.

2019 Master Plan

The 2019 Master Plan identified 32 “certified projects” that the Forest Preserve District Board of Commissioners has decided to prioritize, schedule and fund over the next five years (as of approval on December 17, 2019). The plan also identified “Initiatives and other considerations” which were items brought up during the master planning process that were not addressed in the certified projects, but that warrant further study and possible action.

Certified Projects

The certified projects are divided into four cost categories, conservatively assuming each is implemented to the full extent as conceptually envisioned.

\$	\$0 – \$500,000
\$\$	\$501,000 – \$2,000,000
\$\$\$	\$2,000,001 – \$5,000,000
\$\$\$\$	\$5,000,001 – \$20,000,000

The certified projects that relate to the Blackwell, Greene Valley and Waterfall Glen preserves were:

1. Blackwell: Mack Road Trail
2. Blackwell: Cenacle Bridge
3. Blackwell: Family Campground Shower Building Improvements
4. Waterfall Glen: Cass Avenue and Bluff Road Parking Lot
5. District wide: Restroom Improvements
6. District wide: Tree Trimming
7. District wide: Asphalt Maintenance
8. District wide: Demolitions

Initiatives and Other Considerations

- Land Acquisition Plan
- ADA Transition Plan
- Landfill End-Use Plans
- Education Center Master Plans
- Individual Forest Preserve Master Plans
- East Branch DuPage River Trail
- Green Energy Study
- Natural Resources and Grounds Maintenance Operations Assessment and Facility Provisions
- Sign Plan
- Trail Plan
- Cultural Resource Management Plan
- Infrastructure Management Plan
- Special Needs Recreation Plan

2014 Strategic Plan

The strategic planning process was aimed at identifying and addressing organizational development issues to support the districts sustainability and long term mission-related goals. The anticipated outcome of this strategic planning process was the development of a comprehensive, strategic framework setting the District’s direction

and providing guidance for its evolution over the next three years (as of approval October 14, 2014).

The process included 5 phases: discovery, market research and analysis, commissioner debrief, retreat design and facilitation, and strategic design development. Through that process, goals for the preserve were created.

Goals

1. Leadership

The District will be recognized as a model of organizational effectiveness and a leader in its field.

2. Sustainability

The District will operate in a manner that is both financially and environmentally sustainable.

3. Community/Public Outreach and Engagement

The District will proactively provide and promote opportunities to engage communities, affinity groups and individuals in ongoing dialogue to foster greater collaboration, trust, accountability and alignment among the District, the public and its partners.

4. Natural and Cultural Stewardship

The District will continue to maintain and improve upon its legacy as responsible stewards of DuPage County's natural and cultural resources through effective resource management, responsible and strategic acquisition, proactive maintenance and appropriate allocation of financial and human resources.

5. Connecting People to Nature

The District will actively engage people of all ages, backgrounds, and walks of life in opportunities to connect with nature, in order to improve the quality of life and health in DuPage County and foster a lifelong appreciation of nature among its citizens.

Policies

- Wetland Mitigation
- Recreation Policy
- Land Preservation Guidelines
- Selection of Land
- Historical and Cultural Resources Policy
- Ordinance Establishing Wildlife Policy
- License and Easement Policy
- Intense Recreational Activities
- Drainage Ordinance
- Land Management Policies
- Buildings - Licensing and District Owned
- Reforestation
- Land Use Policy

Blackwell Documents

- Blackwell Trail Concept (2014)
- Blackwell Egret Trail Reroute (2020)
- Mack Road Connector (2020)
- WBRT - Roosevelt (2019)

Greene Valley Documents

- TENG Greene Farm Barn Renovation-Reuse Report (2010)
- Green Farm Barn Recommendation (2019)

Waterfall Glen Documents

- Parking Analysis and Opportunities (2016)

BLACKWELL,
GREENE VALLEY &
WATERFALL GLEN
FOREST
PRESERVE

Market
Analysis

IN THIS SECTION:

DEMOGRAPHICS

PEER
BENCHMARKING

COMPETITIVE
CONTEXT FOR
BLACKWELL
PROGRAMS

PROGRAM GAPS

GREENE
FARM BARN



MARKET ANALYSIS



Blackwell Forest Preserve

INTRODUCTION

As part of the broader master planning effort, a market analysis was conducted to better understand the customer base: who users are, where they live, and how they spend leisure time and disposable income. This information can be useful to show how interests and travel patterns vary from place to place.

Going forward, this type of information may be useful in determining what types of facilities and amenities to provide and where, which is important for planning purposes. In the meantime, it can also help the District decide how to allocate its limited resources towards improving accessibility, visitation, and experience. It can even feed into discussions about potential revenue generation, which is important in sustaining operations and furthering the broader mission.

This chapter starts with a description of the demographics of the county, using maps that show the broader regional context. There are some significant differences between the city center and the distant suburbs; DuPage lies somewhere in between and serves many communities outside its border. Issues of equity and access are also covered in this section, as they are related.

As part of this work, peer benchmarking was undertaken to understand how DuPage compares to its neighboring counties in terms of resources, service offerings, and costs. Analysis of the home origin (zip code) of those purchasing permits for various activities reveals where users of activities are coming from.

A high-level gap analysis and brief commentary about the potential for new offerings was conducted for two areas of interest identified in conjunction with FPDDC staff: food and beverage facilities, and bike-sharing.

Lastly, a high-level pre-feasibility study of a revenue generating event space – the Greene Farm Barn – was explored in slightly more detail. Previous planning studies had already been undertaken to explore the potential for upgrading and expanding the use of this facility. This new study builds on the previous work and explores additional commercial alternatives that could cross-subsidize the non-revenue generating activities. Analysis involved deeper research into similar facilities including usage patterns, costs, and business models. Interviews were conducted with owners/operators of competitive and comparable spaces. A proforma exercise exploring the financial feasibility of such an operation is provided in the Appendix, with results and assumptions noted. The chapter concludes that such a facility may be feasible, but additional work would be needed to confirm the details. It is worth noting that an initial engagement with the community to discuss the potential for such (partial) commercial uses revealed that there may be resistance to the idea.

1 DEMOGRAPHICS

OVERVIEW

DuPage County is located west of the City of Chicago, and straddles the urban to rural spectrum of communities. It is the second-most populated county in Illinois. One in every 14 residents of Illinois lives in DuPage County.

	DuPage County	Illinois
Estimated Population	923,540	12,862,980
Population Growth, 2010 to 2020	0.7%	0.3%
Estimated Number of Households	341,949	4,900,572
Household Growth, 2010 to 2020	1.4%	1.3%
Median Household Income	\$96,477	\$65,003
Median Home Value	\$312,492	\$207,550
Median Age	39.6	38.2
Percentage with Bachelor's or higher degree	50.6%	35.6%
Family households as a share of all households	86.6%	83.7%

DuPage County has grown at a modest rate in the past decade. It has a very similar age profile to the state of Illinois as a whole. Its population is more educated than most counties, and household incomes are significantly higher than the state average. It has a higher than average proportion of households that are families of one kind or another. A smaller percentage of its population identify as

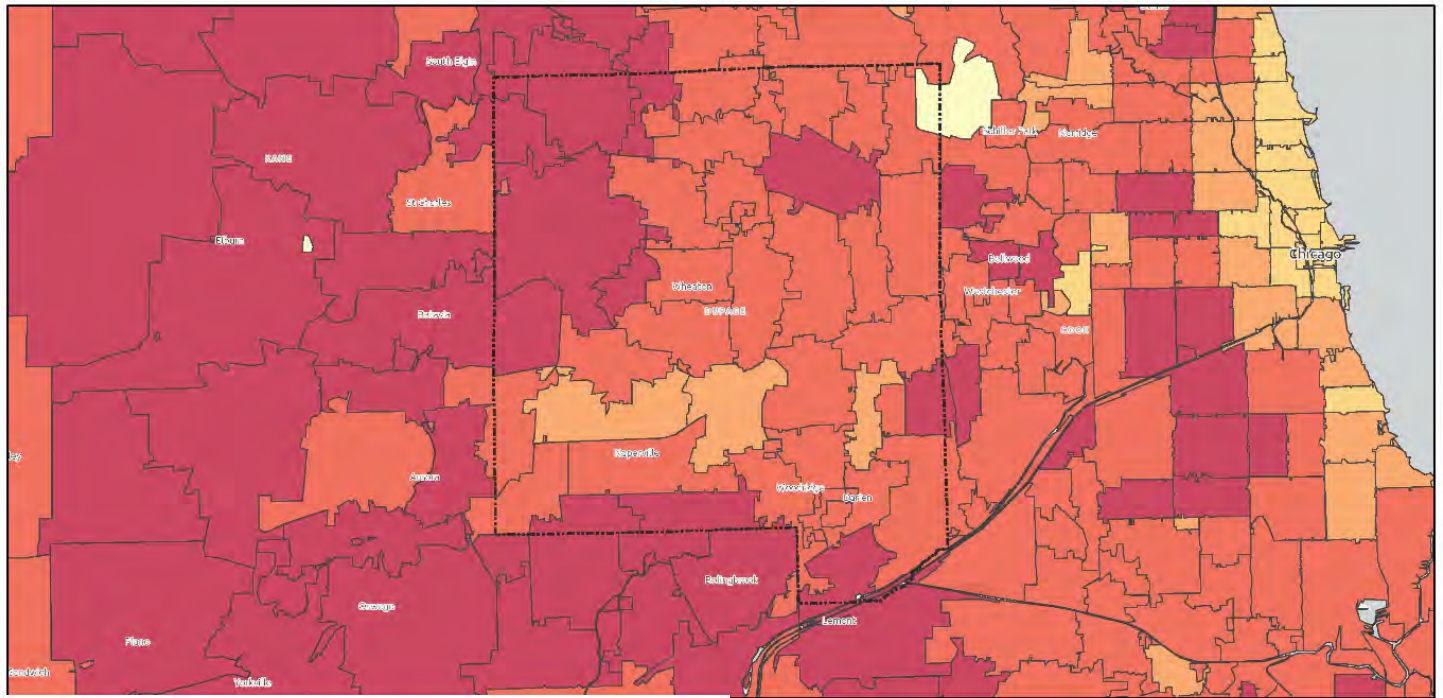
nonwhite or Hispanic/Latino, compared with the state of Illinois as a whole.

To understand demographic characteristics of the DuPage County population within the County, Stantec created a series of maps that illustrate demographic characteristics by zip code. The maps extend beyond the County border to illustrate how the DuPage County population compares with the populations in neighboring jurisdictions.

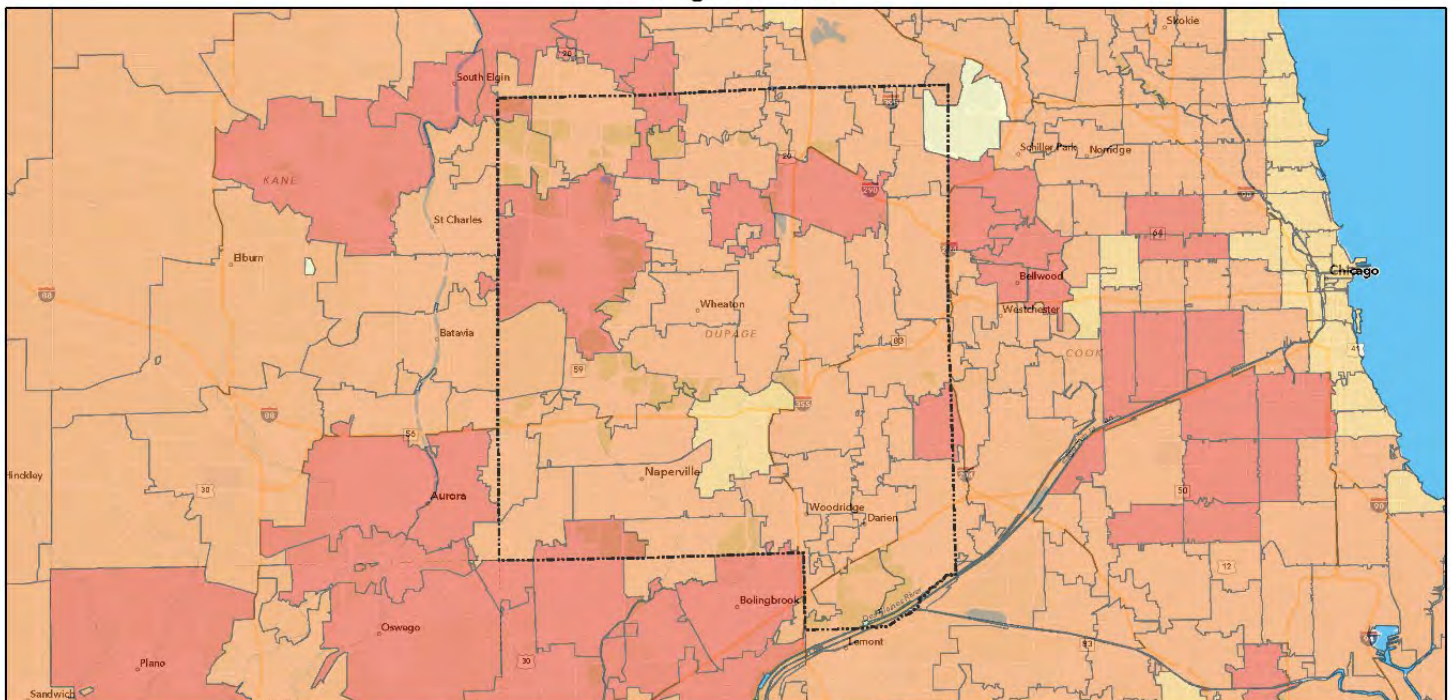
Family Households

The share of households that are family households is illustrated in the first map. Darker colors reflecting a higher proportion of family households. Family households are defined as a householder living together with one or more people related by birth, marriage, or adoption. As might be expected in the suburbs, there is a greater concentration of families as one moves away from downtown Chicago. Note that these distributions change over time as the population ages. DuPage no longer has the highest concentration of such households (that occurs in newer areas to the west and in some outlying neighborhoods within Chicago). As time has passed, some singles and other non-family households have moved into the area, and some families may have aged in place to the point where people are living alone or with unrelated individuals. (Reference Family HH)

Family HH



Average HH Size



DEMOGRAPHICS

Household Size

The average size of households is illustrated on the previous page, by zip code. In general, larger households are found in the suburbs as well, although some notable concentrations may occur in certain urban areas with greater ethnic and racial diversity for a variety of cultural reasons. (Reference Average HH size)

Median Income

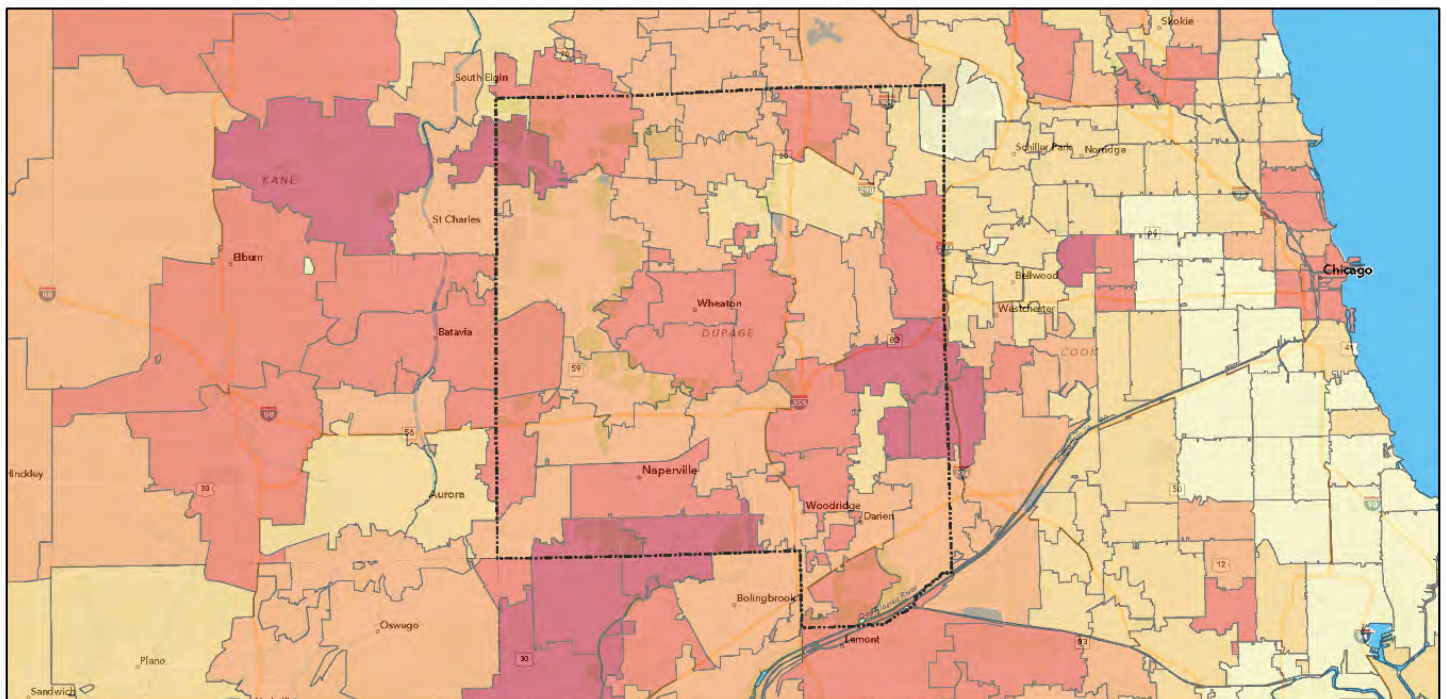
The geography of median household income is shown below. DuPage is a generally higher income area within the region, although some variation in income levels is evident in different parts of the county. (Reference 2020 Middle HH Income)

Age

The map on the next page illustrates the share of the population that are children under the age of 18. The western edge of DuPage County has a greater percentage of children. Some areas of Chicago also have high concentrations of children. (Reference Population Percent less than age 18)

Areas near downtown Chicago show the highest concentrations of population in the young to middle adult years. (Reference Population Percent Age 18-44)

2020 Median HH Income



4/19/2021

Geography Areas

2020 Median Household Income by ZIP Codes

\$0 - \$46,706

> \$46,707 - \$71,935

> \$71,936 - \$97,317

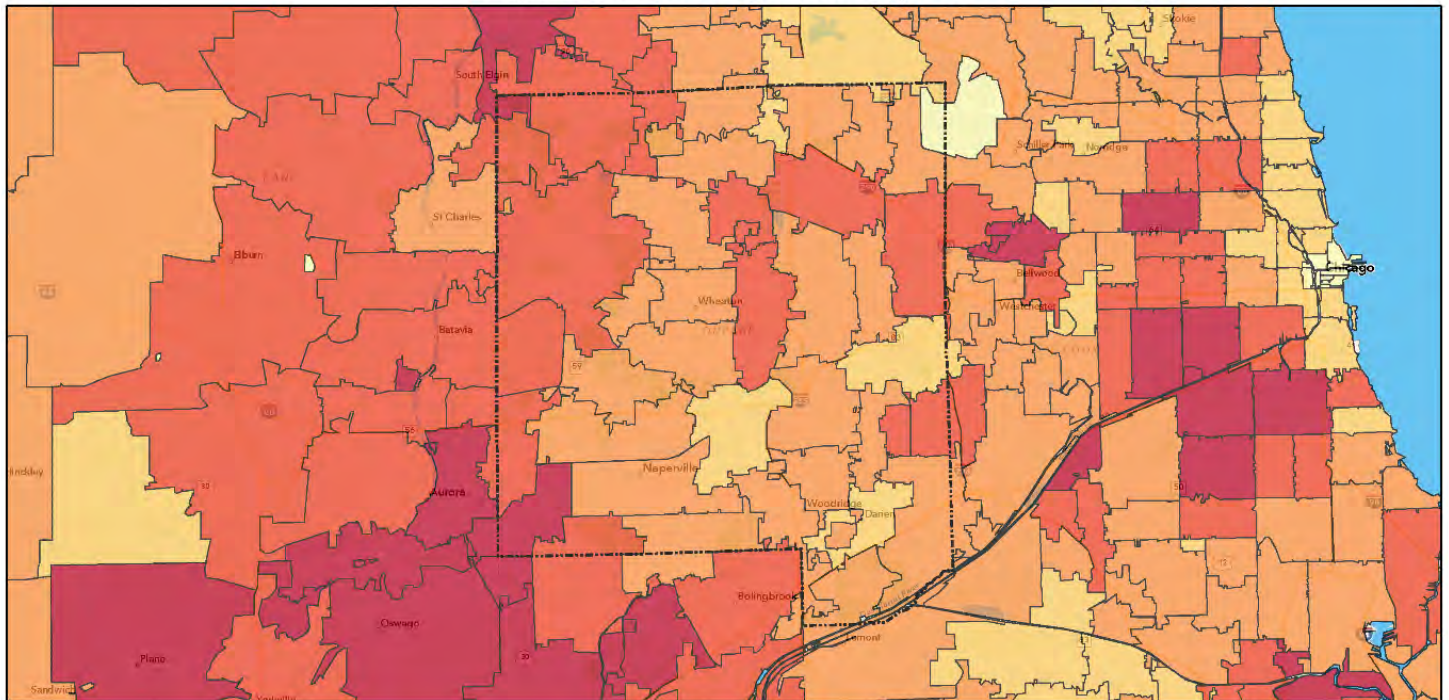
> \$97,318 - \$131,217

> \$131,218 - \$200,001

1:300,000
0 2.75 5.5 11 mi
0 4.25 8.5 17 km

City of Wheaton, County of DuPage, Esri, Cananda, Esri, HERE, Garmin, SafeGraph, FAO, MET/NASA, USGS, EPA, NPS

Population Percent less than Age 18



4/19/2021

Geography Areas

2020 Population Age less than 18 (%) by ZIP Codes

0% - 8.94%

> 8.95% - 18.31%

> 18.32% - 23.53%

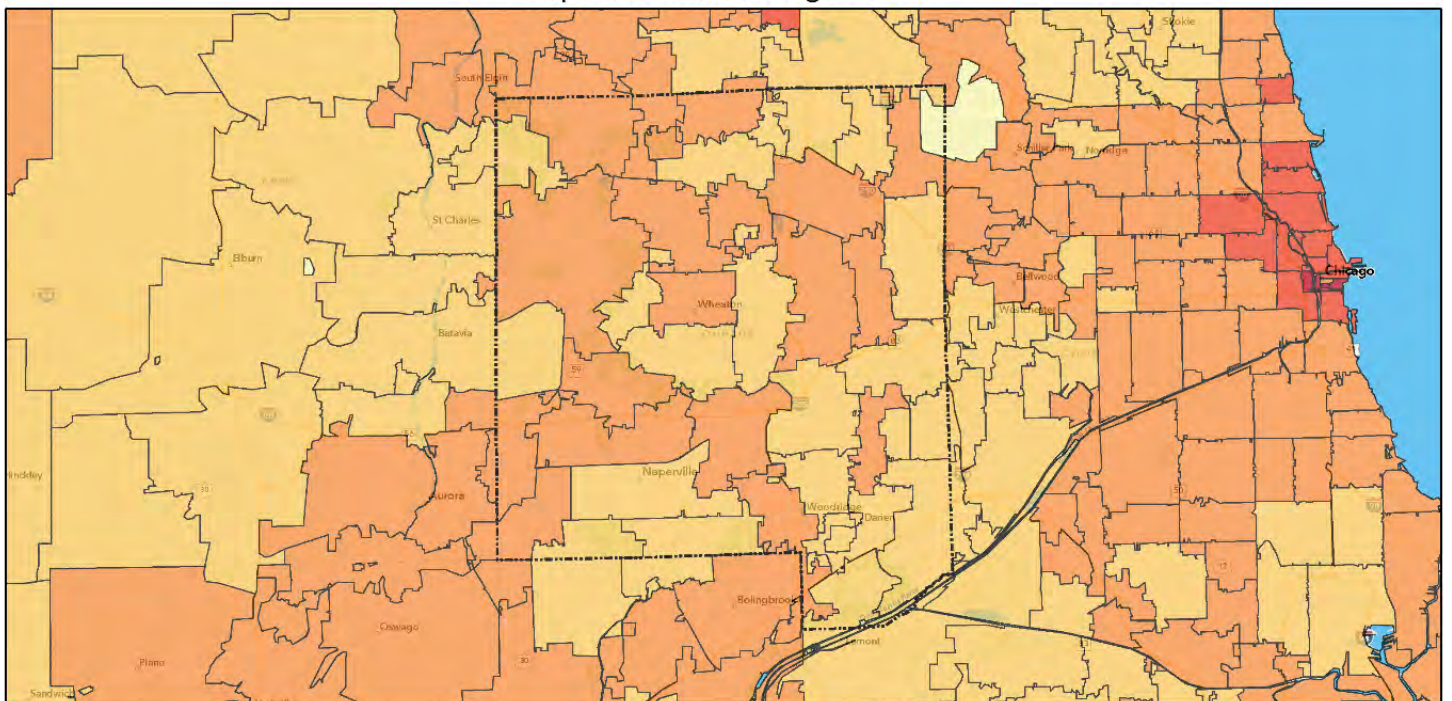
> 23.54% - 28.25%

> 28.26% - 34.59%

1:300,000
0 2.75 5.5 11 mi
0 4.25 8.5 17 km

City of Wheaton, County of DuPage, Earl Canada, Earl, HERE, Garmin, SafeGraph, FAO, MET/NASA, USGS, EPA, NPS

Population Percent Age 18-44



4/19/2021

Geography Areas

2020 Population Ages 18 to 44 (%) by ZIP Codes

0% - 10.57%

> 10.58% - 33.99%

> 34% - 47.5%

> 47.51% - 67.9%

> 67.91% - 94.73%

1:300,000
0 2.75 5.5 11 mi
0 4.25 8.5 17 km

City of Wheaton, County of DuPage, Earl Canada, Earl, HERE, Garmin, SafeGraph, FAO, MET/NASA, USGS, EPA, NPS

DEMOGRAPHICS

There are significant concentrations of the population defined as “middle aged” both in DuPage and further to the west. (Reference Percent Population Percent Age 45-64)

The eastern part of DuPage and the western part of Cook County have significant concentrations of Seniors. (Reference 2020 Population Age 65 Plus)

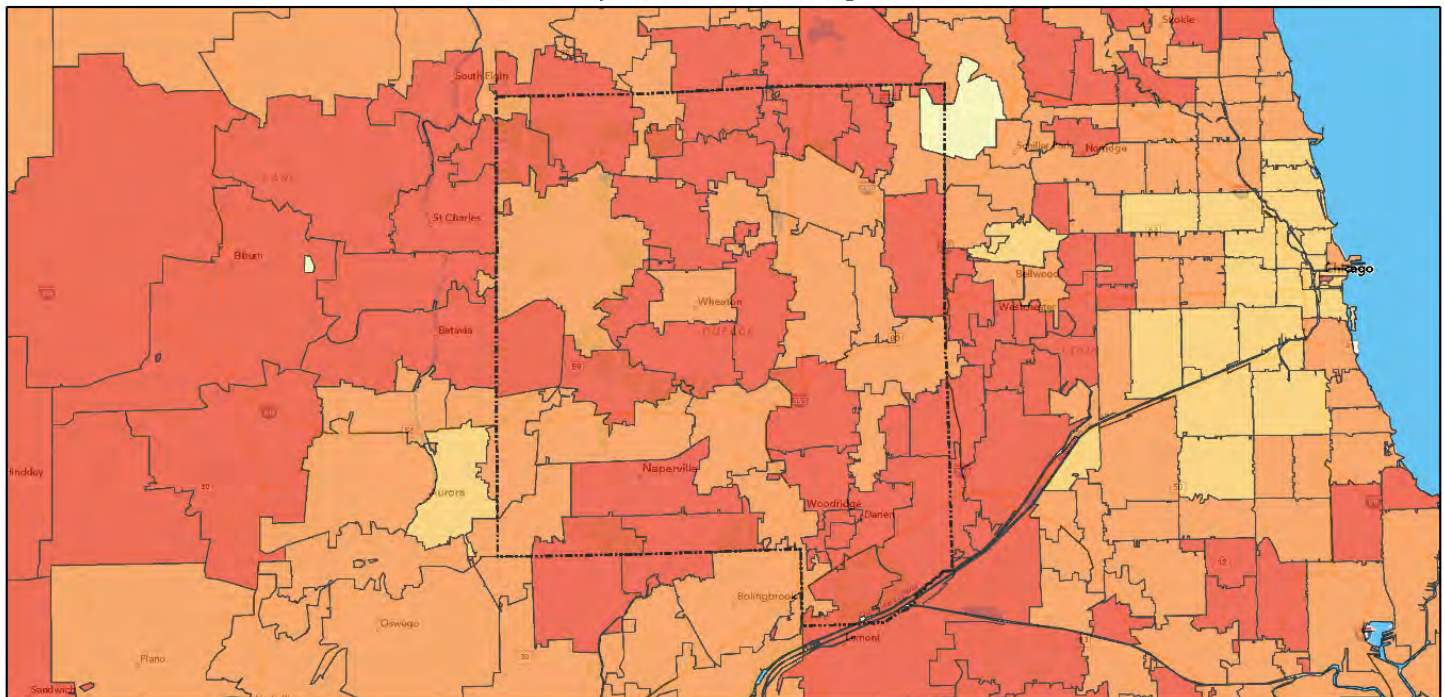
Psychographic Analysis

Tapestry segmentation is a form of psychographic analysis. It classifies people into types that reflect their lifestyle preferences and spending behaviors.

The naming and classification of such groups is beyond the scope of this report but a map of the dominant segments by zip code are shown below. The diversity of DuPage County shows up more in tapestry segmentation than it does in maps of racial or income distribution. (Reference Psychographic Analysis)

Information on each of these groups is available at this [link](#).

2020 Population Percent Age 45-64



4/19/2021

Geography Areas

2020 Both Ages 45 to 64 (%) by ZIP Codes

0% - 7.56%

> 7.57% - 21.32%

> 21.33% - 26.63%

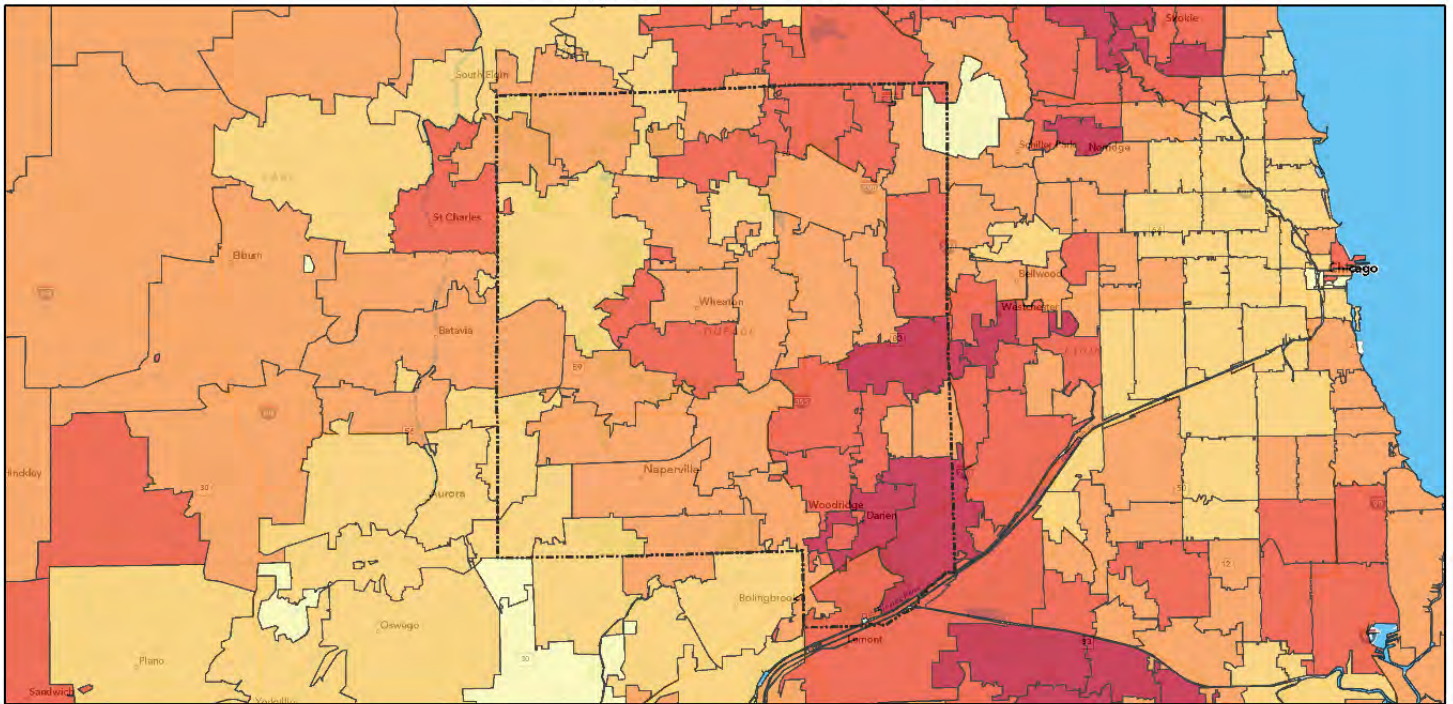
> 26.64% - 45.71%

> 45.72% - 54.55%

1:300,000
0 2.75 5.5 11 mi
0 4.25 8.5 17 km

City of Wheaton, County of DuPage, Esri, Cananda, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS

2020 Population Percent Age 65 plus



4/19/2021

Geography Areas

2020 Population Ages 65+ (%) by ZIP Codes

0% - 6.51%

> 6.52% - 12.73%

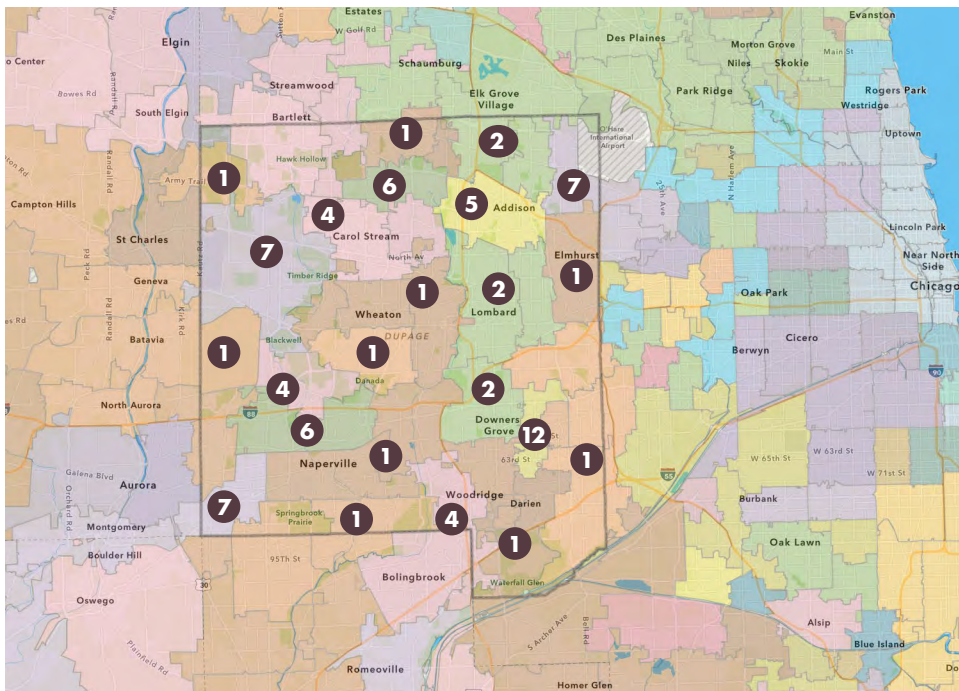
> 12.74% - 17.87%

> 17.88% - 23.54%

> 23.55% - 38.06%

1:300,000
0 2.75 5.5 11 mi
0 4.25 8.5 17 km

City of Wheaton, County of DuPage, Esri, Cananda, Esri, HERE, Garmin, SafeGraph, FAO, MET/NASA, USGS, EPA, NPS



2020 Dom Tapestry Segment Name by ZIP C...

- 1 Affluent Estates
- 2 Upscale Avenues
- 3 Uptown Individuals
- 4 Family Landscapes
- 5 GenXurban
- 6 Cozy Country Living
- 7 Ethnic Enclaves
- 8 Middle Ground
- 9 Senior Styles
- 10 Rustic Outposts
- 11 Midtown Singles
- 12 Hometown
- 13 Next Wave
- 14 Scholars and Patriots
- Unclassified

Tapestry Segmentation

DEMOGRAPHICS

Summary

Population and household characteristics can inform the planning of physical landscape and elements within the Forest Preserve District, the programs and events that are offered, and marketing and outreach efforts. The demographic variation within DuPage County may argue for creating different environments and opportunities at different Forest Preserves.

ISSUES OF EQUITY & ACCESS

In recent years there has been an increasing awareness that locational inequities and disparities have resulted in part from decades of race-conscious policies in government, lending and other institutions, mirroring and responding to prevailing public attitudes and prejudices. This has raised interest in how at different levels of organizations and public institutions, steps might be taken to reduce inequities and level playing fields.

This section of the report summarizes the measures that organizations similar to FPDDC are taking to build equity consciousness into the outreach, availability and costs relative to their natural resources and associated programs and services. (Reference Racial Diversity and Median Income by Zip Code Map)

A number of studies related to equity issues and open space have been conducted by such entities as the Urban Land Institute (ULI), the National Recreation and Park Association (NRPA), and the Trust for Public Land. The following reports are cornerstone efforts that may be of interest to the FPDDC.

- [The Heat is On \(TFPL\)](#)
- [10 Principles for Enhancing Equitable Access to Parks \(ULI\)](#)
- [Engagement with Parks Report \(NRPA\)](#)

The reports include case studies and examples of best practices DuPage may want to consider, along with some key facts that highlight the issue.

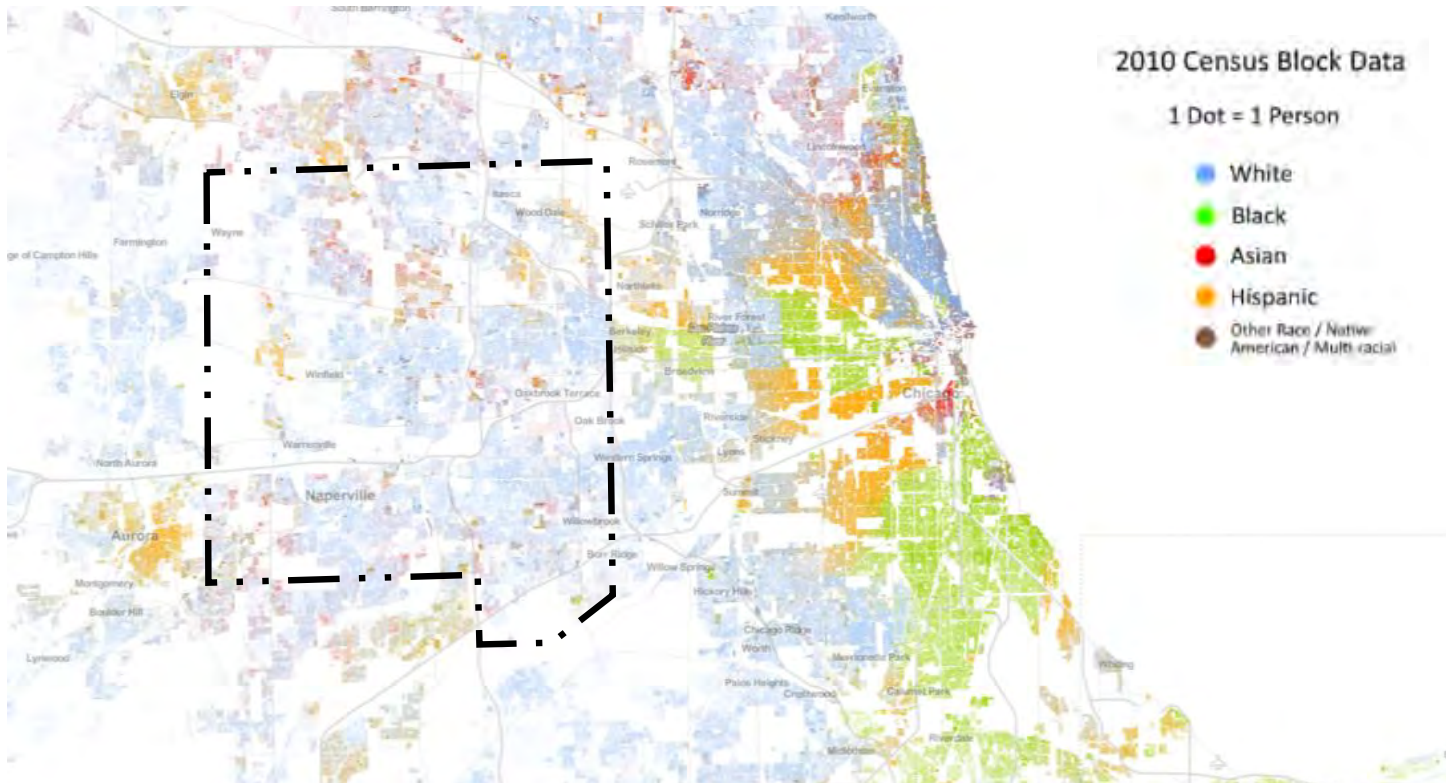
The ULI report is perhaps the most comprehensive of the three, with an overview of case studies showing how a number of other places have begun to address equity related disparities. Their findings are distilled into ten recommended principles, which are excerpted in the pages that follow (Reference 10 Principles for Enhancing Equitable Access to Parks). The report emphasizes that engaging, welcoming and reducing barriers to attract the full diversity of a community involves conscious policies and practices at a number of levels. Many of these approaches fall under the following two headings.

Community Outreach

Intentional efforts are required to reach lower income communities or communities of color who may have a preconceived idea that the forest preserves are not really for people like them. Involvement in governance, planning and decision making processes is an element of community outreach.

Barrier Reduction

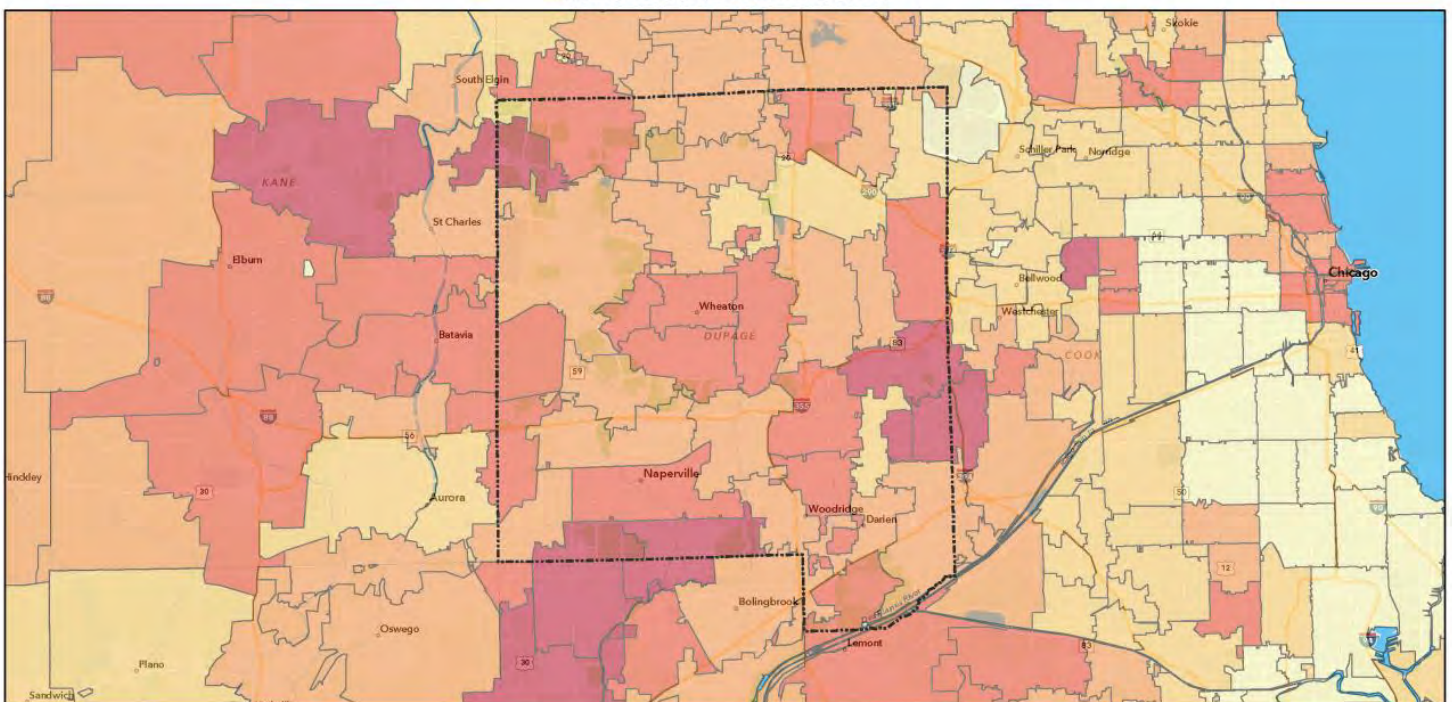
Lower income communities may face challenges accessing the forest preserves because of transportation limitations or due to site-based conditions. Adjusting the pricing of programs and equipment is a specific type of barrier reduction.



Racial Diversity Map

Source: [The Racial Dot Map](#) | [Weldon Cooper Center for Public Service](#)

2020 Median HH Income



4/19/2021

Geography Areas

2020 Median Household Income by ZIP Codes

\$0 - \$46,706

> \$46,707 - \$71,935

> \$71,936 - \$97,317

> \$97,318 - \$131,217

> \$131,218 - \$200,001

1:300,000
0 2.75 5.5 11 mi
0 4.25 8.5 17 km

City of Wheaton, County of DuPage, Esri, Canada, Esri, HERE, Garmin, SafeGraph, FAO, METI/ANSA, USGS, EPA, NPS

DEMOGRAPHICS



10 Principles for Enhancing Equitable Access To Park

Community Outreach

Increasing the equitable access and use of natural spaces and related programs can involve a conscientious review and innovation of practices at several levels. For example:

- What improvements can we make to our everyday and ongoing communication and outreach?
- How do we engage our underrepresented communities when we're researching and designing improvements to the preserves or their programs?

- How might we broaden the representation of those who are involved in the Forest Preserve District's governance and decision processes?

At each level, intentional efforts can be made to expand the engagement beyond the passionate stakeholders that are more readily at hand.

Expanding engagement with diverse constituencies typically involves broadening the types and variety of outreach methods used, making use of traditional communication outlets as well as nontraditional and informal methods. A broader menu of media and social media outlets

can be used. Intermediary organizations can be tapped to get the word out or reach people for involvement. Networking with formal or informal community leaders can be helpful.

Staffing can play a role in this. A conscientious effort to broaden an organization's outreach and engagement might involve hiring community engagement staff who have experience with connecting with communities of color. Consultant support can also be helpful on a project basis to propose improvements to communication practices.

Barrier Reduction

Connecting people to parks and open spaces means reducing barriers to access. (Reference Top 10 Barriers Keeping People from Greater Enjoyment of Local Parks and Recreation Facilities)

Transportation

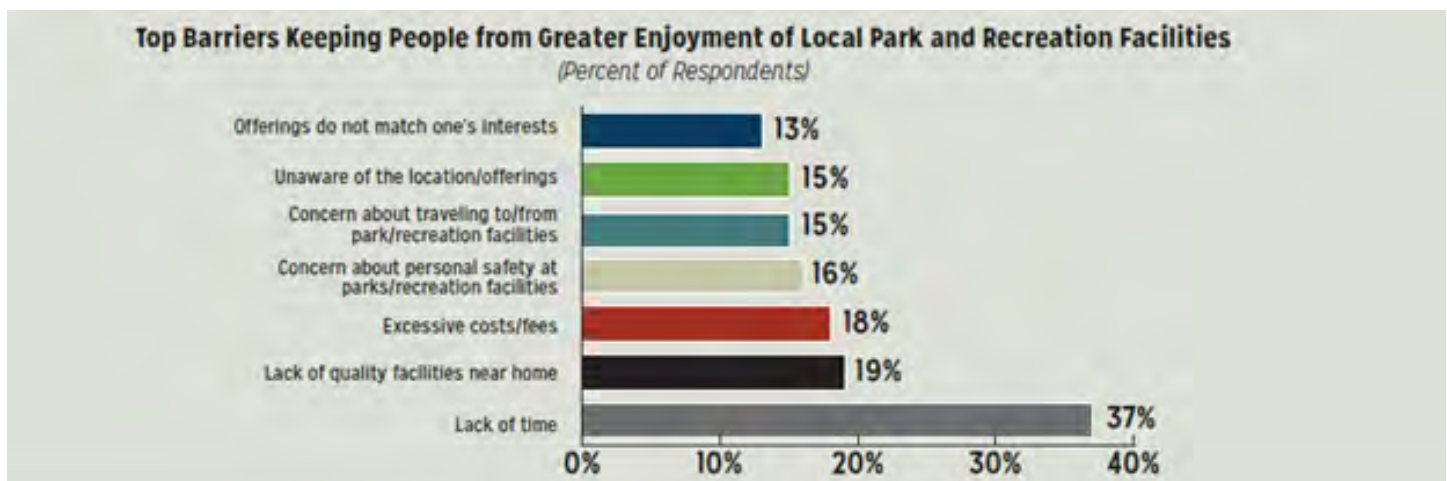
Some lower income households may have less access to an automobile. That can be borne in mind in how the Forest Preserves conceive of their

entrances and gateways. Where area preserve facilities are on a transit route, is there a sense of arrival at the Preserve, and clear connections to the interior and preserve facilities? Bicycle path entrances may also be arrival points for lower income individuals or families.

Sense of Welcome

Being in a suburban county, and given community use patterns, the Forest Preserve District faces inherent hurdles in inviting diverse communities to see the preserves as being theirs to enjoy. On the other hand, recent research has highlighted findings that young adults in communities of color are reporting a high level of connectedness to nature, but often have situational concerns about entering particular spaces.

While there's no magic formula for making a space feel welcoming and comfortable for different communities, spaces can be created that reflect the unique identity and characteristics of different communities. Including community representatives, designers or artists in the design



Top 10 Barriers Keeping People from Greater Enjoyment of Local Park and Recreation Facilities

DEMOGRAPHICS

of spaces can increase pride and a sense of ownership. Another strategy is to leverage school involvement. If school children are tapped to contribute to the physical environment in some way, that can build a connection to parents who want to see their children's creative efforts. Another strategy for building a sense of welcome is to pay attention to community representation through employing programmatic staff that come from a range of communities. That sends an important signal of belonging to others from those communities.

Cost

Cost may be the most obvious barrier to full utilization of Forest Preserve District offerings. Barrier reduction could involve making more programs free, or it could be about cost reductions based on economic related criteria.

One yardstick for thinking about cost barriers is the Ability to Pay Principle. A 2019 article in NRPA's Parks & Recreation Magazine, titled "[Pricing Strategies That Combat Social Injustice](#)," promotes the use of this Principle. It suggests that park and recreation agencies could offer price discounts to four groups of potential users.

- **Low-Income Residents** – Establishing a qualifying benchmark income level that defines a "poor" individual is controversial, requiring additional administrative steps to verify and audit compliance that could become intrusive. Recreation agencies typically adopt criteria already used by others, such as schools for their subsidized meals programs, welfare and

unemployment agencies, to determine those eligible for discounts.

- **Unemployed Residents** – Unemployment is devastating to most who experience it. Recreation programs can offer relief from boredom and give some structure, order and routine to each day for the unemployed. Agencies have the potential to mitigate the isolation and exclusion caused by removal or disruption of social interactions with colleagues.
- **Children** – Leisure literacy is as important to a satisfying life as reading, writing and numerical literacy. The absence of such skills could lead to deviant behavior that inflicts great costs on society. Investing in youth by giving them meaningful discounts allows park and recreation agencies to nurture their future clientele.
- **Large Households** – Larger families have more expenses to meet and are economically disadvantaged compared to smaller families. Traditionally, agencies offer family passes to these households.

Santa Clara County Parks offers a specific example of a program to offer price discounting for their annual parking fee. To get their [Low Income Annual Venture Pass](#), a family must demonstrate eligibility based on one of the following criteria:

1. Families and individuals receiving public assistance such as: Medi-Cal, CalFresh, SSI or participating in the CalWORKs program.

2. Families and individuals receiving Department of Family and Children's Services (DFCS) such as: Prevention Programs, Family Support, Early Intervention, Safety & Wellbeing, and Resource Families.
3. Customers/families who are using resources at the DFCS San Jose or Gilroy Family Centers

If the Forest Preserve District established a process for qualifying families, the "Pass" given to the qualifying family could make them eligible for discounted rates on a menu of District programs and services.

Experiment

There's no single road map to pursuing a more equitable forest preserve landscape and programs. The objective needs to be maintained as a priority, but to pursue it meaningfully will require a measure of innovation and creativity. Experimentation with park elements that may attract more types of users, and introduce nature in new ways will eventually lead to broader appreciation and education about its benefits. This means continuing to evolve in our understanding of what the forest preserve user looks like.

A sense of experimentation and creativity can support the District in finding ways to evolve and innovate its amenities for new cultural groups and a new generation, to address longstanding equity issues, and to promote other values such as community, culture, and civic appreciation.

2 PEER BENCHMARKING

The Forest Preserve District of DuPage County has a variety of programs and outdoor recreation offerings across their forest preserves. Most, if not all, of these offerings are also available at other forest preserve districts, park districts and other local private and public competitors. As part of the market research component, the menu of offerings at other identified forest preserve districts and organizations in the Chicago metropolitan area and elsewhere was researched. Information was collected on both revenue-generating and non-revenue generating program offerings across the entire district. The findings of this research include the overall “menu” of programs, availability of equipment rental, fees associated with programs, operating format and other notable characteristics of the program offerings.

Peer Organizations

The peer districts and organizations researched are shown and mapped on the next page. The list includes a variety of forest preserve districts (FPD), local park districts (PD), private entities and a conservation district.

- Forest Preserves of Cook County
- DeKalb County Forest Preserve District
- Forest Preserve District of Kane County
- Forest Preserve District of Will County
- Lake County Forest Preserves
- Morton Arboretum
- Cantigny
- Bartlett Park District
- Downers Grove Park District
- Carol Stream Park District
- Naperville Park District
- West Chicago Park District
- Wheaton Park District

- Fox Valley Park District
 - McHenry County Conservation District
 - Forest Preserves of Winnebago County
 - Kendall County Forest Preserve District
- (Reference Map of Peer Organization)

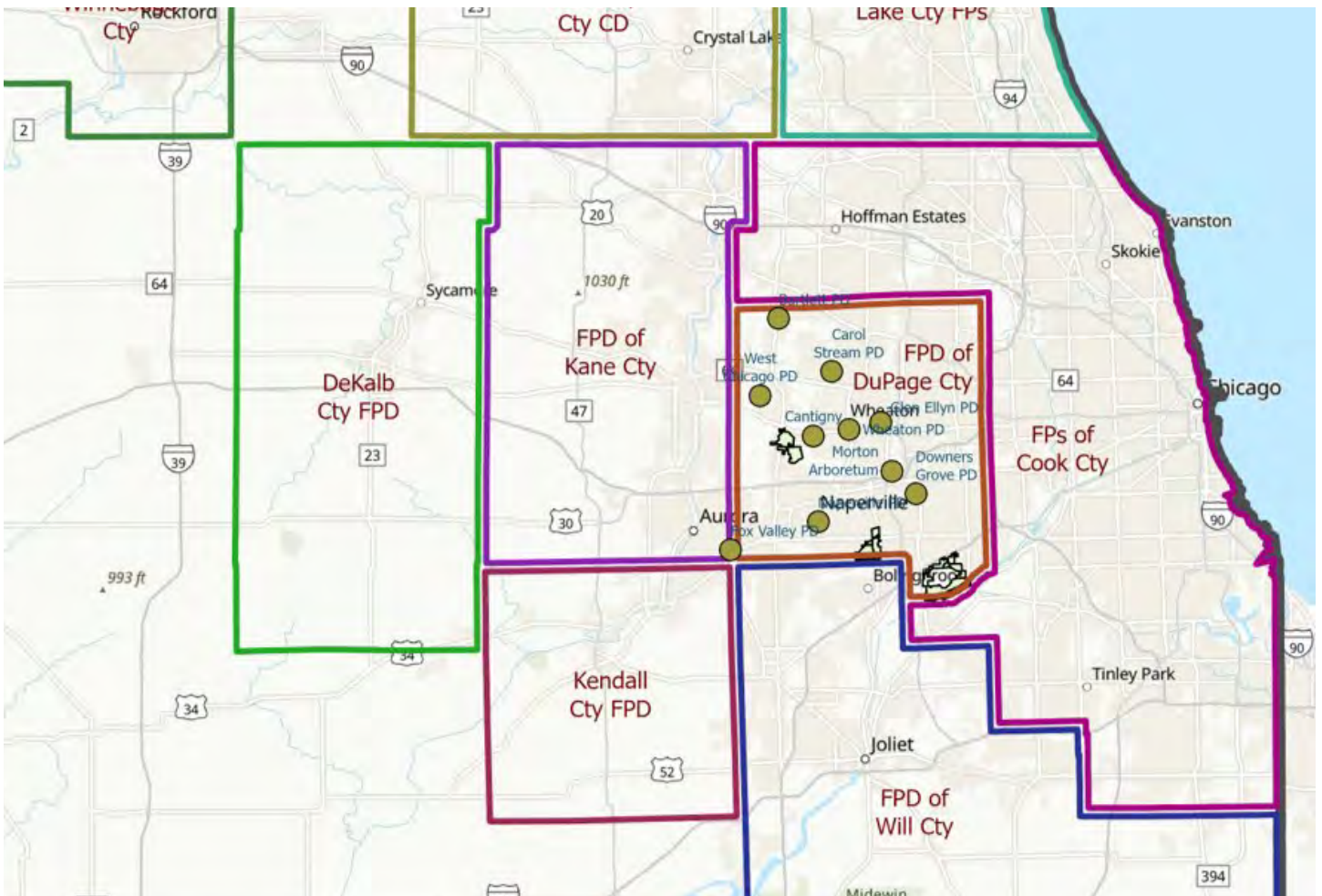
Overview Metrics

Overview metrics were collected for the FPDDC and a small set of the most comparable Forest Preserve Districts. These overview measures include population, land area in the preserves, land area per thousand residents, number of visits, visits per capita, visits per acre, revenues and budget per capita. The overview measures attempt to compare FPDDC with its competitors in the following chart. (Reference Overview Measures Compared with Four Peers)

The FPDDC serves the most populous county outside of Cook County, and it offers the greatest amount of land area as a proportion of the county's total land area. 12.1% of DuPage County's total land area is in the ownership and care of the Forest Preserve District.

Program Overview

Information was collected from organization websites to determine program offerings at each peer organization. The chart below shows a simple overview of offerings at FPDDC, and the other peers. The information was collected at the district level to simplify comparison, and more information was sought on topics that were of particular interest to the FPDDC staff. These topics of special interest are included in Section 3, program gaps. (Reference Program Overview)



Map of Peer Organization

	DuPage	Cook	Will	Kane	Lake
Population					
County Population (2021 est)	914,269	5,106,780	689,931	531,769	690,431
Land					
Land Area in Preserves (acres)	26,000	70,000	22,000	20,000	31,000
Land Area in County (acres)	215,040	1,046,400	543,360	335,360	875,520
% of County Land in Forest Preserve Districts	12.1%	6.7%	4.0%	6.0%	3.5%
Land Area per Thousand Residents (acres)	28.4	13.7	31.9	37.6	44.9
Visitors					
Estimated Number of Visits Annually	4,000,000	62,000,000			
Visits per County Population	4.4	12.1			
Visits per acre	154	886			

Overview Measures Compared with Four Peers

PEER BENCHMARKING

Finding Meaning – High Level Findings

It is clear that the FPDDC has one of the most comprehensive set of program offerings among its peers. There are a few programs offered by the FPDDC that were somewhat unique among its peers. These activities include:

- Boat/paddling rental (staffing in-house is unique)
- Archery
- Canopy/grill rental
- Snow tubing
- Model aircraft
- Orienteering course

A few potential gaps are explored further in Section 3, Gaps Analysis. These gaps include:

- Food/beverage offerings
- Bike Rental/Bike Share

Competitive Context – Program Offerings

For each program offered at FPDDC, Stantec analyzed the competitive context among its peers. This analysis included a comparison of fees charged, a number of key observations and variations among the peers. The revenue-producing programs at Blackwell are studied in more depth in Section 4, Blackwell Programs Competitive Context.

	DuPage	Cook	DeKalb County	Kane	Lake	Will	Bartlett PD	Downers Grove PD	Carol Stream PD	Glen Ellyn PD	Naperville PD	West Chicago PD	Wheaton PD	Cantigny	Morton Arboretum	Fox Valley PD	McHenry County Conservation District	Winnebago County FPD	Kendall County FPD
Trails/hiking	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Bicycling	X	X	X	X	X*	X	X	X	X	X	X	X	X	X	X*	X	X	X	X
Fishing	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Private boat	X	X	X	X	X	X				X							X	X	
Boating/paddling rental	X	X			X	X													
Organized hikes/walks	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X
Snowshoe rental	X	X				X	X	X					X		X	X	X		
Cross-country ski trails	X	X	X	X	X	X	X	X			X		X		X	X	X	X	
Canopy rental	X	X									X								
Shelter rental	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
Off-leash dog area	X	X	X	X	X	X	X		X	X		X	X			X		X	
Daily dog permit	X		X		X	X	X												
Model aircraft	X	X		X	X						X					X		X	
Model boat	X	X	X	X	X	X				X									
Volunteer Opportunities	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Snow tubing	X					X	X												
Sledding	X	X	X	X	X			X	X	X	X	X	X			X	X		X
Archery	X						X*	X*	X*	X*	X*		X*						X
Family camping	X	X	X	X		X											X	X	X
Youth camping	X	X	X	X	X			X									X	X	X
Kids summer camp	X	X	X	X	X		X	X	X	X	X	X	X		X	X	X	X	X
School groups/education	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Scouts groups	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X
Food/beverage		X		X	X	X	X	X	X	X	X	X	X	X	X	X			

Program Overview

Competitive Context – Organized Hikes and Walks

There were a few key observations and variations between the organized hikes and walks at FPDDC and its peers, which are documented below. The FPDDC offers hikes at a competitive price to its peers, although there are some peers that offer organized hikes and walks for free.

Observations

- All forest preserve district competitors have organized hikes/walks, as do many of the park districts
- FPDDC offers hikes/walks with a naturalist for \$5 in advance, and \$10-15 for specialty tours or night hikes

Variations

- Costs for organized hikes/walks vary from free to \$17
- FPD Will County offers hikes/walks for organized groups at a higher cost
- Some forest preserve districts offer night hikes/walks

(Reference Fee for Naturalist Hike)

Competitive Context – Bicycling

There were a few key observations and variations between the bicycling opportunities at FPDDC and its peers, which are documented below. While FPDDC offers a robust trail system for biking, other competitors offer additional amenities such as bike share and rental, as well as bike clubs. Other competitors offering bike share in the area include Visit McHenry County, Cook County Forest Preserve District, Lake County College (and partners), City of Aurora (and partners), Village of Lemont (and partners). The bike providers in the area include Koloni, Movatic, Zagster and Divvy.

Observations

- The trail system in DuPage County is robust and high quality

Variations

- The quality and connectivity of trails is an important differentiator



Competitive Context – Private Boat

There were a few key observations and variations between how private boats are treated at FPDDC and its peers, which are documented below. Blackwell is among the most expensive of its peers for private boat permits/licenses.

Observations

- Most forest preserve districts allow you to bring your own non-motorized boat with proper license
- Private boats are allowed on both lakes and rivers within preserve districts
- A distinction is made between non-motorized and boats with small trolling motors

PEER BENCHMARKING

Variations

The amount charged for boat license varies (daily and annually) FPDDC staff also provided the data on the zip code origins of those purchasing private boat permits. As shown in the map below, most permit purchasers came from within DuPage County, which could be indicative of the many boating opportunities in the broader area. (Reference Zip Code Analysis for Private Boat Licenses)

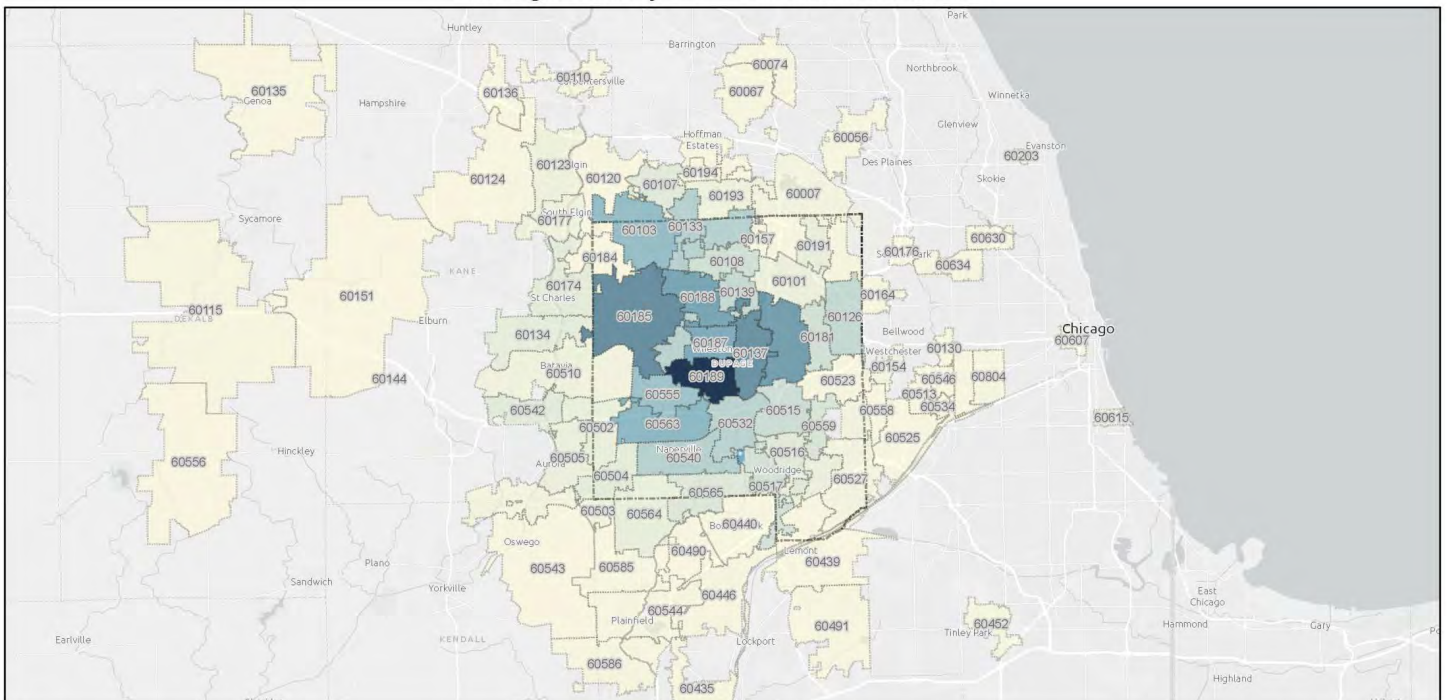
Competitive Context – Shelter Rental

There are a few key observations and variations between how shelter rentals are treated at FPDDC and its peers. Shelter rental fees are relatively varied and complex across the peers, which made comparing fees difficult.



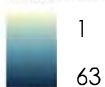
License Fee for Private Boat

DuPage County FP - Watercraft Permits



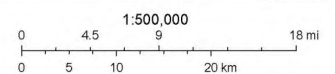
4/30/2021

Watercraft Permits Zip Codes



Geography Areas

Zip Code Analysis for Private Boat Licenses



City of Wheaton, County of DuPage, Esri Canada, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS

Observations

- Setting and quality of shelter matters, as do supporting amenities (parking lot, water, etc.)
- All forest preserve district competitors offer picnic shelter rentals
- Most park districts offer shelter rental

Variations

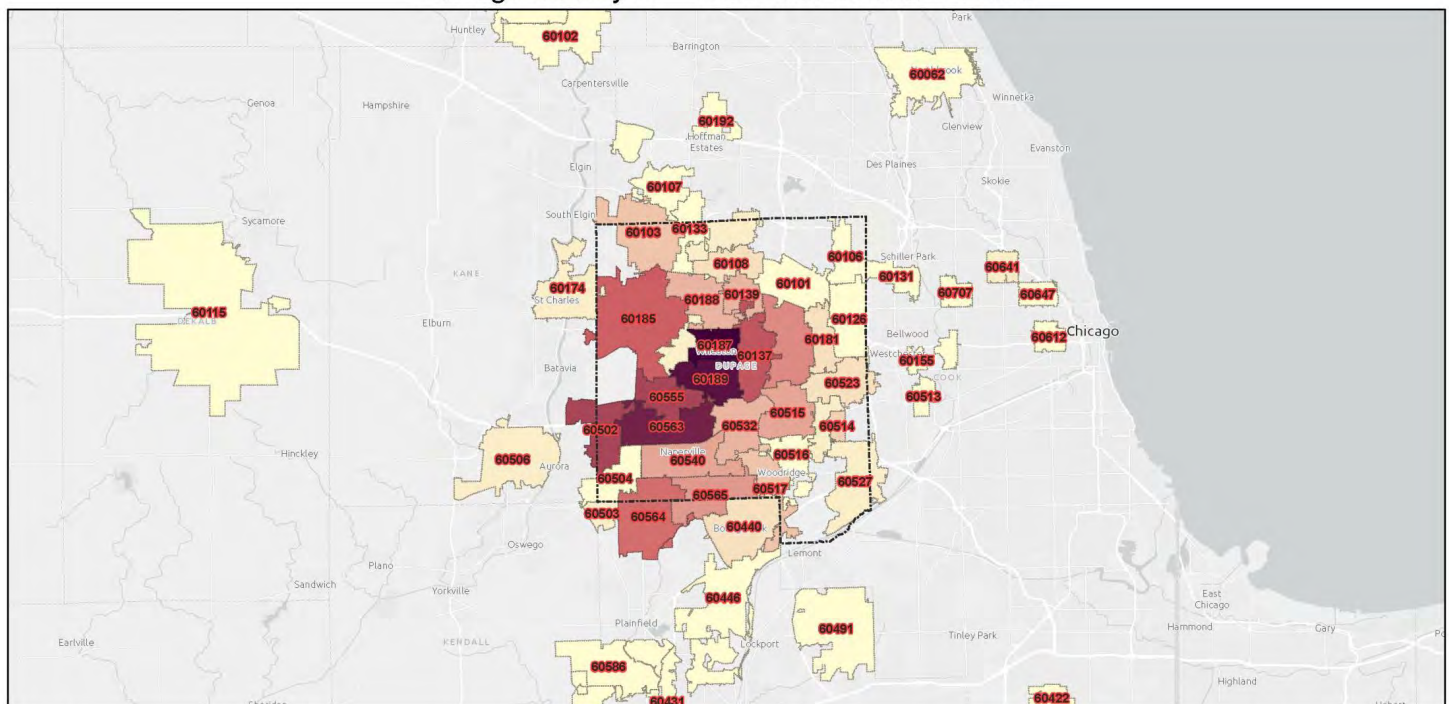
- Size and capacity varies widely
- Price differences based on size/capacity, time of year
- Overnight rental available in some forest preserves in conjunction with camp sites

FPDDC staff also provided data on the zip code origins of those purchasing shelter permits at Blackwell and Greene Valley Forest Preserves. As shown in the maps below, Blackwell shelter permit purchasers traveled a longer distance for their rental than purchasers at Greene Valley. (Reference Zip Code Analysis for Shelter Rental at Blackwell and Greene Valley)

Competitive Context – Volunteer Opportunities

There were a few key observations and variations between volunteer opportunities at FPDDC and its peers. Generally, each peer offers a similar type of volunteer experience, but with different specific offerings and programs.

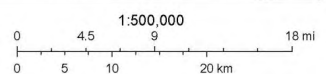
DuPage County FP - Blackwell Shelter Permits



4/19/2021

Geography Areas

Blackwell Shelter Zip Codes

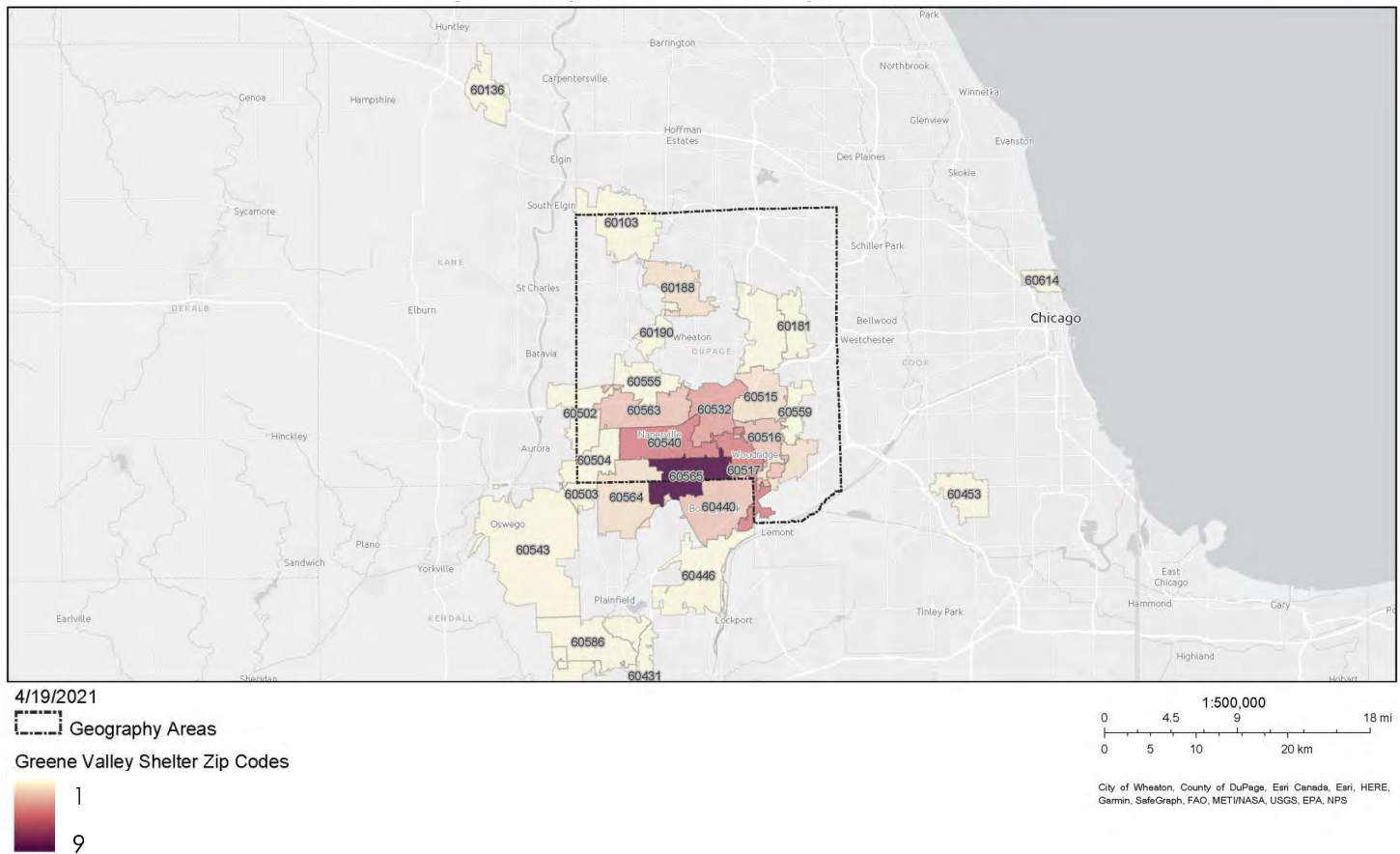


City of Wheaton, County of DuPage, Esri Canada, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS

Zip Code Analysis for Shelter Rental at Blackwell

PEER BENCHMARKING

DuPage County FP Greene Valley Shelter Permits



Zip Code Analysis for Shelter Rental at Greene Valley

Observations

- Volunteer opportunities are available at all forest preserve and park districts

Variations

- Different types of opportunities are available. Examples: conservation volunteers, research, visitor services, youth/scout volunteers, corporate volunteer groups, special events, nature/trail monitors, nature ambassadors, litter clean-up, volunteer leadership

Competitive Context – Indoor Facility Rental

There were few key observations and variations between indoor rental facilities at FPDDC and its peers, which are documented below. While most peers offer rental space, the quality, quantity and amenities offered vary widely.

Observations

- Most forest preserve and park districts offer indoor facility rental
- There is a distinction between facilities for room rentals and wedding/corporate event spaces

Variations

- There is a lot of variation in the indoor and outdoor spaces available for large events such as weddings
- Some have recreation center and pool rentals
- Some offer overnight facility rental
- There is variation in the availability of associated amenities such as catering, kitchen, etc.

Competitive Context – Youth Programming

There were a few key observations and variations between youth programming offerings at FPDDC and its peers. Some of FPDDC's peers offer much more robust childcare options such as preschool, which may not be mission aligned for FPDDC.

Observations

- Park districts tend to offer more robust childcare programs than forest preserve districts
- Forest preserve districts offer more nature-based classes
- Both forest preserve and park districts offer school group programs

Variations

- Programming aimed at children ranges broadly, encompassing kids summer camps, day-off programs, preschool, skill camps and others
- Some offer organized group events such as birthday parties or scouts programming
- The cost for programming varies widely based on offering

3 COMPETITIVE CONTEXT FOR BLACKWELL

The FPDDC County operates several fee-based programs at the Blackwell Forest Preserve. FPDDC staff were interested in learning more about the competitive context for these programs, as several of the offerings are also available at other public and private entities in the area. Specifically, staff were interested in learning whether the programs offered at Blackwell were comparable in cost to other programs in the area, and wanted to learn more about the other offerings. FPDDC staff also have an interest in exploring options for concessionaires to potentially run some of the fee-based programs at Blackwell. This topic is addressed in this section. It is addressed in more depth for types of potential FPDDC programmatic offerings in the program gaps section of this market analysis.

The fee-based programs offered at Blackwell that were analyzed include the following: Boat Rental, Archery, Off-Leash Dog Park, Family Camping, Youth Group Camping, Snow Tubing and Snowshoe Rental. For each program, the competitors were determined to be all offerings within a 20-to-50-mile radius from Blackwell, depending on an estimate of how far people would be willing to travel for each offering.

FAMILY CAMPING

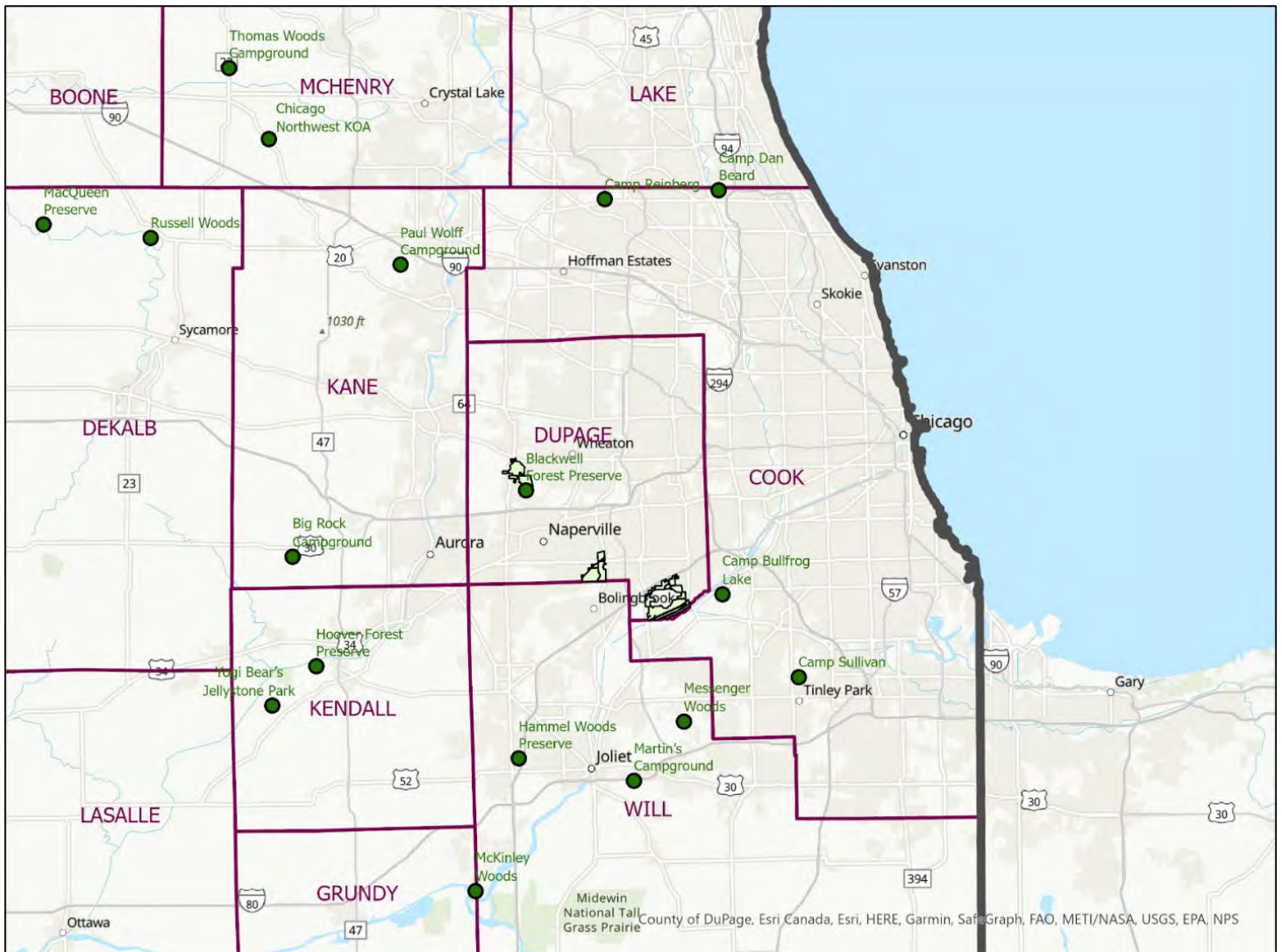
Blackwell Forest Preserve offers family camping opportunities for tents, trailers or motor homes from May to September on weekends and extended holidays. The sites have electricity, a gravel parking pad, fire ring and picnic table, but no sewage or water hookups. The project team identified other family camping options within a 50-mile radius of the Blackwell Forest Preserve.

Family camping was defined as any camping opportunity that is available to the general public (in contrast to camping only available to organized groups/youth groups). The list of competitors is identified below and mapped on the next page:

- Camp Bullfrog Lake - FP Cook County
- Camp Dan Beard - FP Cook County
- Camp Reinberg - FP Cook County
- Camp Sullivan - FP Cook County
- MacQueen - DeKalb County FPD
- Big Rock Campground - FPD Kane County
- Paul Wolff Campground – FPD Kane County
- Hammel Woods – FPD Will County
- McKinley Woods – FPD Will County
- Messenger Woods – FPD Will County
- Thomas Woods – McHenry County Conservation District
- Hoover Forest Preserve – Kendall County FPD
- Chicago Northwest KOA
- Yogi Bear's Jellystone Park
- Martin's Campground

Zip Code Analysis for Blackwell Family Camping

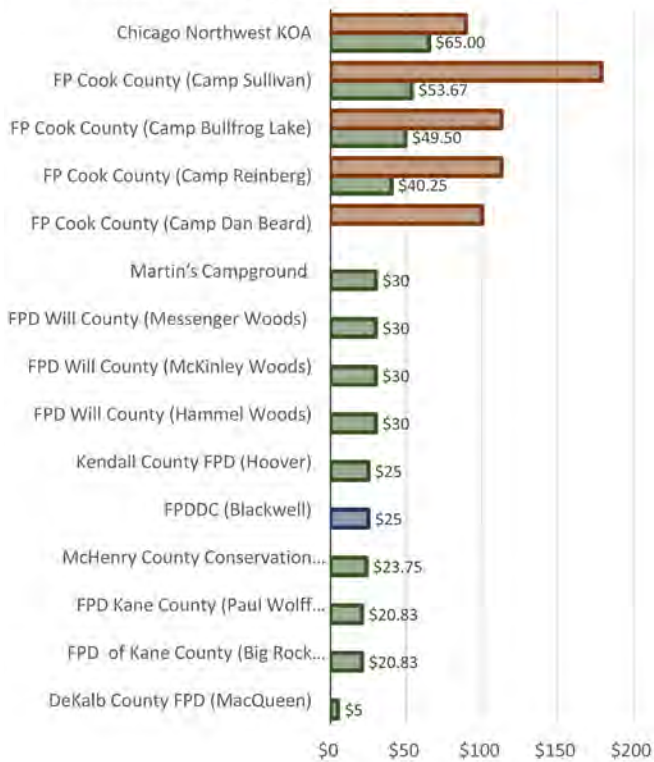
FPDDC staff also provided data on the number of permits pulled per zip code in the surrounding area. The zip code map indicates that most permits are obtained by DuPage County residents. This is perhaps due to the robust camping options in the broader area and is not necessarily a reflection on the quality of offering at Blackwell. (Reference Zip Code Analysis for Blackwell Family Camping)



Competitive Context for Family Camping

Forest Preserve District of DuPage County
Master Plans for Blackwell, Greene Valley, and Waterfall Glen | **DISCOVERY & ANALYSIS**

Family Campground Fees per Night



Family Campground Fees per Night

Observations:

- Most forest preserve districts have family camping
- Blackwell offers high quality facilities and unique settings
- Rules around alcohol and coming/leaving are common

Variations:

- Availability of cabin/bunkhouse structures
- Year round (including winter) camping
- Camp Sullivan features a red barn with a climbing wall

YOUTH GROUP CAMPING

Youth group camping options were selected within a 50-mile radius of the Blackwell Forest Preserve. Youth group was defined as camping opportunities available only to organized groups, including youth groups. The list of competitors is identified and mapped below:

- Camp Bullfrog Lake - FP Cook County
- Camp Dan Beard - FP Cook County
- Camp Reinberg - FP Cook County
- Camp Sullivan - FP Cook County
- MacQueen - DeKalb County FPD
- Russell Woods - DeKalb County FPD
- Camp Tomo Chi-Chi Knolls - FPD Kane County
- Leroy Oakes - FPD Kane County
- Hammel Woods - FPD Will County
- McKinley Woods - FPD Will County
- Hickory Creek - FPD Will County
- Marengo Ridge - McHenry County Conservation District
- Hickory Grove - McHenry County Conservation District
- The Hollows - McHenry County Conservation District
- Hoover Forest Preserve - Kendall County FPD
- Fox Rover Forest Preserve - Lake County FP

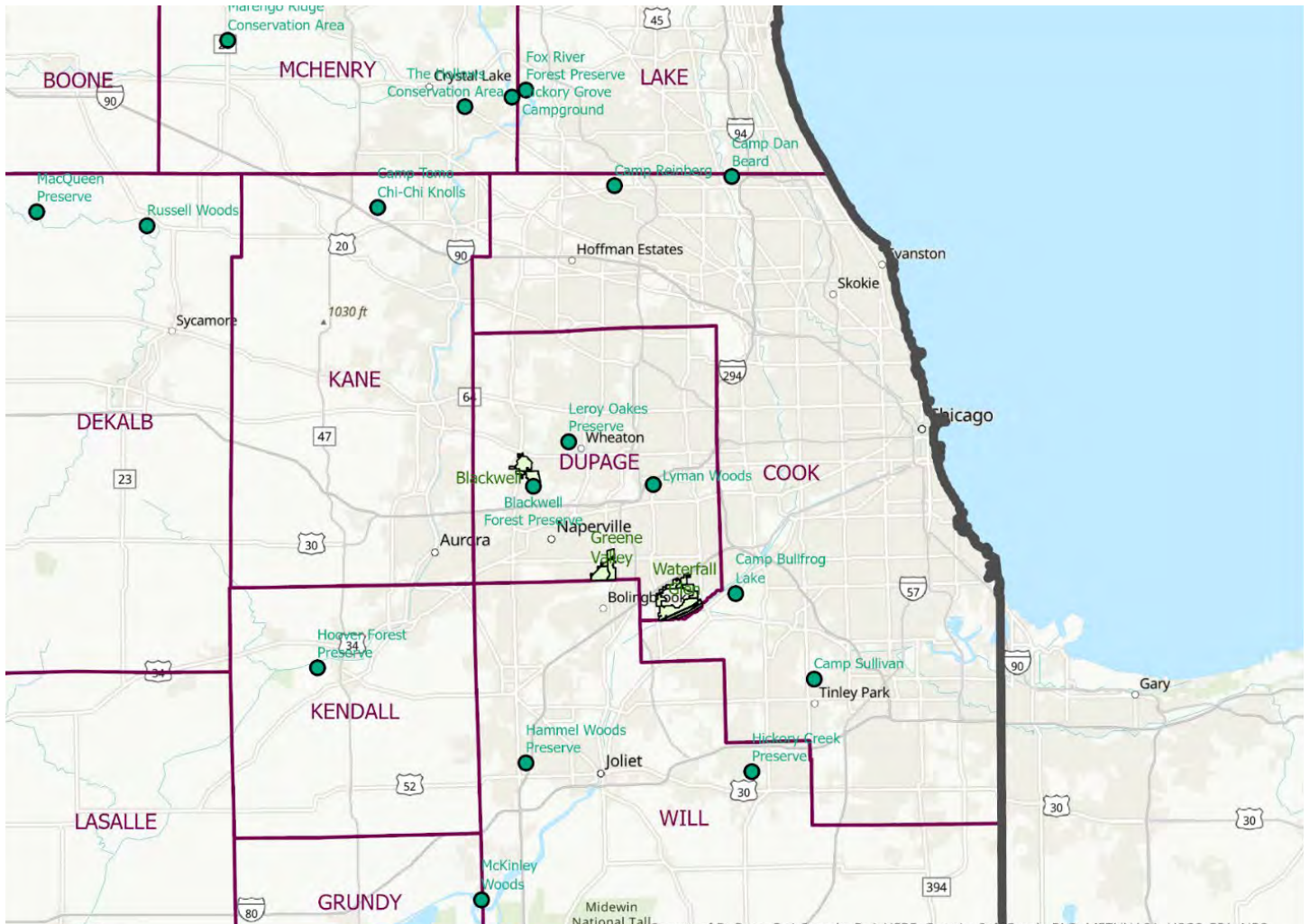
Competitive Context for Youth Group Camping

Blackwell offers exclusively youth group camping opportunities in their group campsites, so the project team tracked fees for other FPD competitors also offering youth camping, as shown in the table below. Generally, FPDDC County is cost competitive, and has far more offerings than other forest preserve districts.

Forest Preserve Districts Offering Group Camping Exclusive to Youth Groups				
	Offered At	Capacity	Cost for Residents	Cost for Non-Residents
FPDDC	Blackwell Churchill Woods Greene Valley Herrick Lake Pratt's Wayne Woods Waterfall Glen	25 to 100 campers	\$25 to \$100	\$30 to \$120
FPD Kane County	Camp Tomo Chi-Chi Knolls Leroy Oakes	25 campers	\$25	\$50
Lake County FPs	Fox River	40 to 60 campers	\$60	\$120

Group Camping Exclusive

COMPETITIVE CONTEXT FOR BLACKWELL



Competitive Context for Youth Camping

Observations:

- At most competitor sites, group camping is not restricted to youth groups
- There is wide variation in group camping facilities—from traditional campsites, to shelters/bunkhouses, to full-fledged camps that operate within preserves
- Units of rental vary—by tent, by group site, by structure, by entire camp

- FPDDC offers far more youth camping sites than others do

Variations:

- In FPD Will County, youth group camping gets a 50% discount, has option to book a naturalist-led program
- Additional groups that use group camping facilities at other locations: larger family groups,

clubs, other organizations

- Group campsites can be branded with special features such as horseshoe pits, volleyball, isolation, family size grill, etc.

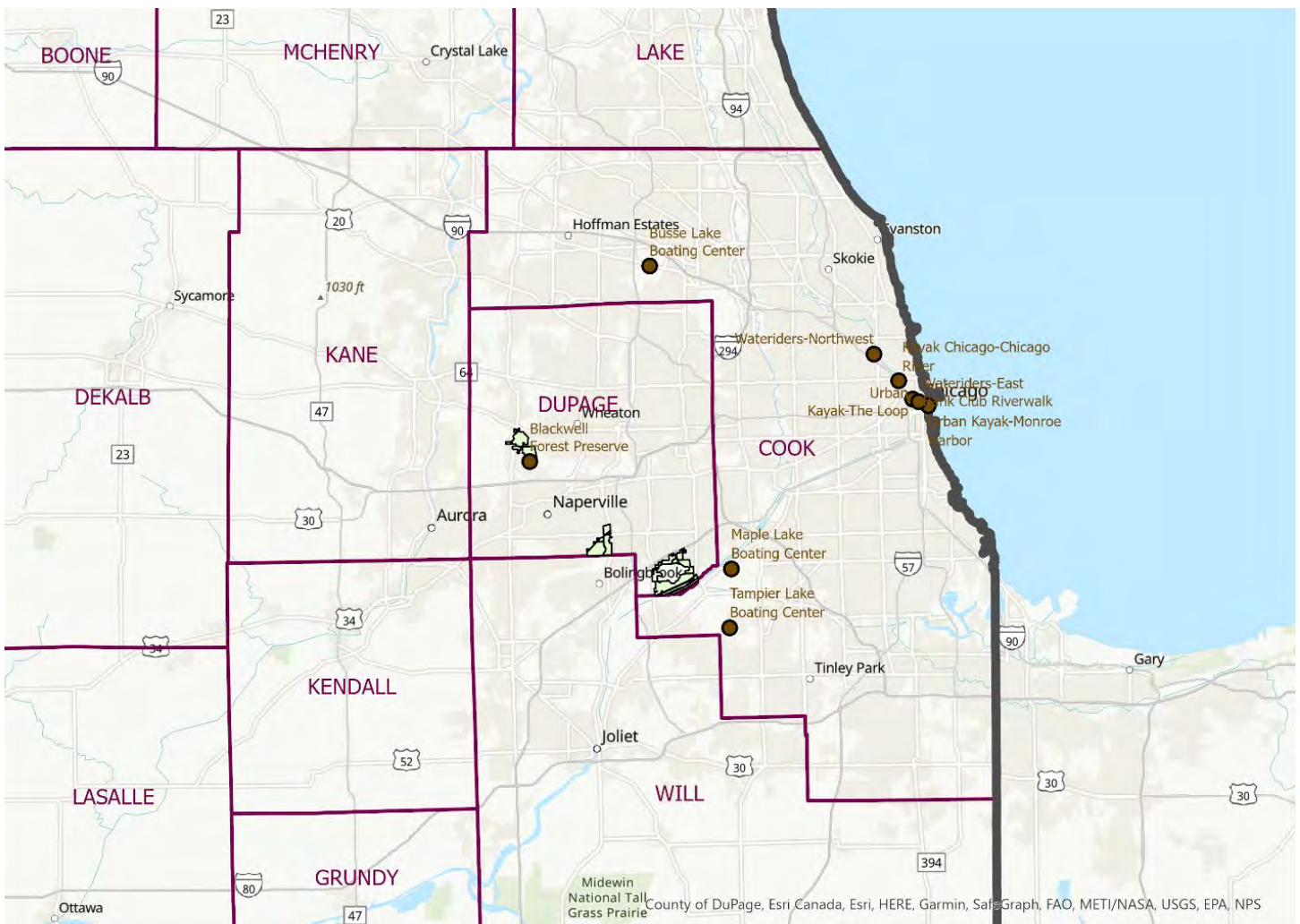
CANOE/KAYAK RENTAL

Blackwell Forest Preserve offers rowboat, kayak, and canoe rentals from early April through the end of September. There are several other private and public competitors who also offer canoe/kayak/boat rentals throughout the Chicago metropolitan area. It is estimated that the average person might travel up to 30 miles for canoe/kayak rental, given the number of other offerings in the area, and therefore researched and mapped competitors are within a 30-mile radius of Blackwell. The list of competitors analyzed are the following:

- Busse Lake Boating Center - FPD Cook County
- Maple Lake Boating Center - FPD Cook County
- Tampier Lake Boating Center - FPD Cook County
- Kayak Chicago – Chicago River
- Wateriders – East Bank Club Riverwalk
- Wateriders – Northwest
- Urban Kayak – The Loop
- Urban Kayak – Monroe Harbor

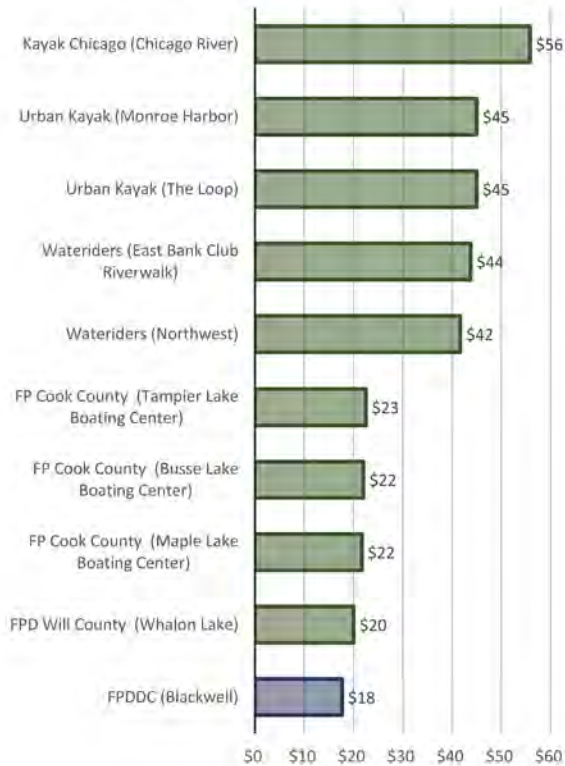
Competitive Context for Canoe/Kayak Rental

Of all the competitors within a 30-mile radius, FPDDC offered the least expensive boat rentals. The private competitors offered the most expensive, but also the most robust offerings for tours, etc. This can be seen in the fee chart on the next page.



COMPETITIVE CONTEXT FOR BLACKWELL

Boat Rental Fees Per Hour



Boat Rental Fees Per Hour

Observations

- There are few nearby competitors. The closest alternatives are in Cook and Will Counties
- There are several options for boat rentals in Central Chicago waterfront locations
- River canoeing/kayaking options are available with shuttles

Variations

- Naperville Kayak operates the kayak rental program through a concessions license at the Whalon Lake Forest Preserve

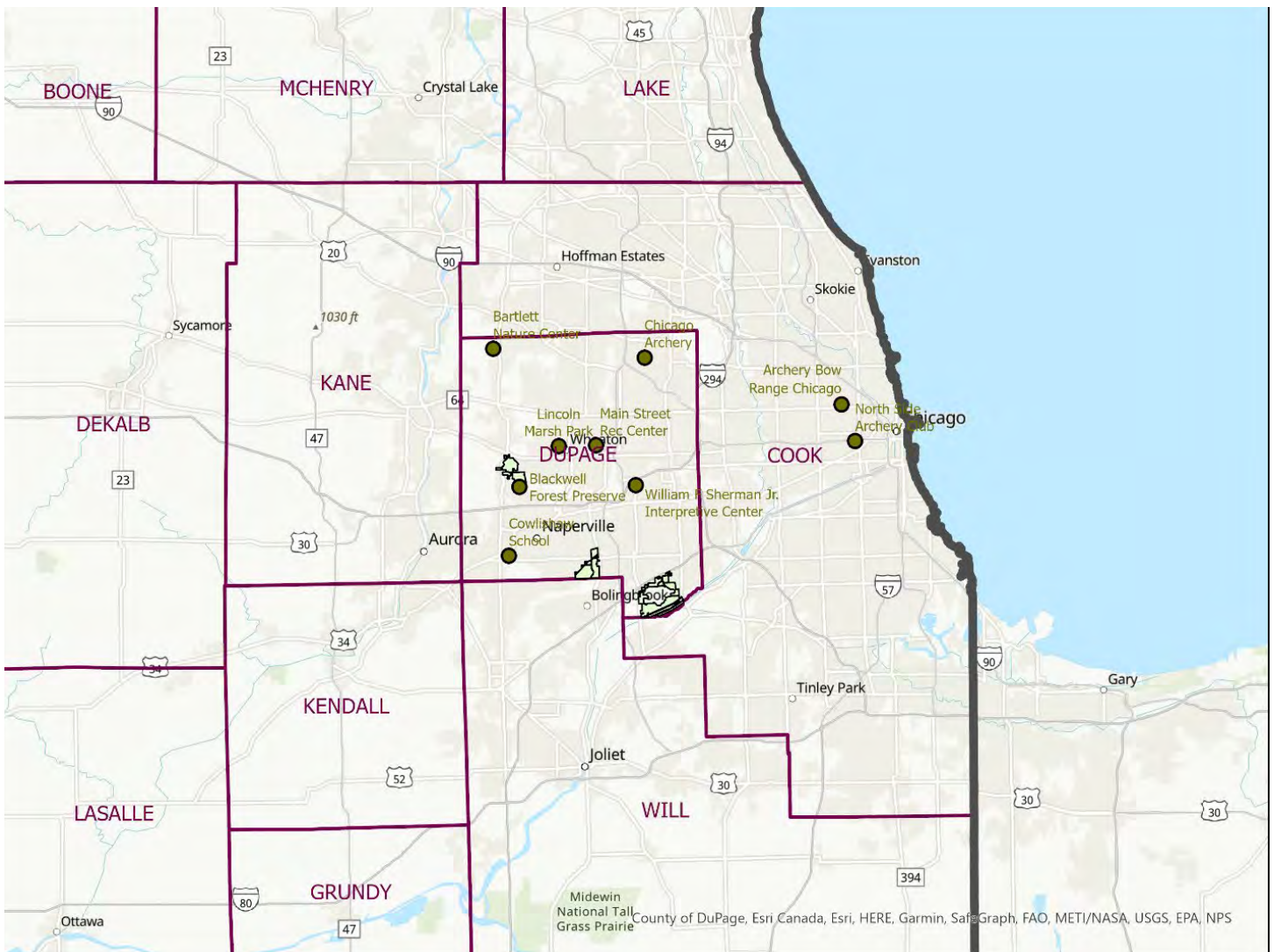
ARCHERY

The FPDDC offers archery at Blackwell Forest Preserve including beginner, advanced and interactive ranges. The District also offers various group and class opportunities, although typically individuals bring their own gear. Similar to boat rental, it is estimated that the competitive context for archery is about 30-miles, and there are a number of public and private entities that provide archery within that distance from Blackwell. The list of local competitors is shown and mapped below:

- Bartlett Nature Center – Bartlett PD
- William F. Sherman Jr. Interpretive Center – Downers Grove PD
- Main St. Rec Center – Glen Ellyn PD
- Cowlshaw School – Naperville PD
- Lincoln Marsh – Wheaton PD
- Chicago Archery
- North Side Archery Club
- Archery Bow Range

Competitive Context for Archery

FPDDC staff also provided a list of the zip code origins of those purchasing archery permits. The map on the next page shows that while the highest concentration of permit purchasers resides within DuPage County, the area from which people travel to practice archery at Blackwell expands well beyond the county boundaries throughout the entire Chicago metropolitan area. This could indicate that the offering at Blackwell is high quality, and people are willing to travel a longer distance to practice archery. It could also indicate that there are few options for archery within the Chicago metropolitan area, but high demand. (Reference Competitive Context for Archery)



Competitive Context for Archery

Zip Code Analysis for Archery

The competitive context for archery is relatively complex, with some locations only offering classes, and others offering only range-time. Some locations offer group and corporate archery events. Due to these factors, doing an apples-to-apples comparison of fees is difficult. However, in looking at range time in the chart below, we can tell that Blackwell is relatively price-competitive with other locations offering range time. Given the demand for permits, the DuPage county staff might even think about increasing the permit cost to be more comparable with competitors. (Reference Zip Code Analysis for Archery and Archery Venues Chart)

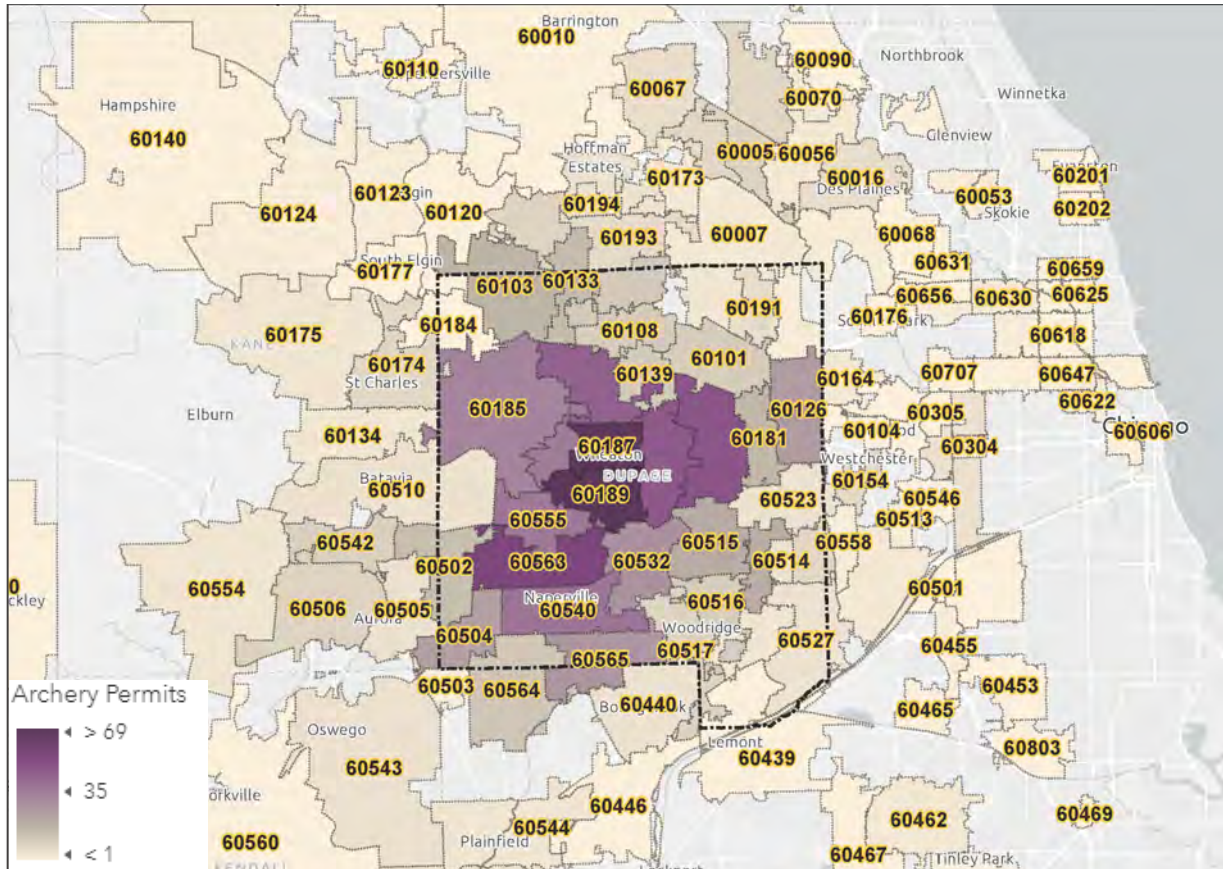
Observations

- High quality facilities at Blackwell
- Many of the alternative locations offer classes, but not open shooting
- Chicago Archery is the closest competitor in regard to the programs that are offered

Variations

- The range of services associated with archery includes classes, private lessons, birthday parties and team building events, and hosting archery leagues
- A concessions arrangement at within the Forest Preserves might be a way to introduce classes, leagues

COMPETITIVE CONTEXT FOR BLACKWELL



Zip Code Analysis for Archery

OFF-LEASH DOG PARK

The Blackwell Forest Preserve has a fully fenced off-leash dog park, and a permit is required for each individual dog. The offering at Blackwell is 10 acres and is open from one hour after sunrise until one hour after sunset. Given the prevalence of off-leash dog parks, it was determined that the competitive context is about a 20-mile radius from Blackwell. There are several public dog parks operated by forest preserve and park districts within that radius which are listed and mapped on the next page:

- James O. Breen Community Dog Park – St. Charles PD
- Riverbend Community Park – St. Charles PD
- Reed-Keppler Park – West Chicago PD
- Whalon Dog Park – FPD Will County
- Bark Park – Carol Stream PD
- Spring Ave Dog Park – Glen Ellyn PD
- Lincoln Park Dog Park – Fox Valley PD
- Gregory Island Dog Park – Fox Valley PD
- Stuart Sports Complex Dog Park – Fox Valley PD
- Phillips Dog Park – Aurora PD

- East Side Sports Complex – St. Charles PD

Archery Venues	
Venue	Pricing for Range Time
Blackwell Forest Preserve	Permits for residents: \$5/day, \$30 per year Permits for non-residents: \$10/day, \$50 per year
Chicago Archery	Range time: \$12/hour
North Side Archery Club	Basic membership: \$50/year + \$5/hour range time. Deluxe membership: \$100/year, includes range time
Archery Bow Range Chicago	Range time: \$10/hour
Bartlett Nature Center, Bartlett Park District	Classes Only
Sherman Jr. Interpretive Center, Downers Grove Park District	Classes Only
Main St Rec Center, Glen Ellyn Park District	Classes Only
Cowlshaw School, Naperville Park District	Classes Only
Lincoln Marsh, Wheaton Park District	Classes Only

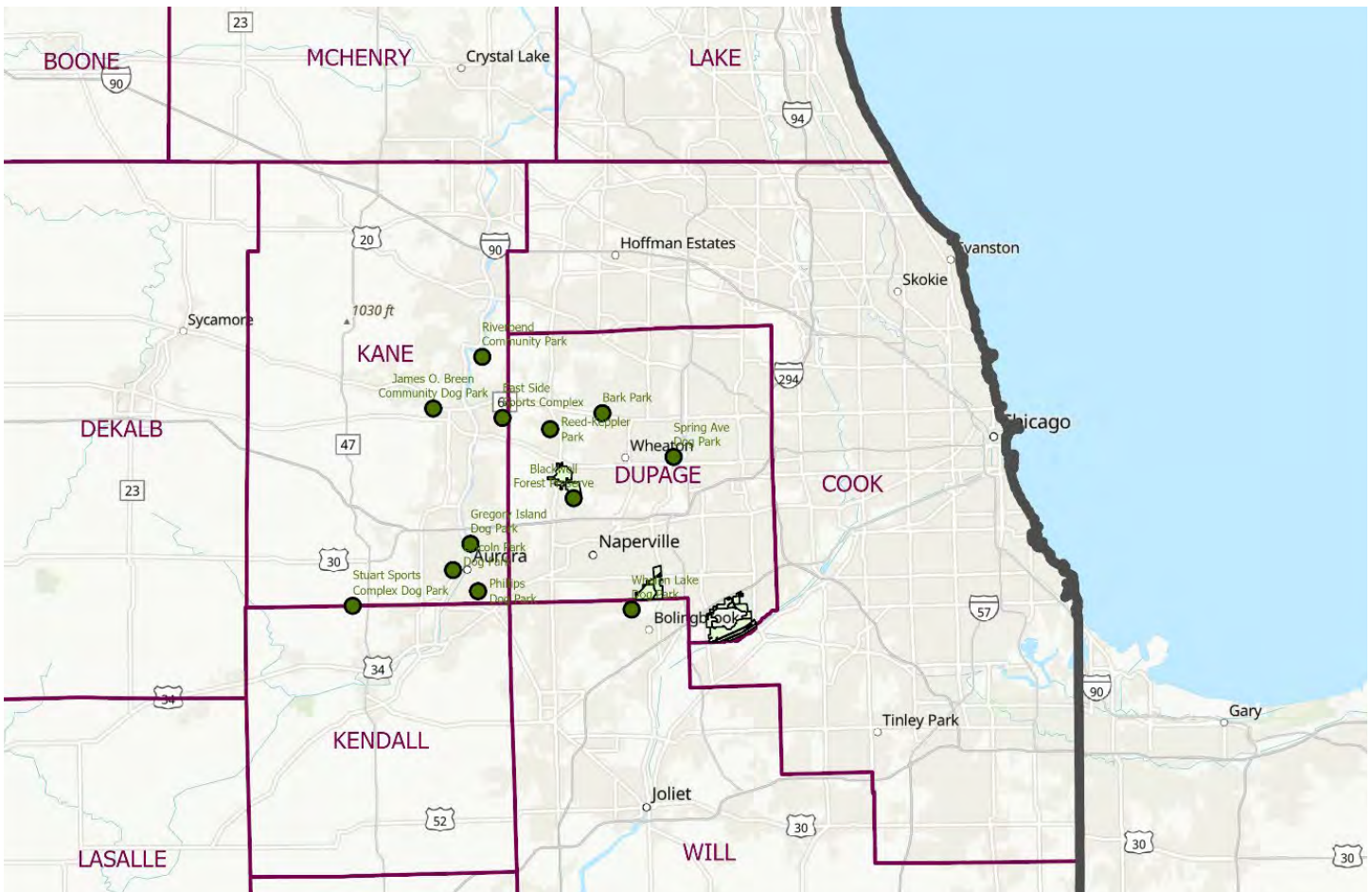
Archery Venues Chart

Competitive Context for Off-Leash Dog Parks

FPDDC staff provided a list of the zip code origins of those purchasing off-leash dog park permits, which is shown in the map on the next page. One can see that most dog park users reside in DuPage County, with a small number coming from the surrounding counties.

Zip Code Analysis for Off-Leash Dog Parks

The FPDDC dog park is relatively high cost when compared with other forest preserve and park districts, as shown in the chart below. However, discounts are offered in a number of situations such as more than one dog, seniors, active military and veterans, and annual permits are prorated when purchased after September. The dog park



Competitive Context for Off-Leash Dog Parks

COMPETITIVE CONTEXT FOR BLACKWELL

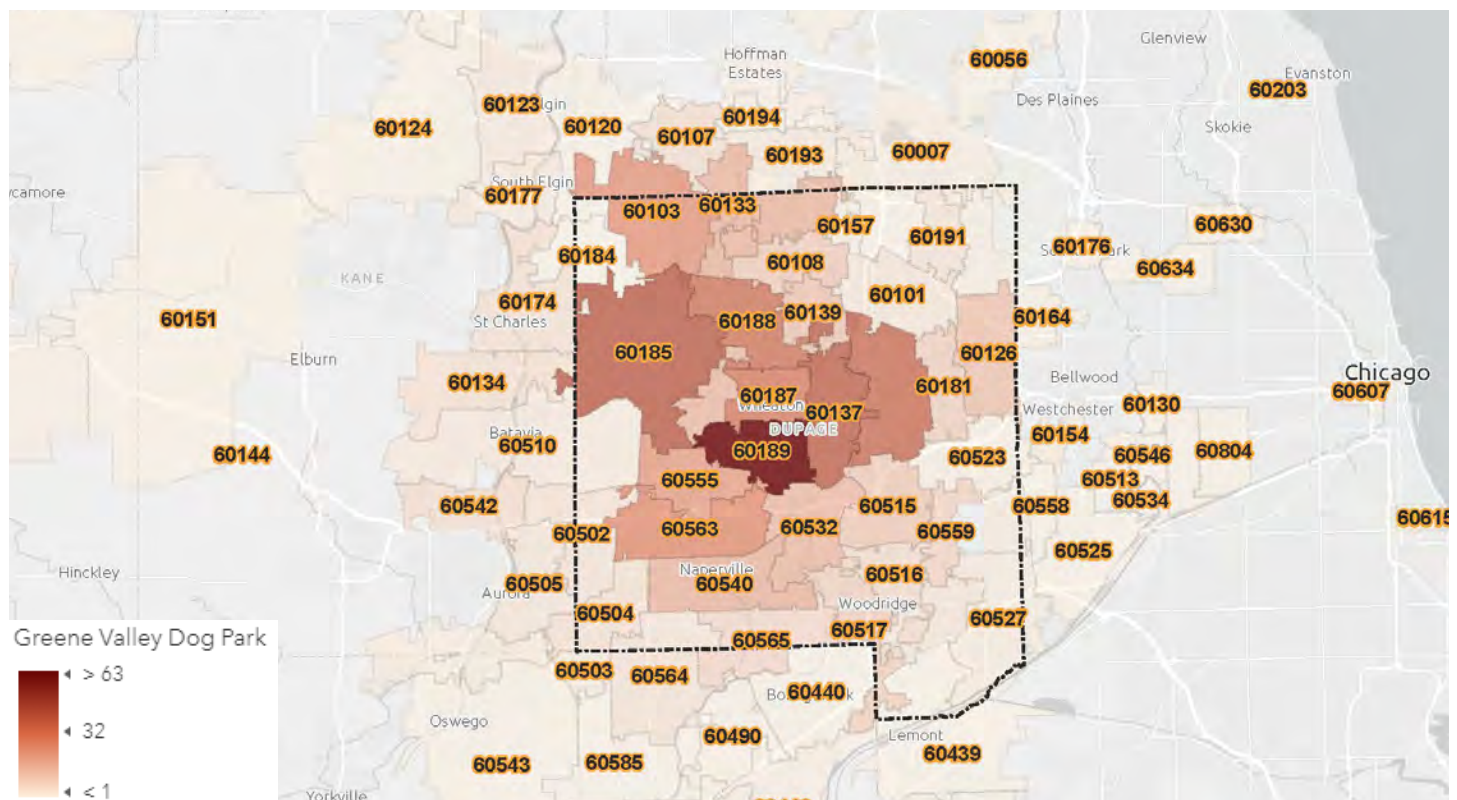
also offers a variety of amenities such as waste bags and a large area for the dogs to play and owners to walk.

Observations

- There are many opportunities at competing sites for off-leash dogs to frolic. But few are large enough to support going for a walk with an off-leash dog
- Dog parks at Stuart Sports Complex (Fox Valley PD) and Whalon Lake (FPD Will County) are comparable in size

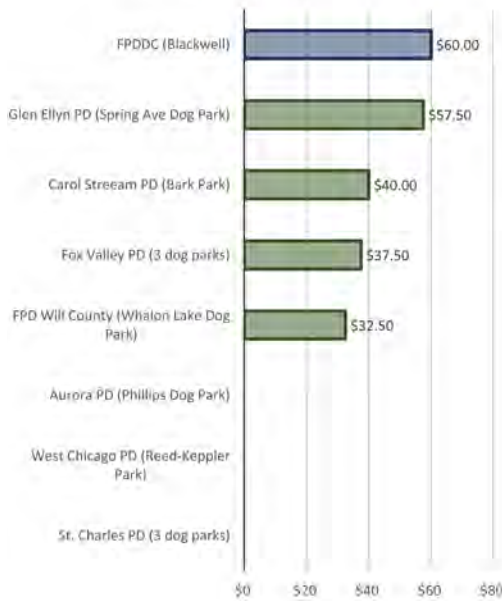
Variations

- Some offer separate areas for small dogs
- Spring Avenue Dog Park (Glen Ellyn PD) has picnic area within dog park
- Riverbend Community Park (St. Charles PD) offers water fountain in lieu of other access to water



Zip Code Analysis for Off-Leash Dog Parks

Off-Leash Dog Park Fee per Year



Off-Leash Dog Park Fee per Year

SNOW TUBING

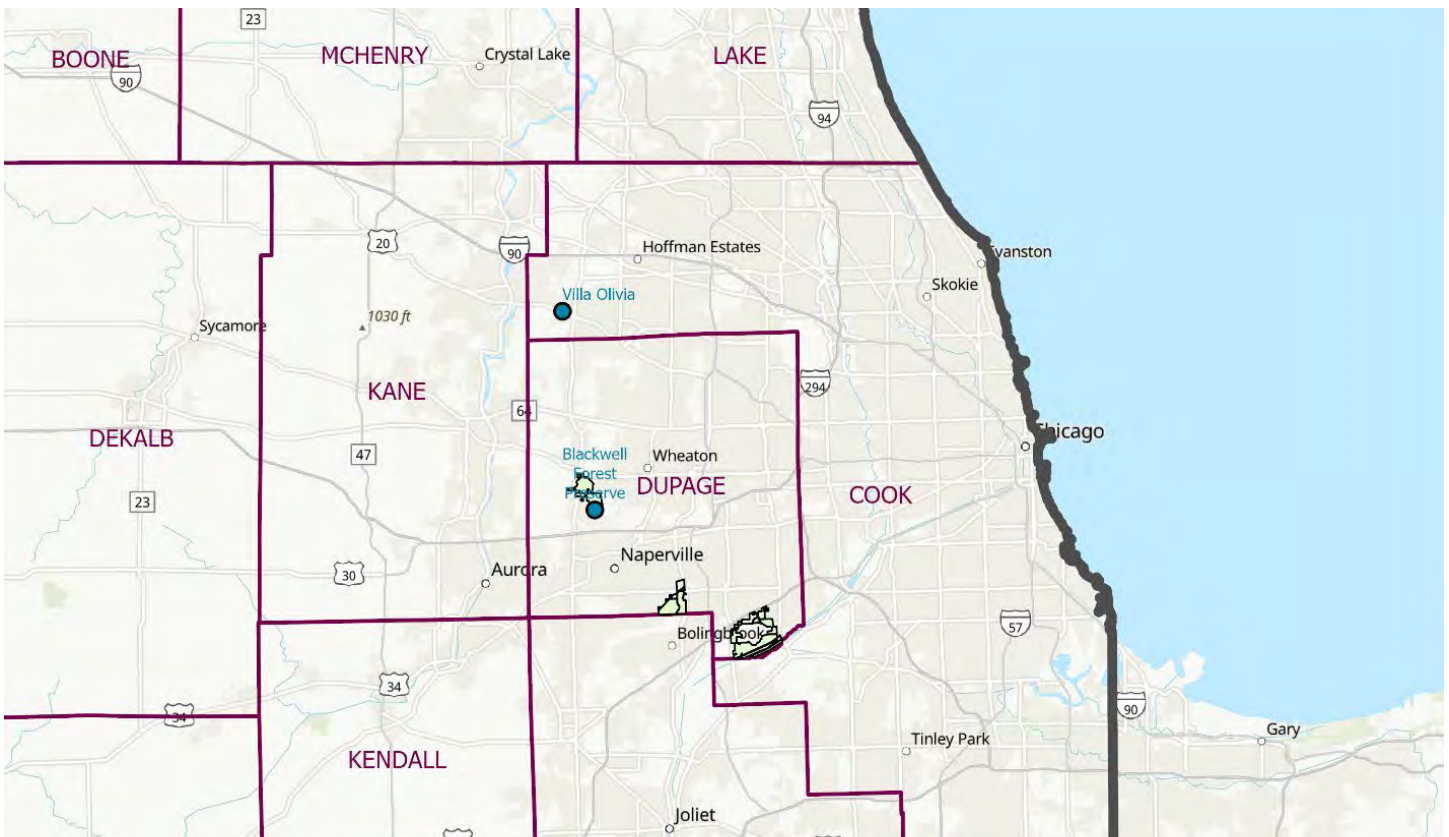
Several of the other preserves and park districts have sledding hills, but Blackwell Forest Preserve is unique in offering snow tube rentals.

Competitive Context for Snow Tubing

Snow tube rental at Villa Olivia is significantly more expensive than at Blackwell Forest Preserve. It also offers a conveyor lift and night tubing, which are not available at Blackwell. There were several key observations, and variations between the two snow tubing options in the area.

Observations

- Snow tubing is a unique feature. There is only one other fee-based snow tubing hill in 30-mile radius



Competitive Context for Snow Tubing

COMPETITIVE CONTEXT FOR BLACKWELL

- The fire pit with benches is a nice amenity at Blackwell

Variations

- Villa Olivia uses a conveyor lift, and offers night tubing until 10:00 p.m.



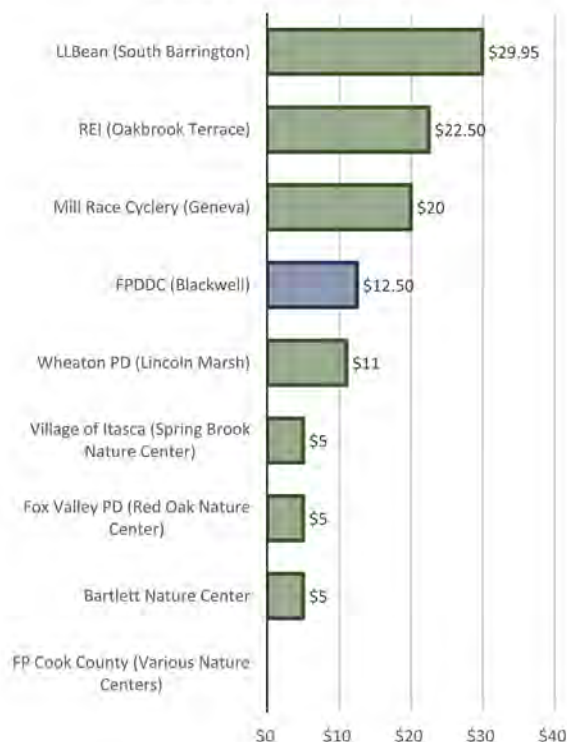
Snow Tubing Fee

SNOWSHOE RENTAL

In addition to snow tube rental, Blackwell also offers snowshoe rental during the winter months. Snowshoe rental is open on the weekends and school holidays when there is plenty of snow. There are several competitors, both public and private, that offer snowshoe rental within a 20-mile radius of Blackwell, as shown:

- Various Nature Centers - FPD Cook County
- Bartlett Nature Center - Bartlett PD
- Red Oak Nature Center - Fox Valley PD
- Visitor Center - Morton Arboretum
- Spring Brook Nature Center - Village of Itasca
- Lincoln Marsh - Wheaton PD
- REI - Oakbrook Terrace
- LL Bean - South Barrington
- Mill Race Cyclery - Geneva

Snowshoe Rental Fee



Snowshoe Rental Fee

Competitive Context for Snowshoe Rental

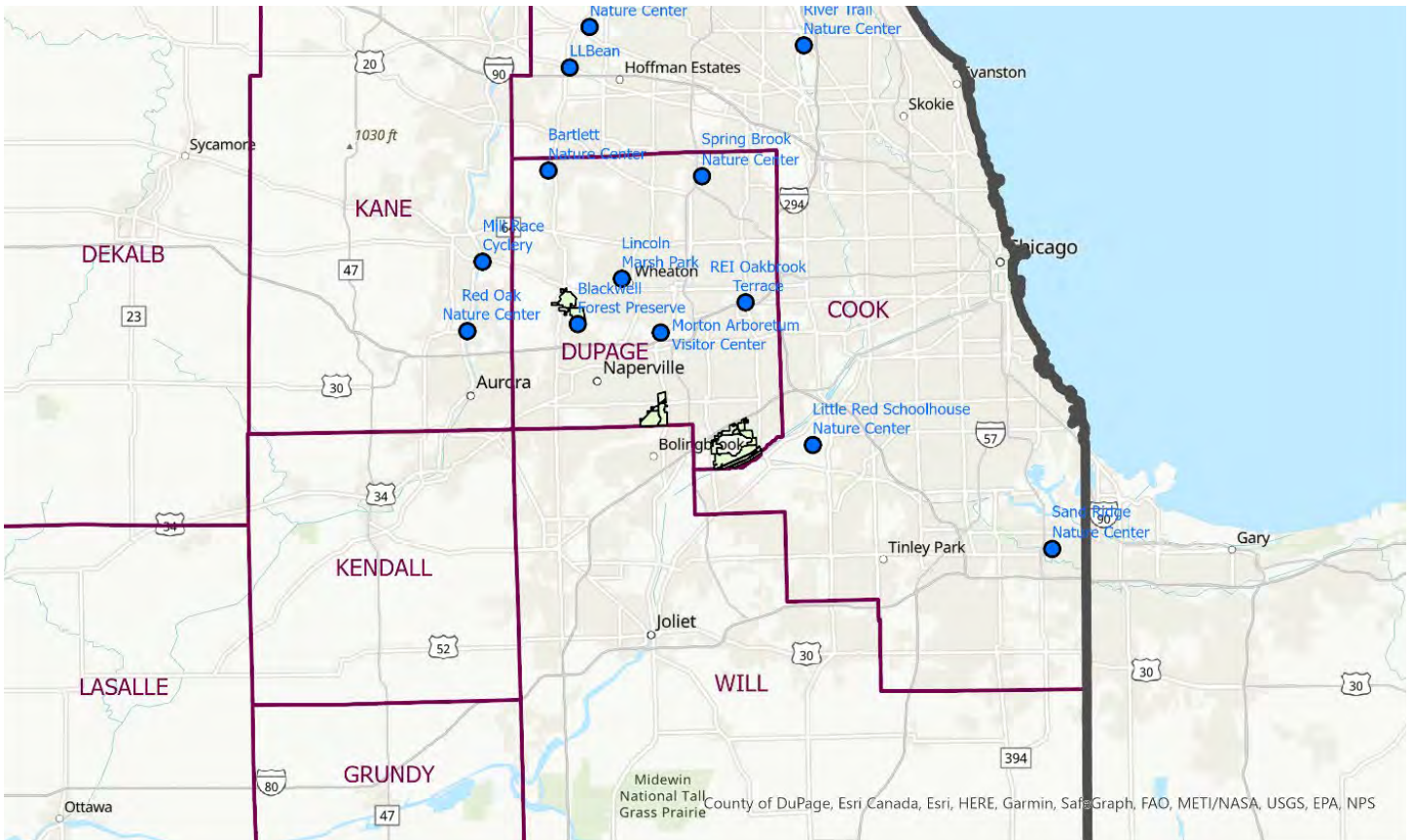
Blackwell Forest Preserve falls in the middle of the cost range for snowshoe rental. It is less expensive than the private operators, but more expensive than its public competitors.

Observations

- Most forest preserve districts don't offer snowshoe rental
- Private providers (REI, LL Bean) rent snowshoes, but don't have access to trails
- FP Cook County and Park Districts have the most comparable snowshoe rental programs

Variations

- Some restrict rentals when snow is insufficient
- Morton Arboretum utilizes a third-party vendor
- Bartlett Nature Center offers a snowshoe, fire & smores event for up to 10 people



Competitive Context for Snowshoe

4 PROGRAM GAPS

GAP ANALYSIS

INTRODUCTION

Based on the peer benchmarking exercise, and consultation with FPDDC staff, two gaps in current Preserve District programming were identified that merited further exploration. The first of these is the opportunity for adding any of a whole range of food and beverage offerings in the Forest Preserves. The second is the potential for a bike share program.

In each of these programming areas, additional information was developed to supplement information gathered in the peer benchmarking exercise.

FOOD & BEVERAGE IN PARKS

Many park and preserve organizations in the United States have introduced food and beverage activities in conducive locations in their properties. Food and beverage offerings can bring people into the parks who might otherwise be less likely to come. They can give existing visitors reasons to visit more frequently or linger at the preserve. It can build support for the Forest Preserves and its mission by strengthening emotional attachments to the preserves.

Food and beverage venues in parks and preserves fits into a national trend toward experiential retail businesses, and activities that support social interaction. Food and beverage destinations are a growth category in an era where almost all other forms of traditional retail are being disrupted by technology and online commerce. Night-time use of open spaces, combined with commercial food and beverage outlets is also becoming more common in some cities.

From a financial perspective, a new food and beverage business may have the strongest potential for providing positive net revenues of any programming options that are under consideration by the Forest Preserve District.

There is a wide range of food and beverage uses that are used to enliven public spaces, and that would merit consideration by FPDDC. Those include farmer's markets, food truck days or events, ice cream or other specialty shops, cafés, food halls, and sit down restaurants. Each of these would invite engagement from a different constituency. Different locations within the DuPage preserves would likely be conducive for different food and beverage formats.

Food & Beverage Case Study: Riverwalk Café in Naperville

The Riverwalk Café in Naperville's Riverwalk Park is in a setting near downtown Naperville that can't be directly replicated in the Forest Preserve Districts. But it is a nearby example of a high quality eatery that is owned, operated and maintained by the Naperville Park District. It is open during regular hours seasonally, and intermittently on the weekends during winter during peak sledding times at Rotary Hill. The Café is open all year round for private rentals. The café offers both indoor and outdoor seating with a capacity of about 90 people and a patio overlooking the Riverwalk.

The Riverwalk Café in Naperville is a casual and quick restaurant that offers a variety of grab and go foods. The food offerings at the café are relatively simple, including hot and cold food such



Riverwalk Cafe at Riverwalk Park

as burgers, tacos, salads and wraps. The café also offers a variety of snacks and frozen treats, including a pet menu. Beverages offered at the café include a variety of beverages, including beer and wine. The park district has a liquor license that limits the consumption of alcoholic beverages to the premises of the establishment.

BIKE SHARE PROGRAMS

The FPDDC staff expressed a particular interest in investigating the prospect of a bike share program at the Forest Preserves. Bike share programs have numerous benefits. Making bikes available is consistent with wellness and sustainability goals that are typically held by park and forest preserve districts. Because not everyone owns their own bicycle, making bikes available through a bike

program improves the equitability of access to the preserves. They promote intergenerational and group activities. For example, a grandparent, grandchildren outing might bring children's bikes to the preserve, and grandparents may check out a ride share bike.

From an economic development perspective, bike share programs can add activity and vibrancy to an area. Administratively, a bike share program can be structured in a way that is hands-off for District staff.

To address this interest, a series of interviews with other entities currently providing bike share in the region were conducted. The objective of these interviews was to learn more about program

PROGRAM GAPS

administration, implementation and insights that could be helpful if FPDDC decided to pursue bike share at some of their preserves. There are a number of public and private entities surrounding DuPage County that offer bike share programs and bicycle rental. A representative in Lake County, both responsible for implementing and operating the bike share in their region offered their insights into their respective programs. Several best practices emerged from these conversations and are summarized below.

Implementation

- Getting a bikeshare program off the ground can be administratively challenging and requires a point-person or group to champion the effort.
- Most entities choose to contract with a concessionaire to avoid responsibility for staffing, liability, repairs and return of bikes.
- Bike share in suburban areas is a different offering than those offered in cities. As opposed to cities, bike share is used less for commuting and last-mile transportation purposes, and more for recreation and special use purposes. Examples of special use purposes could be bike share at a college or in a downtown area where

bikes would be more heavily used.

- Others in the area offering bike share include Kane County, McHenry County and Lake County.

Cost

- Bike share is unlikely to make money, especially in its infancy.
- With Koloni (a local concessionaire), the cost of bikes is a one-time fee of about \$3,800 per bike. The ongoing fee per year is about \$9,000.
- Bike share can be managed on an hourly basis, or set up in a membership format. The managing entity can customize their approach to bike sharing.
- Promo codes can be used to offer free rides during events or to get people out using the bike share.

Concessionaires

- Bike shares are most commonly managed and operated through a concessionaire.
- The two companies that are prevalent in the Chicago area are Zagster and Koloni (although Zagster may have recently gone out of



business).

- Koloni offers flexibility in how the system is set up, and only requires a minimum of 5 bikes in order to establish a program.
- Koloni also offers a geofenced area, as opposed to bike stations. For example, an entire forest preserve could be set up as a geofenced area, prohibiting bikes from leaving the area via GPS.
- The concessionaire provides the software and bikes, while partnering with a local bike store for maintenance and repairs and liability protection. The concessionaire can carry the liability insurance for an additional fee.

Partners

- Having partners that are willing to also do bike share in the area can be helpful. For example, in McHenry County, several cities and colleges partnered to get bike share in their respective locations.
- With multiple partners, each entity can help to cover some of the upfront and ongoing costs of operating a bike share program.
- Some partners such as county government and colleges have chosen to offer bike share for free to their employees or students. This requires students or employees to sign up with their work/school email address.
- The branding of the bicycles can be aligned with one of the partners, or the bikes can be branded individually.
- It is also beneficial for a lead organization in the partnership to handle contract administration for the partnership.

5 GREENE FARM BARN

FEASIBILITY OF GREENE FARM BARN AS A COMMERCIAL AND COMMUNITY USE DESTINATION

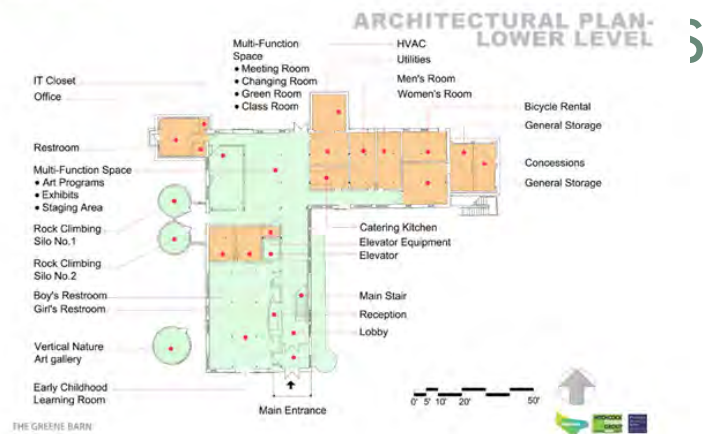
The Greene Farm Barn is an older picturesque barn building. It and its surrounding grounds are currently used for some events, but the facilities are limited and spartan. The Forest Preserve District has studied options for renovating the facility to become a mixed commercial and community use facility.

One of the key priorities of this Market Analysis is to deepen our understanding of the business potential of the Greene Farm Barn if it were renovated to serve the purposes described in the Greene Farm Barn Ad Hoc Committee's 2019 Greene Barn Recommendation report. In order to advance our understanding of the market viability of that concept, research was conducted on the competitive context for event space in the DuPage County area, and on other parameters related to the event space industry. Our assumption, borne out by our research, is that rental of the Greene Barn for event space would be the primary revenue generating use of the renovated building, and wedding events would represent the core of that financial program.

This research augments the 2019 Greene Barn Recommendations report by offering additional findings relative to the proposed business function of the barn, bearing on parameters such as:

- The depth of demand for event space at the renovated Greene Barn
- The approximate rents that could be charged
- Design requirements for the facility
- Potential operating models
- Operating costs

LOWER LEVEL



UPPER LEVEL



*Greene Farm Barn Architectural Plan Concept
from 2019 Greene Farm Barn Ad Hoc Committee
Recommendation*



Greene Farm Barn Outdoor Space Proposed by Ad Hoc Committee



Greene Farm Barn Aerial

GREENE FARM BARN

COMPETITIVE CONTEXT FOR EVENT SPACE IN THE GREATER DUPAGE COUNTY AREA

Competitive Context for Event Space in the Greater DuPage County Area

Event space is a niche product in real estate. Comparable/competitive venues are each somewhat unique in terms of design, location, amenities, and appeal, not to mention business and operating models. Many are on private land, and are operated commercially by the property owner, who would not have the same constraints as the publicly governed Forest Preserve District.

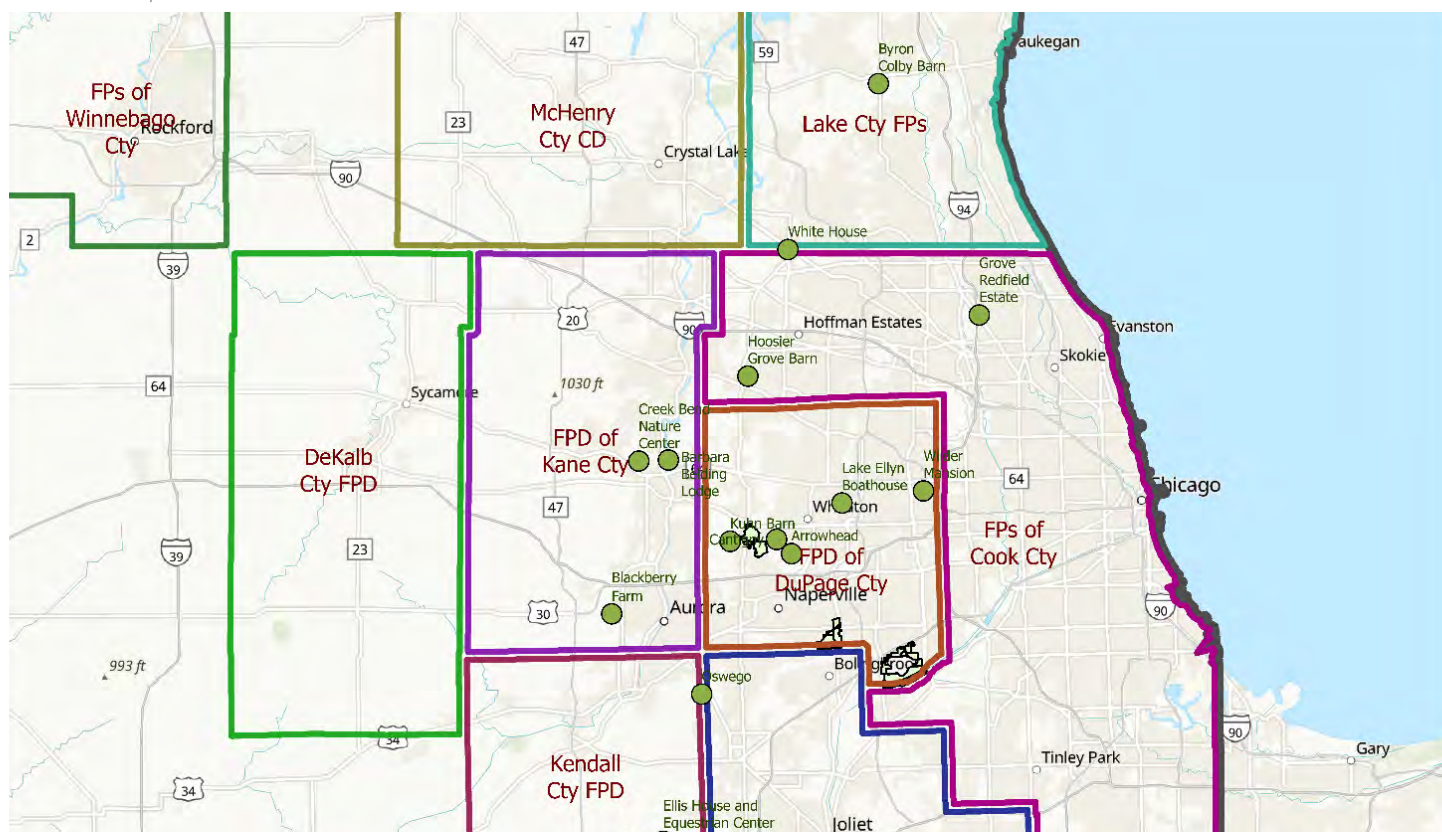
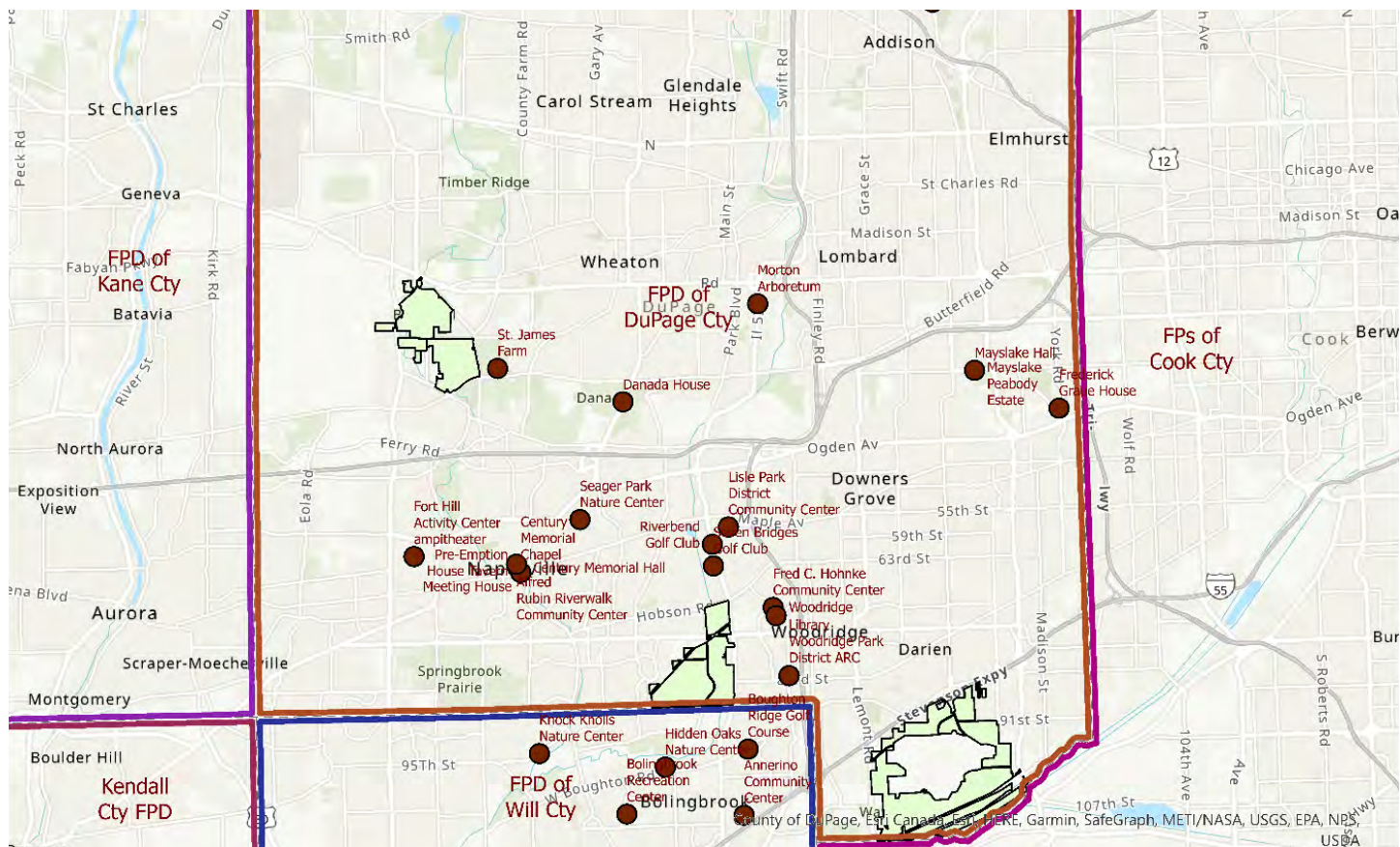
Information on locally comparable facilities was compiled through website reviews and phone interviews. We collected relevant images and plans, and anecdotal operating data on usage patterns, operating costs, capacity, and other parameters. These are summarized below. As it turns out, there are a number of similar facilities throughout the county, and they serve an important role.

For the analysis of comparables/competitors to Greene Farm Barn, event venues were analyzed that are in two tiers as suggested by FPDDC staff. The first tier are event venues that are nearby, but not necessarily providing facilities and amenities that are comparable to those proposed for the Greene Farm Barn. The second tier of venues analyzed are further from the Greene Farm Barn. The most comparable venues to the renovated

Greene Farm Barn are located some distance away from where the Greene Barn is located, which might be a benefit to the facility.

However, a countervailing finding (noted below) is the importance of nearby hotels and commercial activity nearby, because many guests will stay in nearby hotels and shuttle to the event. In the case of the Greene Barn, the closest cluster of hotels is a 10 minute drive to the south on Interstate 55.

Generally, each venue analyzed has an enclosed space to host events and most venues have either full kitchens or catering kitchens. Capacity of spaces range from 25 to 300, with some venues offering additional capacity outdoors, or for cocktail-style events. Prices ranged vastly and were generally handled differently for weddings than other types of events. Most event venues charged a set rate for Friday-Saturday weddings and wedding rentals provided between 6-12 hours of facility time. For other events, it is more common for the space to be rented on an hourly basis. Hourly rentals ranged from \$20 per hour to \$325 per hour. Other summary information related to cost, capacity, amenities and types of events hosted are noted in the tables on the following pages.



GREENE FARM BARN

Park District/ Forest Preserve District	Event Venue	Size	Capacity	Cost	Enclosed?	Kitchen?	Types of Events
Tier 1 - In Close Proximity							
	Danada House	5,777 SF (roughly)	250	\$1000 - \$5000/ 8 hrs, \$200 additional hours	Y	Y	social events, weddings, corporate
	St. James Farm (indoor riding arena)	N/A on website	45	\$150 - 200 / 2 hours, \$25 - \$50 additional hours	Y	Y (kitchenette)	meeting space within the indoor riding arena
	Mayslake Hall and Event Hall	N/A on website	100 120	Living Room/ F-Su: \$750 Event Hall – Sat: \$2500-3000 Misc. Spaces Weekday rental: \$75-500	Y	N	sit-down dinner only, not available for cocktail-style events. Also available for film television or commercial photo shoots.
	Portiuncula Chapel (at Mayslake Peabody Estate)	N/A on website	24 25-56 100	Interior: \$225-300 Interior: \$445-550 Exterior: \$575-750	Y	N	wedding ceremonies, baptisms, memorial services, other ceremonies
	Frederick Graue House	N/A on website	70*	\$750 / 4 hours, \$85 additional hours	Y	N	weddings or other events
	Maple Meadows Grill and Pub - Wood Dale	N/A on website	120	\$500 - \$2500 per 4 hour event	Y	Y	golf outings, social events, meetings
	The Preserve at Oak Meadows - Addison	17,355	180	\$800 - \$5,000 per 4 hour event	Y	Y	golf outings, social events, meetings
Naper Settlement	Century Memorial Chapel	3,500	175	N/A on website	Y	N*	weddings
	Century Memorial Hall	2,268	90	N/A on website	Y	Y	weddings, variety of events
	Meeting House	1,650	80	N/A on website	Y	Y	private business meetings, parties, special events
	Pre-Emption House Tavern	761	34	N/A on website	Y	Y	private business meetings, parties, special events
Woodridge Park District	Fred C. Hohnke Community Center	N/A on website	Smallest room: 25 Largest room: 200	\$35 - \$145 / hour	Y	N	meetings, birthday parties, bridal/baby showers
	Woodridge Park District ARC	N/A on website	Smallest room: 50 Largest room: 150	\$30 - \$145 / hour for room rental	Y	Y	room rentals and birthday parties, tournaments, large events
Bolingbrook Park District	Boughton Ridge Golf Course	N/A on website	80	N/A on website	Y	N	weddings, special events
	Annerino Community Center	N/A on website	25 - board room	\$60/ hour board room rental \$30 - \$75 / hour gym rental	Y	N	Gym events and meetings
	Bolingbrook Recreation and Aquatic Center	16,000 SF	N/A on website	\$20 - \$150 / hour	Y	N	Gym events, meetings, birthday parties etc
	Hidden Oaks Nature Center	N/A on website	40	\$ 50 - \$100 / 2 hours	Y	N	birthday party, baby shower, memorial, social gathering
Naperville Park District	Seager Park Nature Center	N/A on website	48 dining, 60 theatre seating	\$80 / hour	Y	?	Private events, ideal for small gatherings

Park District/ Forest Preserve District	Event Venue	Size	Capacity	Cost	Enclosed?	Kitchen?	Types of Events
Tier 1 - In Close Proximity (cont'd)							
Naperville Park District (cont'd)	Fort Hill Activity Center - NPD Riverwalk - amphitheater	11,000 SF	N/A on website	\$40 - \$170 / hour gym \$60 - \$300 / 3 hrs multipurpose room	Y	N	Room rentals (gymnasium and multi-purpose room)
	Knock Knolls Nature Center	N/A on website	100	\$200 / 3 hours	Y	Y	special events, birthday parties, showers, anniversaries, receptions, meetings, etc.
	Alfred Rubin Riverwalk Community Center - NPD	N/A on website	160 dining, 200 theater style	\$90 / 3 hrs Mon - Thurs \$150 / 4 hrs Fri - Sun			community hall is available for rental for events
Lisle Park District	Lisle Park District Community Center	1,050 - 1,200 SF	40 - 80	\$20 - \$85/ hour	Y	Y	multipurpose room for a variety of small-medium sized events
	Riverbend Golf Club	N/A on website	150 (up to 275 in outdoor tent)	\$2500 flat fee (100 person minimum)	Y	Y	weddings, showers, family gatherings, corporate functions, golf outings, birthdays, anniversaries, memorial luncheons, holiday parties, sporting events
Woodridge Library	Meeting rooms	N/A on website	N/A on website	N/A on website	N/A on website	N/A on website	N/A on website
Seven Bridges Golf Club	4 meeting/banquet rooms	N/A on website	20 - 200	N/A on website	Y	Y	weddings, banquets, meetings etc.
Morton Arboretum	Different rooms/many sizes and types	N/A on website	40 - 300	\$300 - \$9000 / event depending on day/ time. Most expensive is Saturday night, least expensive is M-F daytime	Y	Y	weddings and receptions, corporate events, parties, showers, social events etc.

Park District/ Forest Preserve District	Event Venue	Size	Capacity	Cost	Enclosed?	Kitchen?	Types of Events
Tier 2 - Farther Away, But Somewhat Aligned							
Kendall County FPD	Ellis House and Equestrian Center	N/A on website	200 (Ellis House + outdoor tent) 40 (Ellis House)	\$3500 - \$4000 / wedding \$60 - \$130 / hour for smaller events	Y	Y	weddings, meetings, showers, special events etc.
FPDWC	Four Rivers Environmental Education Center	N/A on website	80	\$3000 full day wedding rental \$1,150 - \$2,800 conference rental (depends on day/ time) \$225 - \$500 room rental	Y	Y	weddings, hourly events
Park District/ Forest Preserve District	Event Venue	Size	Capacity	Cost	Enclosed?	Kitchen?	Types of Events

GREENE FARM BARN

Tier 2 - Farther Away, But Somewhat Aligned (cont'd)							
FPDLC	Barbara Belding Lodge	N/A on website	115	\$400 - \$500 / 4 hours full lodge \$100 - 300 / 4 hours room rental	Y	Y	weddings, receptions, birthdays, business meetings, other occasions
FPDLC	Creek Bend Nature Center			\$600 - \$800 / 4 hours full facility \$200 - \$360 / 4 hours room rental			weddings, special events, etc.
Streamwood Park District	Hoosier Grove Barn	N/A on website	150 ceremony 120 banquet style 200 cocktail style	\$8000 Saturdays \$7500 Fri & Sun.	Y	Y - refrigerator, freezer, convection oven, 3 tub sink, and counter space for caterer to use day-of.	weddings, corporate events etc.
Glen Ellyn Park District	Lake Ellyn Boat-house	1,904 SF (main hall)	120 150 without tables	\$150 - \$175 / hour + \$100 for deck/terrace rental	Y	Y - refrigerator, freezer, warming oven, ice machine, microwave and bar refrigerator	weddings, meetings, special events, etc.
Fox Valley Park District	Blackberry Farm	4,500 SF	220	\$500 ceremony \$3,350 - \$5,565 depending on time of year Non-wedding: \$175 - \$325 / hour	Y	?	weddings, parties, reunions, picnics
Elmhurst Park District	Wilder Mansion	9,000 SF	250	Weddings \$2800 - \$3500 for an 8 hour rental \$100 - \$250 / hour rental	Y	? Catering prep area	weddings, private events, parties, corporate meetings, etc.
Glenview Park District	Grove Redfield Estate	1,800 SF	102	Receptions: \$2000 / 7 hrs \$4,000 / 9 hrs Ceremony only: \$500 - \$1500 / 4 hrs Business meeting: \$400 / 6 hrs	Y	Y	wedding receptions, ceremonies and corporate groups
Fermilab	Kuhn Barn	?	?	\$7 admission, Under 12 Free, 12-17 & Over 65 \$4	Y	?	?
Village of Barrington	White House	N/A on website	150	\$117 - \$325 / hour wedding: \$1300 - \$1800	Y	Y	nonprofit, corporate, family events
Wheaton Park District	Arrowhead	5,304 SF	275	N/A on website	Y	Y	weddings and other social events
Arranmore Farm	Oswego	N/A on website	40 - 60 Farmhouse 30 - 40 Clubhouse	N/A on website	Y	Y	Weddings, private events, large concerts/festivals, rentals, sports
Cantigny		N/A on website	250	weddings: \$1500 - \$3000	Y	Y	weddings, corporate events, birthday parties, room rentals, outdoor rentals
Grayslake (Prairie Crossing)	Byron Colby Barn	2,266 SF	160	Weddings: \$3845 - \$4345 with 5 event hours			weddings /events. Also serves as community center for Prairie Crossing

COMPARABLE VENUE INTERVIEWS

The two venues highlighted in the table prior were most similar to the proposed Greene Farm Barn. Both venues are relatively old barn spaces that host a variety of events, although the main source of revenue for both venues are weddings. Interviews with managers of each facility provided invaluable insight and considerations for the Greene Farm Barn.

Byron Colby Barn

The Byron Colby Barn is located within Prairie Crossing, a nationally recognized conservation community in Grayslake, Illinois. The barn was constructed in 1885 three miles east of Prairie Crossing and was dismantled and reconstructed in its current location in 1992 when threatened by a nearby housing development. The barn serves as both the community center for Prairie Crossing, as well as an event and wedding venue. The barn was recently purchased by the school district and will only be a wedding and event venue until 2023. The event manager provided the following insight into the Byron Colby Barn property and considerations for the Greene Farm Barn:

The Space and Amenities

- The barn was fully reconstructed about 25 years ago and has had updates such as floors redone since that time. It is important for barn spaces to be maintained, especially if weddings are to be held in the space.
- It is likely crucial that the barn have a kitchen (at least a catering kitchen, if not a full kitchen), bathrooms, air conditioning and heat.
- Having a nice outdoor space for a ceremony is necessary. Quality over quantity for outdoor space
- Wedding venues need to be in close proximity to major roads and hotels. Generally, shuttles will be hired to take guests to/from nearby hotels.
- The Byron Colby Barn operates year-round with full HVAC, as well as indoor restrooms.

Capacity

- Up to 160 guests can be accommodated with seating on both the main floor and loft. The total space is roughly 2,266 square feet.
- The occupancy of the space is limited by the seated floor plan, not by fire code.

Event types

- Other events held in the space include prom, bridal showers, baptisms, and other random one-off events. For events other than weddings, the price is based on the number of people.
- Last minute event pricing at a lower cost is available for Saturday and Sundays 6 weeks ahead of event date.
- For large corporate events on Monday to Friday, space can be rented by the hour
- Weddings range from \$3,845 - \$4,345 with 5 event hours (and additional getting ready hours).
- The highest number of weddings was 115 per year. The average is about 75 per year
- Fads within the bridal industry have a big effect on the popularity of barn weddings, and there has been a noticeable tapering off in barn weddings in recent years.

Operations

- The Byron Colby Barn has 2 staff and a part-time bookkeeper. There is a day-of event planner that works 8-9 hours for each event, as well as a full-time manager for the space.
- Cleaning staff has been difficult to find in recent years, especially for back-to-back events where cleaners are needed in the middle of the night
- Historically, cleaners have cost \$100/hour, but this is shifting and will likely become more expensive.
- Advertising costs on some wedding websites such as the knot can range from \$600-700/month. Word of mouth is important for advertising, as well as reviews and a good venue website.
- Revenue is about \$300,000 per year with the bulk of the revenue coming from weddings.
- Total operating costs are estimated to be around 25% of gross revenues.

GREENE FARM BARN

Hoosier Grove Barn

The Hoosier Grove Barn is an event venue owned and operated by the Streamwood Park District in Streamwood, Illinois. The barn is an old dairy farm that was constructed in 1888 and was purchased and fully restored by the park district in 1988. There is also a one-room schoolhouse on the property that was renovated and can be used as an additional ceremony or event space. The event manager provided the following insight into the Hoosier Grove Barn property and considerations for the Greene Farm Barn.

The Space and Amenities

- The venue offers a garden to do outdoor wedding ceremonies and a schoolhouse for additional ceremony options. Couples can also do outdoor weddings on the staircase at the schoolhouse. Having many options for set-up of ceremony is important (inside & outside).
- Weather permitting, the venue typically does the cocktail hour and ceremony outdoors.
- The event manager personalizes each wedding and set-up. This has been especially important with COVID gathering restrictions.
- The facility is rented from 9am to midnight. The loft space is used as a getting ready space, as well as additional seating for dinner.
- The venue offers room darkening curtains, mirrors, linens, and an outdoor fire pit
- The venue has full HVAC and is open all year round (Other venues sometimes don't have full HVAC, or even on-site bathrooms, use porta-potties)
- The venue offers a prep kitchen, no full cooking facilities. Couples have the freedom to pick their caterers. The venue has a convention oven. Caterers usually bring food in hot boxes
- The package is all inclusive and covers a bartender.

Capacity

- 120 can be seated for dinner. Tables are broken down to make a dance floor. Seating depends on table options.
- Since Greene Valley Barn appears to be L-shape, it may not have to break down for dance floor
- Access to elevator and stairs is required for ADA compliance

Event types

- Averages 60 weddings per year, with a peak year of 79 weddings
- From April 1 to November 30, the priority is weddings on Friday, Saturday and Sunday
- Rentals are year-round. They will not book within 90 days in wedding season
- They do rentals for all types of events
- A-la-carte events get lower pricing

Operations

- 2 full-time, 2 part time staff (20-29 hours per week)
- Office hours and appointments open during the week
- Most marketing is by word of mouth and reviews– facebook page, wedding pro, the knot, website
- Total operating costs are estimated to be around 50% of gross revenues.
- Special considerations with public entity
- Staffing by the park district introduces restrictions. They need to go through the board to get things approved
- There's no way to invest in the future because passing money for updates to infrastructure is difficult
- Liquor license for property because liquor is not allowed in the parks
- Nobody can bring in outside liquor. No liquor can leave the property.



Hoosier Groove Barn

GREENE FARM BARN

Other Expected Amenities

- There would definitely be something missing if there was not a quality outdoor space
- A scenic outdoor space for photos is important
- Parking. There are over 100 parking spaces at their venue. 60 parking spaces for 120 people is needed on average
- Shuttles to hotels nearby are usually provided



Hoosier Groove Barn



Byron Colby Barn



Byron Colby Barn

GREENE FARM BARN

SUMMARY FINDINGS

Geographical Location

The Greene Barn is surrounded by numerous venues that can be utilized for events, but because of so many differentiating characteristics it's difficult to determine which ones would be seen as a competitor to a renovated Greene Barn. In our view the facilities that would be most comparable from both a capacity and an aesthetic perspective are some distance away, which might work to the benefit of a Greene Barn event center. The Greene Barn, however, lacks close proximity to hotels and commercial activity, which was noted as a desirable locational characteristic by one of the interviewees.

Floor Area and Event Capacity

The Greene Barn concept plan would provide slightly over 10,000 square feet of finished floor area, including both the ground level and the second floor. Having said that, it appears the second floor of the structure will be much more attractive for events because of its elevated ceiling heights. The second floor offers around 5,300 square feet of floor area. Using the Byron Colby Barn area and occupancy as a yardstick, the Greene Barn's second floor might seat around 375 guests, and might work for a wedding reception if the head table is at the corner of the L-shaped area and so could view the guests in both directions. If just the larger of the two wings were utilized, and all event attendees remain in view of one another, around 2,900 square feet is available, and around 205 guests can be seated at tables in that area. The seating capacity of the renovated Greene Barn is on the larger side of the comparison sites we studied.

Design Requirements

The comparison data and interviews underscored the importance of a catering kitchen. Easy access between the floors will be important. A high quality outdoor space is essential and could be a differentiator at Greene Barn. The parking area will need to accommodate something on the order of one car per two event attendees.

Business Models

In the event that the Greene Barn is rehabilitated for an event center, a key decision for the Forest Preserve District will be whether to operate the event center itself. Doing so would entail building specialized managerial capacity, hiring dedicated staff, and operating the business in a competitive marketplace. The alternative is to bid out the right to manage the event center component of the Greene Barn's operations, and negotiate a concession agreement with the selected organization. In that scenario, the responsibilities of the Forest Preserve District are much narrower because the concessionaire becomes responsible for most of the business aspects of running the event center, including marketing, staffing, equipment storage, etc. Typically the concession agreement establishes an annual payment to the property owner, and it may provide for additional revenue sharing or profit sharing beyond the annual payment.

Expected revenues

Wedding events provided the majority of gross revenues for the event centers we interviewed, with other scheduled events being less prevalent and commanding a lower hourly fee. If a Greene Barn event center is seen as comparably attractive

to the two facilities we interviewed, Greene Barn could potentially attract 50 to 100 wedding events a year at a per-event rate of around \$4,000 for a wedding. That sums up to wedding revenues of around \$300,000 per year—or perhaps a little greater because of its large size. Additional corporate, family, graduation, and miscellaneous events could result in an additional 5% to 25% in revenues.

Operating Costs

Operating costs for an event center would include marketing, all communication, coordination and management related to event rentals, equipment storage (tables, chairs, audio), equipment setup and take down, business administration, property maintenance, taxes, and insurance. Some event centers provide a day-of-event staff person to troubleshoot and respond to requests—even if there is a wedding coordinator and caterer. Expected operating costs were explored through internet research, as well as direct conversations with staff from Byron Colby Barn and Hoosier Grove Barn venues. The internet search yielded a few reports from existing event centers, and analyses that projected financial outcomes for proposed event center projects. Event Centers are very distinctive one from another, and that was evident in the examples we found. But those examples suggested that operating costs might be expected to be below 50% of gross revenues for an event center in a strong location. Both of our barn event center interviewees were forthcoming in responding to questions about operating expenses. Operating costs were estimated to be 25% of gross revenues at Byron

Colby Barn, and 50% of gross revenues at Hoosier Grove Barn. The difference between the two may have to do with the level of services that are offered at the two sites. There may also be a difference between the two in what cost elements they considered to be operating costs.

APPENDIX

Financial Pre-Feasibility Analysis

The project team conducted a high-level financial feasibility analysis for the Greene Barn based on the previous study of the Barn done by the Greene Barn Ad Hoc Committee in 2019, and the information gathered from comparable venues. Based on other comparable facilities (ie. other barns in the region that are operated at least part time as commercial venues), the most likely potential commercial uses for the Barn would be for larger events such as weddings/receptions and corporate events. Some of these comparable event venues also generally host a variety of smaller events and classes, which could fit with the concept of using the space for potential community uses (eg. classes) as was noted in the previous study for the Barn. It should be noted that the previous study for the Barn did not appear to anticipate many commercial events such as weddings or corporate gatherings; the hypothetical schedule appeared to show exclusively community type events (educational, fitness, arts, and so forth). A list of potential revenue sources was given but event rentals were only part of a mix that appeared to emphasize community funding. By contrast, this financial feasibility analysis focuses mostly on the viability of a commercial event space, as described above.

While some commercial uses such as restaurant, café, or beer garden might also be possible, the previous study did not explore this option and DuPage County staff gave clear instruction to focus on the use of the Barn as a multipurpose space in accordance with the Ad Hoc Committee's recommendation. Given the uses anticipated above, the Barn would be competing not only with

other similar spaces, but also hotels and other meeting event type spaces throughout the region. The target market for the Barn would thus typically be residents and employees within a certain driving distance that may be seeking something unique and picturesque, at a competitive price point that reflects the facility's general appeal and level of convenience.

Methodology

A financial feasibility study explores whether a project can be justified financially. It is based on the idea that a project is only justifiable if the anticipated revenues exceed costs (capital costs, operating expenses, and costs associated with other factors such as developer/operator profit, financing, risk). It is not enough to say a project is a good idea or that there is demand for such a venue; users would need to be willing to visit and pay enough for the use of the facility to offset the costs of developing and operating it to make it a justifiable commercial venture. Although there may be cases where projects may be subsidized through donations, grants, or public funding, this financial feasibility analysis starts with an assumption that no such public funding is available.

The heart of the financial analysis is a proforma: an excel based schedule of cash flows over time, that is then used to calculate various measures of value and return. If the value is positive and the returns exceed a certain threshold, the project is considered feasible.

In this situation, the project team conducted a "pre-feasibility" analysis. The project team does not have all the information that might normally

feed into a proforma analysis, so we are making educated assumptions and doing a simplified version so that we can get a preliminary answer as to whether the project might be feasible. The exercise can be revisited if and when there is more information, or the project moves into a stage where a more detailed proforma analysis would be required.

Issues & Assumptions

As noted, the key assumptions in a proforma are those relating to cost and revenue. The following reflects our initial assumptions based on interviews, research, and prior experience.

Capital Cost: The cost of the renovation/upgrading of the Barn was noted in the 2019 report as being approximately \$5 million (based on a 2010 study), although it was noted that this did not include exterior amenities proposed in the 2019 report. It is also unclear from the report exactly what was included in the \$5 million figure. Some cost estimates only cover the anticipated hard costs, however various soft costs (planning, design, various studies, permitting/approvals, accounting/legal, developer staffing, financing, holding costs, taxes and insurance, etc.) can also increase the cost significantly.

The project team made the following assumptions and adjustments to determine capital cost:

- Assume that the \$5 million estimate in the 2010 study is accurate
- Adjust the cost for general inflation through 2021 to \$5.9 million
- Assume site improvements of approximately 8% of the building costs (equivalent to \$14/sq ft for about 30K sq ft of site improvements)
- Adjust the total capital cost to \$6.3 million based on the assumed site improvements noted above, and round down to an even \$6 million for simplicity's sake.

It should be noted that this capital cost for upgrading an existing building seems very high in comparison to other development projects and should be studied further.

A key question in this particular exercise is the business model that would be followed. In a normal commercial development, someone buys a piece of property, secures financing, develops a building, and starts operating it commercially. In this case, the property owner is a public entity, the building already exists, and the “development” involves upgrading that building. The party who would be responsible for the development has not yet been identified.

In the simplest case, the FPDDC County is the entity that rehabilitates the facility, and then maintains and operates it. However, the FPDDC County is not in the business of operating a commercial endeavor such as an event space. A more likely arrangement is that a concession would be issued for the rights to operate the facility. The concessionaire might be responsible for making some of the improvements (subject to specifications of and review by the FPD), or those could be shouldered entirely by the FPD. The concessionaire would then lease the property and pay rent and/or a concession for its use. At the end of the concession, the FPD is free to pursue a new concession contract or go a different direction with the property.

For simplicity purposes, our baseline assumption of \$6 million in capital improvements is all inclusive, and that FPD is the party responsible for incurring all of those costs.

Revenues

In this case we are assuming revenue refers to rental revenue or its equivalent paid by a concessionaire (rather than gross revenue of any commercial business that would operate out of the space).

Projecting rental revenues can be complex and various assumptions must be made relative to operating hours, utilization, and fees paid. Since this is a partially outdoor attraction and Chicago has a long winter, there is significant variation in seasonal use and that has to be taken into account.

APPENDIX

Similarly, most weddings are held on weekends; during the week there is less potential to generate revenue. During these periods community uses can dominate the schedule for a lower rate. We would still need to make various assumptions about the various rates charged and the resulting utilization. In general, rates and utilization would be inversely related, but there is likely an optimum balance. Note that in this analysis, we have not yet taken into account any revenue from community events.

A review of some significantly smaller barn comparables (Byron Colby, Hoosier Grove) appears to put revenue in the range of about \$300,000-480,000/year, and revenue per wedding event at somewhere between \$4-8K. If we assume we can reach the higher side plus 10% (528,000/yr) given the larger size of the Greene Farm Barn, and the revenue is about \$8,000/event, then the venue would need to accommodate around 66 such events per year, close to the midpoint of the average number of events our two comparables¹. In the peak season this would be roughly 3 large events per week, in the low season it would be less than 1 per week, and in the shoulder seasons it would be somewhere in between. This seems reasonable for a first pass and there may be significant room to increase, particularly given that Greene Farm Barn @ 10K sq ft is effectively ~4x the size of those facilities².

This rental revenue for a facility the size of the Barn is equivalent to about \$52/sq ft per year, which is

on the higher-end of retail rents in the area, but still within range³. This number typically would increase over time on par with inflation, although it could also increase/decrease depending on competition from elsewhere.

No revenue is assumed from parking or other services, although any concessionaire operating the facility could determine its own formula for collecting revenue based on its various services/offerings. The FPDDC County is only concerned with the rent that it would receive from the concessionaire.

Bidding for the concession could be done in absolute dollar terms, percent revenue, or some combination of the two, similar to what is done for retail rents. A market sounding exercise and/or revenue of other concessions by park districts elsewhere would likely be worthwhile if the decision is made to pursue.

Expenses

Another figure on the cost side relates to operating expenses. In this case it's the operating expenses for FPDDC County as the landlord, rather than the operating expenses of the business operating within it. This could mean utilities (power, water, sewerage), garbage collection, property taxes, and insurance. There may also be expenses related to cleaning, maintenance, grounds-keeping, security, marketing/website, etc. The responsibility for such activities/costs is typically determined during the leasing negotiation (or they become part of the terms of the concession which interested parties

¹ Note: some comparables had slightly lower figures for venue rental (eg. \$4K/event) and slightly more events, eg. 75/yr on average, with some years 25-50% more

² No additional revenue from community events has yet been assumed in these calculations, although that would certainly be something to consider; it would diversify the income stream and ensure more stability if the number of events themselves didn't materialize at these assumed costs. Indeed, if the concessionaire is being requested to manage the facility during the week (during community events) then it would make sense for them to receive some nominal revenue to cover those costs. If community events turned out to be a reliable and significant revenue stream, the additional revenue could be shared between the concessionaire and FPD depending on the concession/rental terms).

³ Retail rents are not really relevant as a direct comparable, but useful as a cross-check

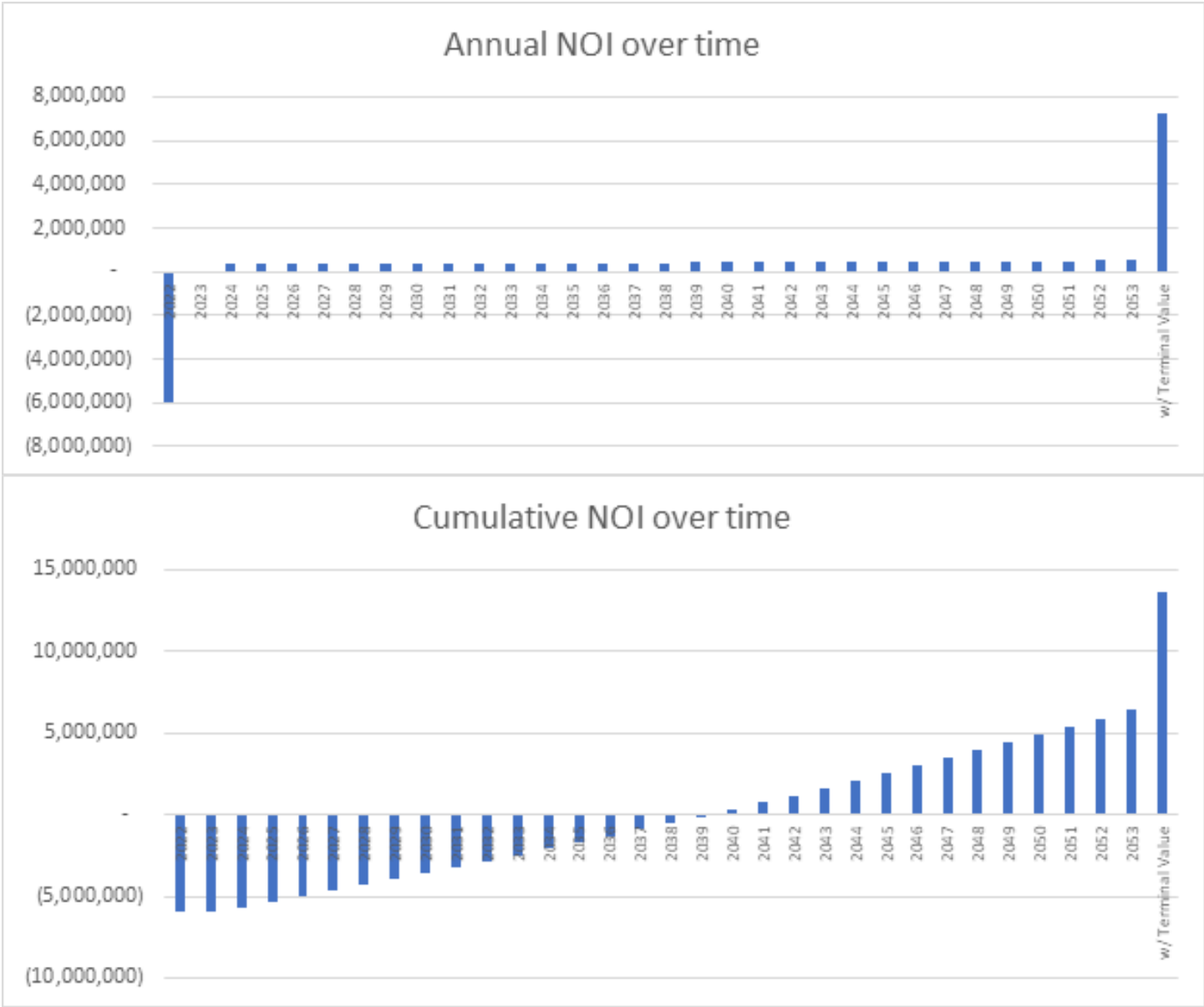
bid on). Some of these might best be left to a concessionaire; others would remain FPDDC's responsibility.

The 2019 Greene Barn Recommendation Report noted an assumption of \$370,400 in 2016 for 10 years of operating expenses that would be incurred by FPDDC; its not noted what was included in this figure. If we inflation adjust this figure to 2021 the number increases to \$412,000, or \$41,200 per year. This figure would be considered low (8-14% of anticipated rental revenue) for active property management so its likely that it just covers basic utilities/city services/taxes. This number would also be expected to increase with inflation over time (assumption is long-term rate of 1.5%). In a

future scenario the concessionaire/ operator would be responsible for the rest (cleaning, maintenance, grounds-keeping, security, marketing, staffing, etc). Operating expenses for the other Barn-type venues was in the range of 25-50% and likely covers these other costs. For the purposes of the proforma, we tested the midpoint of these figures (37.5%, equivalent to 198,000/year).

Initial Results

Assuming the capital cost for upgrading the building is roughly \$6 million dollars, the proforma analysis reveals the following:



APPENDIX

w/o financing			
Yr	Yr	NOI	Cumulative
-1	2022	(6,000,000)	(6,000,000)
0	2023	-	(6,000,000)
1	2024	330,000	(5,670,000)
2	2025	334,950	(5,335,050)
3	2026	339,974	(4,995,076)
4	2027	345,074	(4,650,002)
5	2028	350,250	(4,299,752)
6	2029	355,504	(3,944,248)
7	2030	360,836	(3,583,412)
8	2031	366,249	(3,217,163)
9	2032	371,743	(2,845,421)
10	2033	377,319	(2,468,102)
11	2034	382,978	(2,085,123)
12	2035	388,723	(1,696,400)
13	2036	394,554	(1,301,846)
14	2037	400,472	(901,374)
15	2038	406,479	(494,895)
16	2039	412,577	(82,318)
17	2040	418,765	336,447
18	2041	425,047	761,494
19	2042	431,422	1,192,916
20	2043	437,894	1,630,810
21	2044	444,462	2,075,272
22	2045	451,129	2,526,401
23	2046	457,896	2,984,297
24	2047	464,764	3,449,062
25	2048	471,736	3,920,798
26	2049	478,812	4,399,610
27	2050	485,994	4,885,604
28	2051	493,284	5,378,888
29	2052	500,683	5,879,571
30	2053	508,194	6,387,765
w/ Terminal Value		7,259,908	13,647,673

Net Operating Income (NOI)

If we take an annual figure of \$528,000 of rental revenue, subtract out the assumption regarding estimated operating expenses of \$198,000, the initial net operating income to FPDDC becomes \$330,000/yr. Both rental rates and operating expenses would increase over time (not always at the same rate, but both are assumed to mirror inflation way for now).

If we ignore financing and tax for now, you can see how the revenues balance out costs over time, with a projected break even under these assumptions around 17 years in (from a 2022 start date).

With an assumed discount rate/cost of capital of approximately 5%, the resulting value (net present value, or NPV) of the investment in the development in exchange for the rental revenue projected is approximately \$1.3 million.

The corresponding rate of return (IRR) is 6.2%. Preliminary investigations into use of leverage (not shown, but assuming a 70% LTV ratio and 1.2 Debt Service Coverage Ratio (DSCR), with a 23 yr permanent commercial loan @ fixed rate of 3.5%) indicate that performance would decline somewhat with the IRR on the smaller amount of capital invested (\$1.8 mil) decreasing to 5.3%, with the same breakeven point (2039). Using more favorable terms improves these results⁴.

Timing

In a proforma, the timing of cash flows is a significant factor. There are holding costs during construction (when there is no incoming revenue), and during startup when the facility is being

⁴ Note: The split between construction financing and a permanent loan has not been taken into account yet; it would also lower the results somewhat.

marketed but is still largely unknown. However, for this simplified exercise we assume a 2-year construction period followed by typical average utilization at opening. We also assume a single permanent loan (in reality there would be a higher-interest construction loan until the building is completed, when it would then be converted into a permanent loan).

The proforma assumes a 30-year holding period after completion with an equivalent terminal value calculated at the end based on a 7% exit cap rate. This type of analysis can be fairly technical and is of course dependent on various assumptions. Other assumptions can be tested if desired; the excel model can also be shared for FPDDC to do its own projections.

Conclusion/ Recommendation:

This analysis indicates that the rehabilitation of the Greene Barn for its use as an event venue, with event sales and operating cost assumptions as noted, and a salable event center facility at the conclusion of the analysis period, may be financially feasible as a private business investment.

As a public entity the market value of the facility at an end point is of less consequences than the operating characteristics of the facility and the ability to pay back the initial capital improvements. The analysis indicates a likelihood that the venue would generate revenues that comfortably exceed its operating costs. That allows it to make contributions toward paying back the initial capital costs. If financing costs are ignored, and the rough estimates of revenues and operating costs are assumed, the payback period of the initial capital

costs is estimated to be about 17 years.

Alternatively, FPDDC may choose to lease use of the building through a concession agreement to an event venue business. There are clear benefits for that business structure, including keeping the FPDDC in its core competency, and putting the business risk on the concessionaire. The analysis suggests that there would be interest from event venue businesses in leasing the Greene Barn. The revenues generated from FPDDC under a concession agreement would be lower than that estimated in this analysis, since the FPDDC's receipts are more similar to a rent payment or profit sharing arrangement, rather than receiving the entire net revenue stream. (Concession agreements are often structured with an annual payment plus a percentage of gross revenues.) So the payback period of the initial capital costs would be significantly longer.

We estimated that there would be an approximately 17 year payback period at 0% interest rate if the FPD rehabbed the Greene Farm Barn and operated it as an event center. But there are strong arguments for renting the facility to a concessionaire and having them manage the operations of the event center business, including the fact that a concessionaire would presumably have the business knowledge to do it well and profitably, and that the concessionaire would be shouldering much of the financial risk associated with the business startup.

Our research didn't extend to drilling down on what a concessionaire would be willing to pay for the right to operate an event center in the Greene Farm Barn. Having said that, the following are preliminary assumptions that I think the FPD could make without further research.

APPENDIX

- Given that the concessionaire would be taking on the business risk of running a new event center, it is safe to assume that the agreement would grant them more than half of the net revenues, and the FPD's share would be less than half of the net revenues.
- If we take a starting assumption that the FPD's proceeds from a concession agreement with an event center business would be on the order of 20% to 40% of the net revenues, that would result in:
 - Net annual revenues to the FPD of between \$66,000 and \$132,000
 - A payback period (still assuming a 0% interest rate) of the initial capital expenditures of between 42.5 and 85 years

It's important to reiterate that this additional back of the envelope "analysis" is more in the realm of educated guesswork than even preliminary findings, since our research didn't extend to exploring the market context for concessions arrangements. Having said that, it might help to set preliminary expectations for the economics of a concessions arrangement.

This page intentionally
left blank

BLACKWELL,
GREENE VALLEY &
WATERFALL GLEN
FOREST
PRESERVES

Public
Engagement
Summary

IN THIS SECTION:

INTERACTIVE
ONLINE

ENGAGEMENT
SITE VISITS

ENGAGEMENT
SESSIONS

ENGAGEMENT
THEMES AND
TRENDS



PUBLIC ENGAGEMENT

SUMMARY

PROCESS

During the Discovery and Analysis stages of work for the Blackwell, Greene Valley and Waterfall Glen Preserve Master Plans, the team created a Stakeholder Engagement Plan. The plan identified a variety of ways to engage preserve users, neighbors, the public and key stakeholders during the process. The Stakeholder Engagement Plan can be referenced for details, times and venues of the engagement conversations, most of which were held virtually during the pandemic.

The team facilitated over sixteen (16) independent engagement sessions including focus group meetings, district staff department discussion sessions, public engagement sessions and two by two (2 at a time) interviews with the current district commissioners. The listening sessions kicked off in June and concluded in July. This document is a summary of what the team heard and recorded during those sessions. Any duplicate comments have been consolidated to cover the themes heard for each preserve.

Due to the Covid-19 pandemic most events were held in a virtual online format via Microsoft Teams or Zoom. Engagement activities in this stage of work focused on informing the public about the Master Planning process and gaining insights

about how people use the preserves, what they enjoy about them and what they would like to see improved. This information will be used as a basis for what will become the vision for future land uses and enhancements in each of the 3 preserves.

There were several ways for the stakeholders and the public to get involved with the process including interactive online engagement, focus groups, and a broader community meeting for each of the three Forest Preserves. The following document summarizes the engagement activities conducted in the first two (2) stages of the project, and the general feedback received through each method of engagement. A presentation of the summary of this document was facilitated to the Forest Preserve Technical Advisory Team on August 5, 2021, a copy of the presentation is included in the Appendix.

	Views/ Respondents/ Attendees
StoryMap Views (5/30/21 - 7/30/21)	2,141 (~35.10 per day)
Public Survey Responses	602
Agency Survey Responses	13/18
Scout Group Survey Responses	8/8
Accessibility Group Survey Responses	8/8
Staff Engagement Sessions	25
Public Engagement Sessions	103
Focus Group Sessions	50
Board Commissioners	7

The following is a summary of FPDDC staff efforts to notify the public about the public meetings and surveys.

- Posted signs in visitor information signs at the preserves and banners at each preserve.

Monday, June 7:

- Issued press release
- Sent out stakeholder email blast
- Posted on web homepage with links either to press release or Upcoming Projects page
- Began promoting on social media.

Thursday, June 10:

- Promoted in Navigator weekly e-newsletter, which goes to 34K people.

Week of June 14:

- Promoted meetings in 6/17 Navigator e-newsletter

Week of June 21:

- Promoted meetings on social media

1 ONLINE ENGAGEMENT

ENGAGEMENT TOOLS AND ACTIVITIES

StoryMap

Stantec created an ArcGIS Online StoryMap accessible through the FPDDC website. The StoryMap provided background information about each of the three preserves and links to sign up for all the virtual engagement. The StoryMap also included an interactive community satisfaction survey for each of the preserves. From May 30, 2021, through July 30th, 2021, there were 2,141 views of the StoryMap.

MURAL

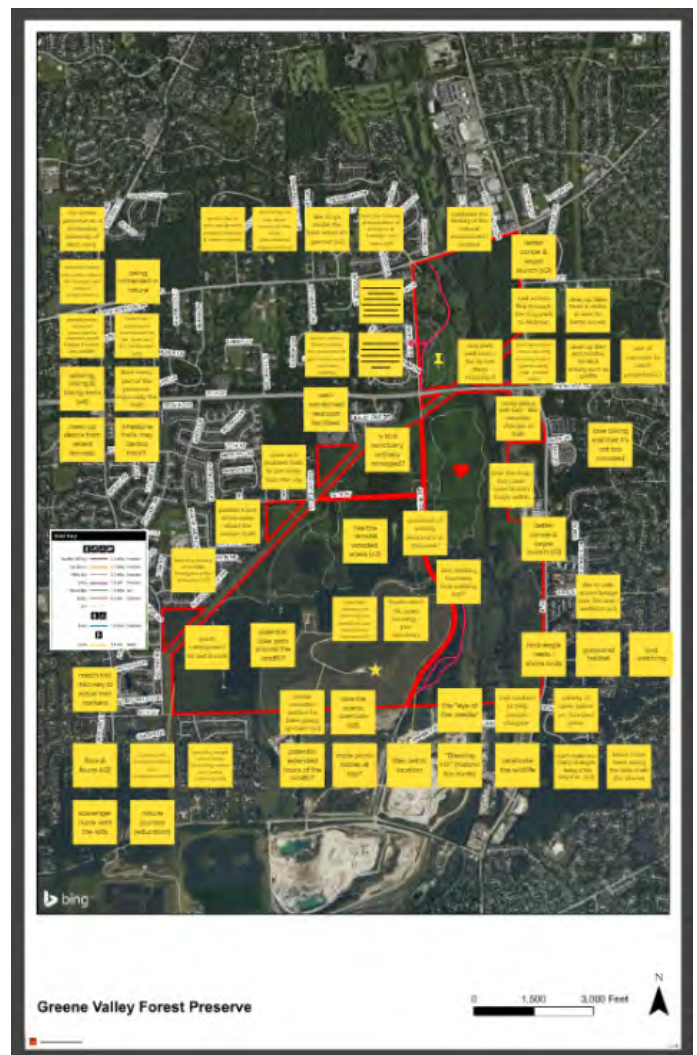
Individual MURAL boards (a digital white board tool) were created and used for most of the engagement meetings. All boards included the following activities: Love-More-Less, Hidden Gems and Focus Areas. Depending on the stakeholder group either these activities were completed as a large group for each Forest Preserve or in smaller “breakout” rooms by activity one Forest Preserve at a time.

All engagement meetings included a brief overview presentation with some having several breakout rooms with different exercises to gather input from the public on a variety of broad topics. The breakout room exercises are described and summarized in more detail at the end of each type of meeting:

1. Focus Group Meetings
2. Staff Department Meetings
3. Public Engagement Sessions
4. Commissioner 2x2 Interviews

Hidden Gems

Participants were asked in this exercise to name their favorite places or “hidden gems” in [Blackwell, Greene Valley and/or Waterfall Glen]. This could also include people’s favorite things about [Blackwell, Greene Valley and/or Waterfall Glen]. In doing this exercise, we hope to gain a sense of the things that make [Blackwell, Greene Valley and/or Waterfall Glen] special and should be preserved. The results of this exercise are summarized below, and a full documentation included in the appendix.



Greene Valley Hidden Gems on MURAL

Participants were asked to review focus areas throughout the city identified in past planning efforts and identify issues and areas that should be prioritized for this Master Planning process. Through a facilitated exercise, participants identified areas on a map that either have issues that should be addressed, or generally should be considered as focus areas. The feedback heard throughout this process is summarized below, and full documentation included in the appendix.



The “Love, More, Less” exercise is meant to gather ideas from residents and stakeholders on what they love about the Forest Preserve, what they want more of in the Preserve, and what they would like to see less of in the Preserve. This exercise was facilitated within a Zoom breakout room, using Microsoft Mural to collect and document ideas. Participants were also able share their thoughts through the chat function on Zoom, which was saved and is documented below.

1. What do you Love about [Blackwell, Greene Valley and/or Waterfall Glen]?
2. What do you want More of in [Blackwell, Greene Valley and/or Waterfall Glen]?
3. What do you want Less of in [Blackwell, Greene Valley and/or Waterfall Glen]?



ONLINE ENGAGEMENT

PUBLIC AND TARGETED SURVEY SUMMARY

Several surveys were designed to get feedback from various user groups and stakeholders for each of the preserves. Public surveys were available from May 30, 2021, through July 30th, 2021. Over 600 people completed surveys for the three preserves, including thirteen agencies, five scout groups and eight accessibility groups. Full survey results can be found in the Appendix as well as a spreadsheet highlighting the love, more, less activity.

The following surveys were created and released for feedback via the StoryMap.

1. Blackwell
2. Greene Valley
3. Waterfall Glen

Additional targeted surveys were created and distributed to get input from:

1. Adjacent governmental agencies
2. Scout Groups
3. Accessibility Groups

Forest Preserves Survey Demographic Summary

Blackwell

- One hundred and eighty-three (183) people responded to the Blackwell survey.
- Fifty percent (50%) of people were ages 40-65, over twenty percent (20%) were age 66 or older.

- The household age distribution was broad with higher percentages in the Gen X and Baby Boomer with some Gen Y (Millennials) with fewer Gen Z but more than the other two preserves.
- Most survey respondents were Caucasian.

Greene Valley

- Two hundred and twenty (220) people responded to the Greene Valley Survey.
- Fifty percent (50%) of people were ages 40-65, over twenty percent (20%) were age 66 or older.
- The household age distribution is broad with higher percentages in the Gen X and Baby Boomer with few Gen Y (Millennials) and even fewer Gen Z.
- Most survey respondents were Caucasian.

Waterfall Glen

- Two hundred and two (202) people responded to the Waterfall Glen Survey.
- Over fifty percent (50%) of the respondents were ages 40-65 and over thirty percent (30%) were ages 66 or older.
- Household age distribution was broad with higher percentages in the Gen X and Baby Boomer with few Gen Y (Millennials) and even fewer Gen Z.
- Most survey respondents were Caucasian.

SURVEY SUMMARIES

Preserves

Blackwell

- Most respondents visit Blackwell to spend time in nature, exercise, relax or spend time with family and friends.
- There are many things that people love about Blackwell, including the trails, experiencing nature, the lakes, biking, and birds.
- The most popular activities at Blackwell cited by residents are to hike/run/walk, bike, picnic and/or bird watching.
- While all aspects are important, the two most important aspects of Blackwell to survey respondents were that it protects natural areas (conservation) and gives people ways to experience nature.
- The top three (3) enhancements that the respondents would like to see are: ecological restoration of open / natural areas, additional trails and flush restrooms.
- The two (2) areas that respondents felt the District should be focused on improving at Blackwell are building new trails or connections and restoring prairies, woods, wetlands, lakes, and streams.
- People would like to see more trails, access, water, flush toilets, signage, nature, restoration, etc.
- In general, the respondents are happy with the current offerings. The only things they would like to see less of are: invasive plant species, crowds/congestion, pavement, trucks, etc.
- Seventy percent (70%) of people who responded to the survey visit the preserve more than 6 times per year.

Greene Valley

- Most respondents visit Greene Valley to spend time in nature, exercise, relax or spend time with family and friends.
- Most respondents most popular activities at Greene Valley to hike/run/walk, bike and visit the scenic overlook.
- While all aspects are important, the two (2) most important aspects of Greene Valley to survey respondents were that it protects natural areas and gives people ways to experience nature.
- The top four (4) enhancements that respondents would like to see are: restoration of natural areas, additional trails, additional drinking fountains and flush restrooms.
- The two (2) areas that respondents felt the District should be focused on improving at Greene Valley are building new trails and connections and restoring prairies, woods, wetlands, lakes, and streams.
- There are many things that people love about Greene Valley including the trails, proximity to where they live, nature, beauty, hiking, biking, overlook, birds, the dog park, etc.
- People would like to see more trails, access, drinking fountains, flush toilets, interpretive signs, benches, etc.
- People are generally happy with the current offerings, but would like to see less invasive plant species, unleashed dogs, bikes conflicting with pedestrians and crowds.
- Almost sixty five percent (65%) of the people who responded to the survey visit the preserve more than 6 times per year.

ONLINE ENGAGEMENT

Waterfall Glen

- Most respondents visit Waterfall Glen to spend time in nature, to exercise or relax, with the loop trail being the largest draw.
- The most popular activities for respondents are hiking/running/walking, biking and birdwatching.
- While all aspects are important, the two (2) most important aspects of Waterfall Glen to survey respondents were that it protects natural areas and gives people ways to experience nature.
- The top three (3) elements that the respondents would like the District to provide are: additional trails, restoration of natural areas and providing more locations along the trails for drinking water.
- The two (2) areas that respondents felt the District should be focused on improving at Waterfall Glen are restoring prairies, woods, wetlands, lakes, and streams then building new trails or connections.
- When asked where people typically park, the respondents said:
 - » Nearly thirty two percent (32%) park in or near the Waterfall lot or on Bluff Road
 - » Twenty-three (23%) percent park at the trailhead lot on Northgate Road
 - » Twenty percent (20%) at the parking lot at Lemont Road and 100 Street
 - » Eight percent (8%) said they park on Northgate Road
 - » The balance of the participants said "other" (see appendix for comments)
- There are many things people love about Waterfall Glen including the trails (especially the loop), biking, access to nature, different ecosystems, that it's beautiful, easy to access (near where they live) and the waterfall.
- People would like to see more parking, trails, restrooms, benches, picnic areas, garbage cans and interpretive signs.
- Many people would like to see less crowds.
- The second most popular comment was "nothing", indicating that they are happy with the current offerings. Additionally, respondents would like to see less invasive plant species, less bikes conflicting with pedestrians, less illegal parking and some ability to mitigate bugs (mosquitoes, ticks etc.).
- Almost sixty five percent (65%) of people who responded to the survey visit more than 6 times per year.

Agency Summary

- Thirteen of nineteen (13/19) targeted agencies responded to the survey, forty percent (40%) of which were closest to Greene Valley and just over twenty five percent (25%) for each Blackwell and Waterfall Glen. Not all respondents answered all the questions.
- Most respondents indicated that they used Blackwell for programed events and activities.
- Most respondents identified some gaps between recreational facilities and bicycle, boating and pedestrian accommodations.
- Most respondents have not encountered challenges or issues at the Forest Preserves. The largest issues were heavy use of parking spaces at Waterfall Glen resulting in reports of vehicles stopping/ parking on adjacent roadways causing traffic back-ups, delays and some unsafe conditions.

- Most respondents offered ideas on how to improve Blackwell and Waterfall Glen including maximizing access, diversity of uses within the preserves, stormwater management and ecological restoration.

Scout Group Summary

- A total of five (5) scout groups responded to this survey, not all respondents answered every question.
- Most use Blackwell, followed by Waterfall Glen and the Greene Valley for scouting activities / events.
- Most visit Blackwell twice per year, Greene Valley at least once or twice per year, and Waterfall Glen once per year.
- Most hike, camp, fish and picnic at Blackwell. Most hike, camp and visit the scenic overlook at Greene Valley. Most hike, camp or use the orienteering course at Waterfall Glen.
- Most would like to see more of nearly all the proposed improvements for Blackwell (excluding restoration of natural areas, cross-country ski trail, picnic shelters or parking lots). Most of would like to see more campsites and drinking water at Greene Valley. Most would like to see additional trails, campsites, cabin rentals, picnic shelters, flush restrooms and drinking water at Waterfall Glen.
- Most people's overall opinion of the facilities and youth-group camping at Blackwell was Good to Excellent. Very Good for Greene Valley and Very Good to Excellent at Waterfall Glen.

Accessibility Summary

- Eight (8) special needs organizations responded to this survey, not all responded to each question.
- Over sixty percent (60%) of respondents visit Blackwell, over thirty-five percent (35%) visit Greene Valley and Waterfall Glen, with the remaining indicating "Other".
- The primary reason respondents visited Blackwell was to relax or attend a program or event. The primary purpose to visit Waterfall Glen was for exercise. No one responded for Greene Valley.
- Most respondents like archery, fishing, boating, camping, paddle boating, trails or biking at Blackwell and Cross-country skiing at Waterfall Glen.
- Most people want additional trails, bike rentals, archery and cabin rentals to have accessible features at Blackwell and more drinking water within Waterfall Glen.
- Most indicate that there were barriers to accessibility at the kayak launch in Blackwell.
- Most would like to see all possible accessible amenities at Blackwell and accessible signage at Waterfall Glen.
- Most people think accessibility at Blackwell is Good to Excellent.
- Most people think accessibility at Waterfall Glen is Fair.

2 SITE VISITS

Over the course of three (3) days, the consultant and Forest Preserve District team met to conduct site visits for each of the three (3) forest preserves. The team toured each of the forest preserves to observe the facilities and grounds, document existing conditions, take note of opportunities and constraints and gain insights from staff on what is working well and where improvements could be made. ArcGIS Online Maps were created with various layers we could view in real time on tablets out in the field. We were also able to take geo-referenced photographs and log notes. Photos taken during the visits are used throughout the Discovery and Analysis report.

The schedule of the site visits occurred as follows:

- Wednesday April 14th - Greene Valley
- Thursday April 15th - Waterfall Glen
- Friday April 16th - Blackwell



Project Team in Waterfall Glen



Project Team in Waterfall Glen



Project Team in Blackwell



Project Team in Greene Valley



Project Team in Blackwell



Project Team in Greene Valley

3 ENGAGEMENT SESSIONS

Focus Group Meetings

The consulting team and Forest Preserve staff facilitated a series of virtual focus group conversations with community stakeholders to gain a greater understanding of opportunities and challenges for each of the three (3) Forest Preserves. The focus groups were comprised of stakeholders from the following groups:

1. Greene Farm Barn Ad Hoc Committee
2. Preserve Volunteers
3. Preserve Users
4. Seniors

Greene Farm Barn Ad Hoc Committee Focus Group

June 15, 2021, 6:00-7:00pm

The master plan team met with people who were associated with the former “Greene Farm Barn Ad Hoc Committee” and others to discuss the Greene Valley preserve. Jessica Ortega provided a brief overview of the master planning process and purpose for the meeting. Todd Meyer, Principal in Charge, started the meeting requesting input on the vision for the barn and any needed improvements around it. The discussion largely revolved around the potential adaptive reuse of the Greene Farm Barn in the Greene Valley Forest Preserve. Predetermined questions were asked of attendees and a detailed account of discussion items is included in the Appendix.

Most of the participants enjoy the visual quality of the barn in the landscape and that the District has made efforts to stabilize it structurally. While some people think that it is fine to remain as a visual element in the landscape, many of the participants would like to see the barn be opened and the interior of it to be accessible at least on a part-time basis. The proposed uses range from

just opening it a couple times a year so people can see what it looks like inside to an open-air community gathering place to a fully renovated and conditioned space that could hold indoor receptions and events. However, most people like the comfortable and informal quality of the place and are not in favor of making it too polished or losing the authentic or genuine experience of the barn as a historical asset. There was a suggestion of converting the silos to an alternate use such as climbing walls. It was suggested that outdoor gathering space with picnic tables was as important as the indoor space. For more information regarding the barn specifically, refer to the market study that was completed as a part of this stage of work.

Regarding the balance of the Greene Valley preserve, most participants really like the existing trails and facilities, spending time in nature, and wouldn’t change much about it. In general, the participants would like to see more programming and events at the preserve. This includes family-oriented programming that is welcoming to people of all ages and abilities such as interpreting nature, movie night, art or music festivals, food trucks, etc. There were suggestions to study the traffic & provide additional parking, particularly if an

Focus Group Attendance		
	Registered	Attended
Green Farm Barn Ad Hoc	10	15
Volunteers	31	14
Preserve Users	26	9
Seniors St James Farm Session	N/A	9
Seniors Mayslake Session	N/A	13

increased amount of events or programming take place. Some of the participants would like better trail connections to the surrounding neighborhoods. Many participants would like to celebrate the history, culture, agriculture and nature through interpretive signs and elements. Some participants would like to see bike rentals including adaptive bikes. Several participants would like to see more access to the river for fishing and boating.

Senior Focus Group

June 21st, 2021, 6:30-8:00pm

June 25th, 2021, 10:30-12:00pm

Shannon Burns, Education Program Coordinator at Mayslake Peabody Estate for the Forest Preserve District of DuPage County facilitated two (2) senior focus group meetings. A detailed summary has been provided in the Appendix.

Volunteer Focus Group

June 16, 2021, 6:00pm-8:00pm

The Volunteer Focus Group was held virtually. The consultant team led three activities: Love, More, Less, Hidden Gems and Focus Areas to solicit feedback. Engagement themes and trends are summarized later in this chapter under each forest preserve.

Preserve Users Focus Group

June 17, 2021, 6:00pm-8:00pm

The Preserve User Focus Group was held virtually. The consultant team led three activities: Love, More, Less, Hidden Gems and Focus Areas to solicit feedback. Engagement themes and trends are summarized later in this chapter under each forest preserve.

District Staff Engagement Sessions

The consulting team facilitated a series of virtual district staff conversations by department in order to gain a greater understanding of opportunities and challenges facing each of the three Forest Preserves from their perspectives. The staff sessions consisted of the following groups:

District Staff Engagement:

June 10, 2021, 9:00-11:00am

Resource Management and Development:

June 17th, 9:00-11:00am

Natural Resources and Grounds:

June 23rd, 9:00am-11:00am

Staff Engagement Attendance	
	Attended
Community Engagement	8
Resource Management and Development	9
Natural Resources and Grounds	8

The staff department sessions were spread out over the course of several weeks. Jessica Ortega, Landscape Architect Supervisor and project manager for the Forest Preserve District master plans began each meeting with some background on the master planning initiative. Todd Meyer, Stantec Principal in Charge, spoke about the importance of a master planning process and the value of public engagement in creating recommendations. Sarah McDonald, Stantec project manager, highlighted the current scope of work, introduced the StoryMap and Survey and introduced the MURAL pages for each session.

ENGAGEMENT SESSIONS

Public Engagement Sessions

The consultant team and Forest Preserve staff facilitated a series of virtual public conversations with community stakeholders to gain a greater understanding of opportunities and challenges facing each of the three Forest Preserves. The focus groups were comprised of stakeholders from the following general categories:

Blackwell: June 22nd, 2021, 6:00-8:00pm

Greene Valley: June 23rd, 2021, 6:00-8:00pm

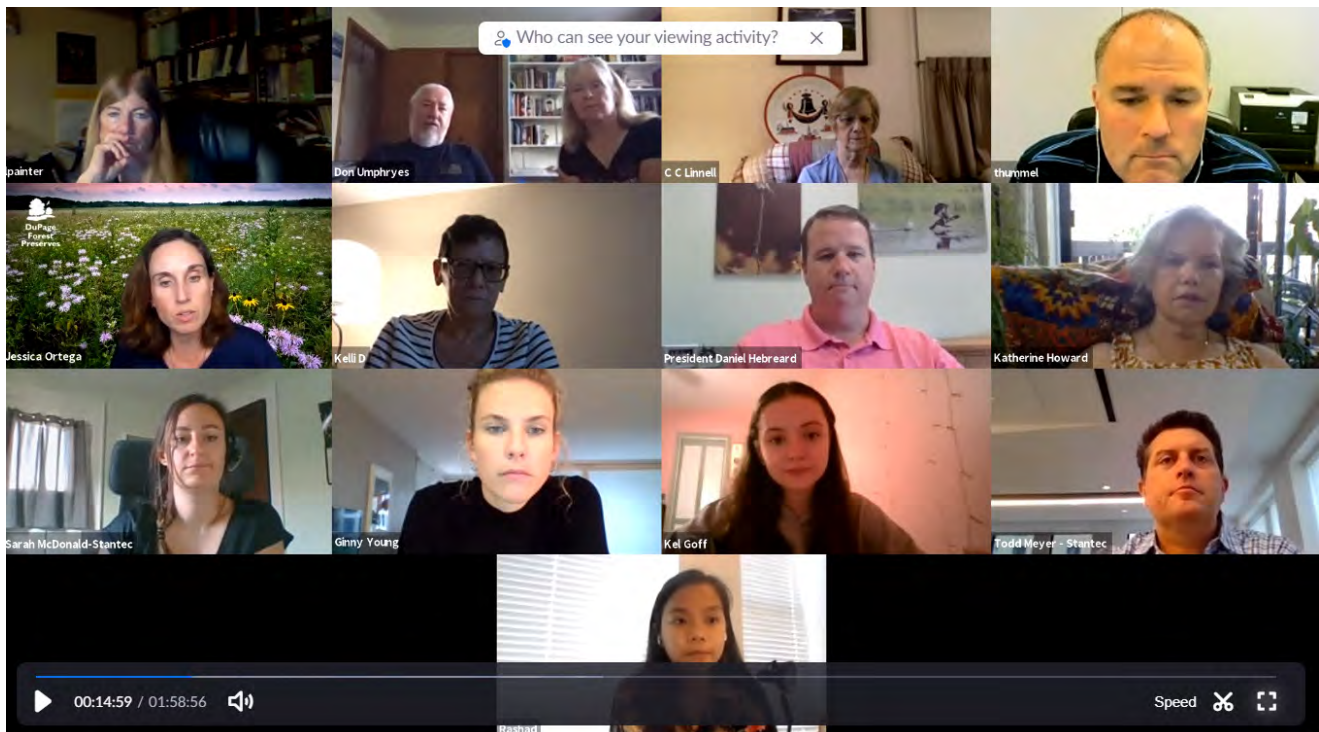
Waterfall Glen: June 30th, 2021 6:00-8:00pm

As part of the stage 1 and 2 work effort, stakeholder engagement was important for the District and Stantec to provide opportunities for preserve users to provide insight and feedback in a variety of ways. One of these opportunities, which was shared on the FPDDC website and social media channels, was to participate in a virtual engagement session. In a typical planning process, this type of session would be held in the

community at some type of well-known gathering space. However, due to the Covid-19 pandemic, the event was scheduled and held on Zoom with residents participating virtually. The session included a brief overview presentation and several “breakout room” exercises to gather input from the public on a variety of broad topics.

The breakout room exercises are described and summarized under each preserve heading.

Public Engagement Attendance		
	Registered	Attended
Blackwell	62	38
Greene Valley	47	36
Waterfall Glen	32	29



District Leadership / Commissioner 2x2 Interviews

District staff and the consulting team facilitated 2x2 conversations with commissioners to gain a greater understanding of opportunities and challenges facing each of the three (3) Forest Preserves from their perspectives. Jessica Ortega, Karie Filing and Todd Meyer facilitated these in-person sessions over the course of two (2) weeks. The overall planning process was described and then the participants were asked to provide their comments on the elements that are working well and what elements need improvement based on their own experience as well as conversations with preserve users in their districts. As expected, the commissioners had more to offer about the preserves within their district, however, each was given the opportunity to provide comments on all three (3) preserves.

The following individuals participated in the 2x2 Interviews:

- President Daniel Hebreard
- District 1 — Commissioner M. Murphy
- District 2 — Commissioner Tyson-Dunne
- District 3 — Commissioner Painter
- District 4 — Commissioner Gahrns
- District 5 — Commissioner O'Meara
- District 6 — Commissioner A. Murphy

In general, this group was largely satisfied with the overall state of the preserves and did not provide any aspirations for significant changes to occur in the future. The discussions largely revolved around maintaining what elements are already in place and making enhancements that would improve the existing conditions such as site access, pedestrian and bicycle circulation, safety of users with car

traffic, parking, expanding existing programs and ecological restoration. Additional comments are listed in the next section and in the export of the MURAL board comments.

4 ENGAGEMENT THEMES AND TRENDS

Below is a high-level summary of the themes and trends from each of the public engagement sessions. Full engagement meeting Mural comments are available in the Appendix of this document. A summary of the focus group conversations are included by topic under each preserve heading below. Note that this is a general summary of topics and themes and not a specific documentation of every comment and conversation.

BLACKWELL

Public

- Participants love Blackwell for the trails, variety of programming and the natural beauty.
- Participants think there should be less pavement, less turf grass and fewer invasive species.
- Participants would like to see more trail connections, particularly along Mack Road and the East side of the lake.
- Participants would like to see additional ecological restoration, particularly for South Blackwell.

District Staff

- Staff love the existing ecosystems and diversity of habitats and wildlife.
- Staff would like to see additional opportunities for stormwater management, ecological restoration, improvements to the trail system and that the latrines be replaced with flush toilets.
- Staff would like to see less mowed turf areas and invasive species.

District Leadership / Commissioners

- Commissioners like the activities offered such as camping and kayaking. They also enjoy the natural beauty, the restoration being done, and the trail around Silver Lake.
- Commissioners would like to see trail access along Mack Road, education elements, signage, flush toilets, and trail improvements.
- Commissioners would like to see fewer new developments, and truck traffic.

Seniors

- Seniors enjoy all of the activity offerings; trails and the restoration being done.
- Seniors would like to see more senior friendly trails, activities and amenities. They also emphasized the need for safety and education.

Volunteers

- Volunteers enjoy the birds, activities and the trails.
- Volunteers want to see more habitat restoration and improvements to the trail system, including access around Silver Lake.
- Volunteers would like to see enforcement of fewer off-leash dogs on the trails.

Preserve Users

- Preserve Users love the archery range, single-track mountain bike trails and camping.
- They also love how accessible Blackwell is but how remote it feels when inside it.
- Preserve Users would like to see more winter activities like ice skating and fishing.

GREENE VALLEY

Public

- Participants love Greene Valley for the trails, its proximity and natural beauty.
- While some said that Greene Farm Barn is an asset, most say that they would not like to see it commercialized.
- Participants want to see more improvements to the trail system, native plant restoration, adding trash receptacles, flush toilets and enforcement / improvement of trail etiquette.

Greene Farm Barn Ad Hoc Committee

- The Ad Hoc Committee loves the visual quality of the preserve, existing trails, and facilities.
- The Ad Hoc Committee would like to see more parking, celebration of history, revenue and to preserve the barn.
- The Ad Hoc Committee has a strong desire to move forward with the 2019 plan, even if that means implementation needs to be phased.
- The Ad Hoc Committee sees developing the barn as a gathering space as a priority and event rentals should not be a focus.
- Questions remain about who would operate the facility and where funds would come from to renovate it.

District Staff

- Staff love the ecosystems, natural beauty and amenities.
- Staff would like to see opportunities for stormwater management, restoration, and improvements in maintenance, signage, and the trail system.
- Staff would like to see less mowed turf areas and invasive plant species.

District Leadership / Commissioners

- Commissioners enjoy the dog park, overlook and bird habitat.
- Commissioners would like to see more picnic tables, trails, and improvements to trail access.
- Commissioners did not think investing more money in the Greene Farm Barn is a top priority

Seniors

- Seniors enjoy the proximity of their homes to the preserve, bird watching and natural beauty of Greene Valley.
- Seniors would like to see more senior friendly trails, activities, and amenities. They also emphasized the need for safety and education.
- Seniors would like to see less uneven paths and renovations to the Greene Farm Barn.

Volunteers

- Volunteers enjoy the overlook and bird watching.
- Volunteers want to see more trails and road improvements.
- Volunteers are not in favor of commercializing the Greene Farm barn.

Preserve Users

- Preserve Users love the diverse habitat, campground, and trails.
- Preserve Users would like to see more trees, more drinking fountains, an expansion of the dog park and would like the overlook to be open more often.
- Preserve Users would like less flooding issues on the trails, and ways to reduce vandalism and theft in the parking lots.

ENGAGEMENT THEMES AND TRENDS

WATERFALL GLEN

Public

- Participants love Waterfall Glen for hiking, biking and its natural beauty.
- The Preserve gets crowded. Some participants want more parking. Others think additional parking will cause more crowding at the preserve.
- Participants want to see more improvements to the trail system.

District Staff

- Staff love the diverse ecosystems, trails, preservation, and the waterfall.
- Staff would like to see more parking lots, improvements to trail access and amenities (replacing latrines with flush toilets) and prioritizing natural resources in the master plan.
- Staff would like to see less trash within the Preserve.

District Leadership / Commissioners

- Commissioners love the interpretive signs in the preserve.
- Commissioners would like to see improvements such as flush toilets, safer parking options and increased ranger presence.
- Commissioners would like to see less paved trails and large crowds.

Seniors

- Seniors love the trails, ecosystem restoration, and the waterfall.
- Seniors would like to see more

senior-friendly trails, activities, and amenities. They also emphasized the need for safety and education.

- Seniors would like to see less horse manure on the trails, crowds and off trail biking.

Volunteers

- Volunteers love the habitat, activities, and unique species the preserve has to offer.
- Volunteers don't think Waterfall Glen needs more of anything.
- Volunteers would like to see less parking.

Preserve Users

- Preserve Users love the single-track mountain bike trails, wildlife, and the waterfall.
- Preserve Users would like to see more access points, signage and improvements like flush toilets, benches, and hydration stations.
- Preserve Users would like less flies and trash.

THIS PAGE INTENTIONALLY
LEFT BLANK

BLACKWELL
FOREST
PRESERVE

Discovery &
Analysis

IN THIS SECTION:



NATURAL
RESOURCES



PHYSICAL
RESOURCES



CULTURAL
RESOURCES

DISCOVERY



SWOT
ANALYSIS

EXISTING CONDITIONS

BLACKWELL

Blackwell Forest Preserve is located in Warrenville, Illinois. Residents of DuPage County and surrounding areas heavily use the 1,366 acre preserve. Passive activities typically occur in the northern half of the preserve, while the southern half contains more active recreation. The diverse uses within the preserve provide something for everyone, and are a main reason people love and use the preserve.

Blackwell offers fishing, camping, archery, a boat launch, picnic shelters, an off-leash dog area, a compass course, and stunning views from the top of Mt. Hoy. In the winter, Blackwell provides users space to snow tube, cross country ski, and snowshoe, making this preserve an outdoor destination year-round.

Blackwell is also home to the Urban Stream Research Center, which provides aquatic conservation programs and is the only one of its kind in the state of Illinois.

Chapter Summary

This chapter is organized into four sections:

1 NATURAL RESOURCES

This section provides an overview of the existing conditions of Blackwell, identifying the ecosystems, soils, hydrology and physiography, and wildlife found on-site. Observations for each of these categories inform the strengths and weaknesses of the preserve's natural resources.

2 PHYSICAL RESOURCES

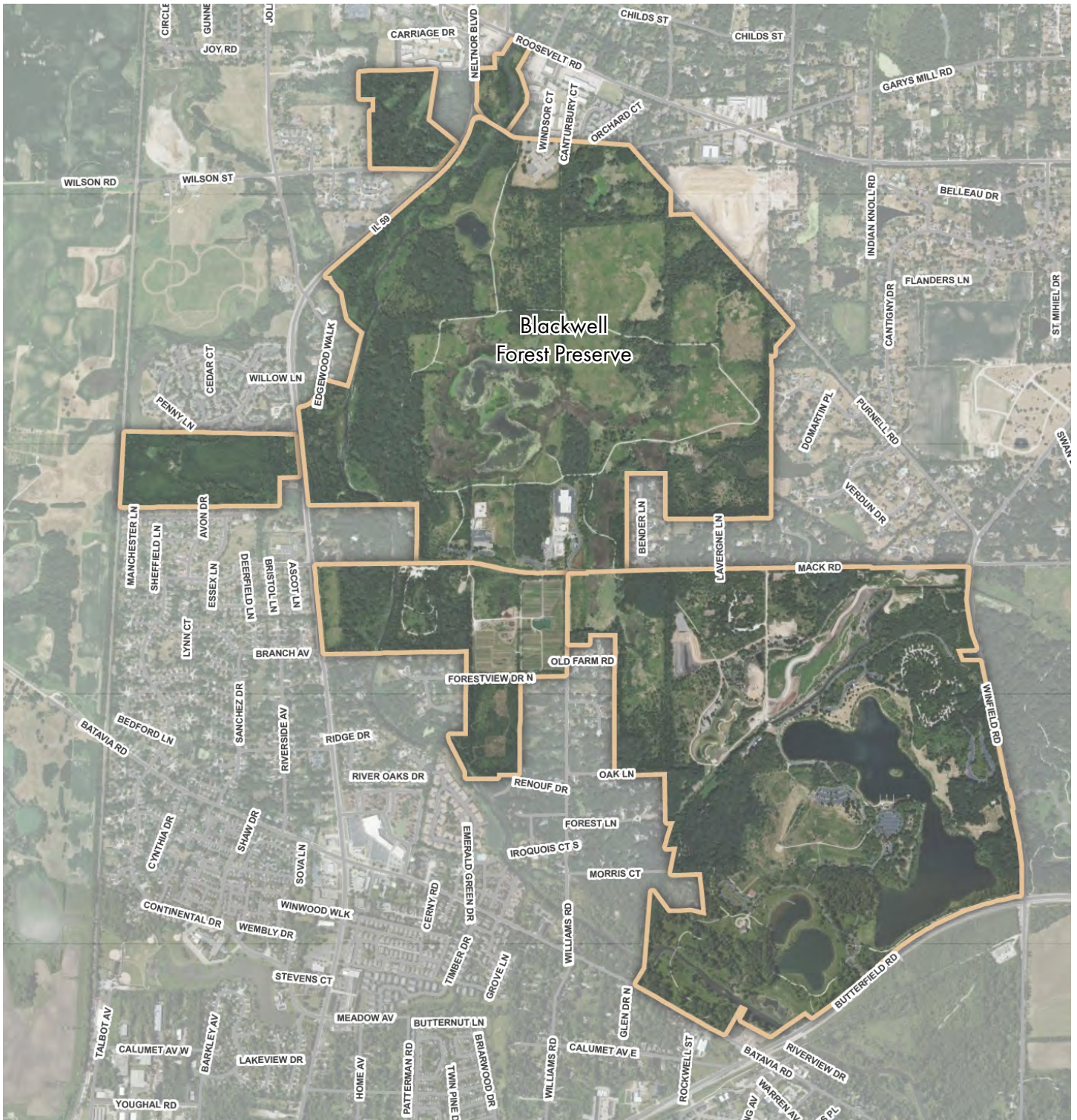
This section focuses on infrastructure, facilities and surrounding land uses. These categories inform the strengths and weaknesses analysis concerning the physical resources at the preserve.

3 CULTURAL RESOURCES

Cultural resources include site history and current use of the preserve. The section concludes with an assessment of these categories to illustrate the cultural resource assets.

4 STRENGTHS, WEAKNESSES, OPPORTUNITIES & THREATS ANALYSIS

This section synthesizes the information from sections 1-3 to illustrate what the preserve is currently doing well and what could be improved.



Blackwell Forest Preserve



1 NATURAL RESOURCES

DISCOVERY

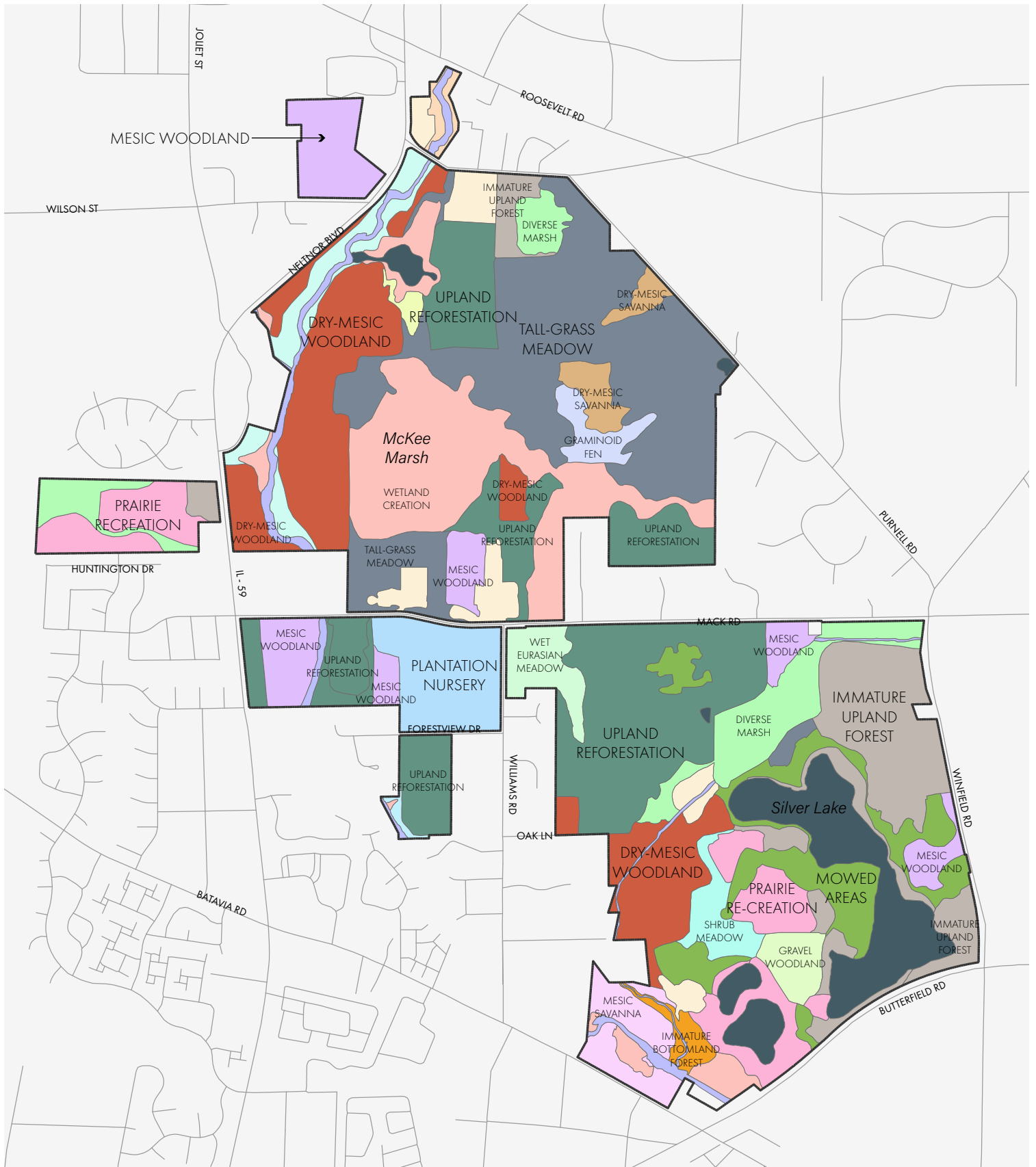
ECOSYSTEMS

Blackwell Forest Preserve includes a diverse assemblage of habitat types ranging from remnant kame and woodland communities to extensive marshes, fen, and grassland ecosystems (as seen in the adjacent map). The preserve has a complex history of mixed land uses across the site, which shaped the present landscape. For example, in the northern portion of the preserve (north of Mack Road) is McKee Marsh. The marsh draws many users and diverse species of wildlife. The marsh has trails and two vernal ponds that provide a home for amphibians and migratory bird species. Other ecosystems in Blackwell, including hickory woodlands, prairies, grasslands and wetlands, serve as habitats that attract native wildlife like turkeys, deer, bald eagles, blue herons, coyotes, foxes and muskrats.

Existing conditions within the natural areas of Blackwell Forest Preserve, summarized below, were derived from preliminary site reconnaissance conducted by the consultant team, as well as, through background data provided by FPDDC and publicly available GIS resources. Organization of existing conditions summaries are according to FPDDC ecosystem divisions and grouped based on assigned community type. The delineation of the ecosystems present at the preserve into these divisions help inform sensitive areas and those supportive of programmatic activities.

LEGEND

	Preserve Boundary
	Diverse Marsh
	Shrub Marsh
	Tree Marsh
	Monoculture Marsh
	Graminoid Fen
	Gravel Woodland
	Immature Bottomland Forest
	Immature Upland Forest
	Wet-Mesic Bottomland Forest
	Upland Reforestation
	Wet Bottomland Forest
	Dry-Mesic Savanna
	Mesic Savanna
	Mesic Woodland
	Dry-Mesic Woodland
	Shrub Meadow
	Tall-Grass Meadow
	Wet Eurasian Meadow
	Prairie Re-Creation
	Prairie / Wetland Creation
	Mowed Areas
	Plantation Nursery
	Residence / Facility Complex
	Lake or Pond



NATURAL RESOURCES

DISCOVERY

DRY AND DRY-MESIC WOODLANDS

A major component of the uplands at Blackwell includes dry and dry-mesic woods, which consist of dry-mesic savannas, dry-mesic woodlands, and kame ecosystems. These oak and hickory dominated woodland systems widely found throughout the preserve are generally associated with higher elevations on knobs and ridges. Based on examination of historic aerial imagery, dry-mesic woodlands and savannas were not heavily cultivated following settlement and appear to have hosted grassland vegetation with sparse to moderate canopy cover. The Kame (a regionally rare remnant plant community) was not cropped and was likely a closed-canopy forest prior to European settlement. The largest of these ecosystems, including the River Savanna North, Spring Brook Woods, and Kame, retain conservative, remnant, native vegetation and provide critical wildlife habitat. Collectively, these ecosystems occupy approximately 163 acres of the preserve.

Current Management Regime And Ecological Constraints

The Kame, River Savanna North, Spring Brook Woods, Marsh Savanna, and portions of the other dry-mesic woodlands are actively managed by FPDDC for limited canopy reduction and invasive species control. Those management efforts are limited by capacity and in many cases have not been followed by ongoing chemical control of woody re-sprouts or frequent burning. As such, the majority of these ecosystems remain degraded by encroachment and shading from invasive brush and mesophytic trees, resulting in dense canopies not likely representative of their historic condition.

Potential Ecological Services

The dry and dry-mesic woodlands at Blackwell provide critical habitat for conservative plant assemblages and native wildlife. Those services may increase through continued site management focused on removal and follow-up treatment of invasive brush. This is in addition to selective tree removal and periodic prescribed burning to maintain overall canopy levels and woodland structure similar to historic conditions. These necessary management practices improve overall plant species diversity and wildlife habitat quality. Class 3 and 4 woodlands contain remnant plant communities which may be negatively affected by expansion of cultural developments and trails. Any proposed cultural improvements should be designed specifically to avoid such impacts, and are best concentrated in lower quality woodland units or adjacent Eurasian meadows.

MESIC WOODLANDS AND MESIC SAVANNA

Existing mesic woodland tracts dispersed throughout Blackwell are largely within transitional areas between the upland hills, low marshes and river corridors. Examination of historic aerial imagery indicates many of these ecosystems remained uncultivated during the mid-twentieth century and were likely marginally affected by agricultural and commercial development in adjacent areas. Historic canopy levels were mixed, with the majority of mesic woodland ecosystems supporting moderate to dense tree cover. Present conditions in the mesic woods are also mixed. Several communities, including the Cenacle Grounds, Shop Savanna, River Savanna South, and Amphitheater Woods contain conservative native plant assemblages and high-quality wildlife habitat. Mesic woodlands and savannas occupy approximately 95 acres of the site.

Current Management Regime And Ecological Constraints

The Class 3 and 4 mesic woodlands, as well as the Cenacle Grounds, are actively managed by FPDDC and volunteers to control invasive species and protect conservative plant species. While this includes limited native tree removals, current canopy levels are somewhat denser than they were historically. Because management is constrained by available resources, ongoing follow-up treatment of woody invasive species is not performed consistently across these ecosystems, and they are subject to continued invasion and canopy closure. This may limit overall plant diversity and favor generalist species.

Potential Ecological Services

The mesic woodlands and savanna at Blackwell provide relatively high-quality wildlife habitat and support a high diversity of native plants, but ecosystem services are limited by long-term management capacity. The greatest potential for increased ecosystem services likely comes from additional efforts to maintain previously restored portions of the community, and through expansion of restoration efforts into lower-quality tracts. Restoration goals should consider pre-settlement conditions and, to the extent practical, recreate historic woodland structure through selective removal of mesophytic trees and shrubs.

UPLAND REFORESTATION AND IMMATURE FOREST COMMUNITIES

Occupying more than 316 acres of the preserve, upland reforestation and immature forest communities are the largest and most widely

distributed ecosystems at Blackwell. These communities occur almost exclusively in areas cultivated during early settlement or those later impacted by quarry or landfill development. As a result, they lack mature tree cover and have limited potential for restoration of remnant plant resources. The largest two ecosystems in this group, South Mack Meadow and Campground Woods, boast relatively rich plant communities and quality wildlife habitat. The remainder of the upland reforestation and immature forest communities are largely low-quality habitats with immature tree cover and ground plane vegetation dominated by a mix of invasive shrubs, exotic forage grasses, and non-conservative native forbs.

Current Management Regime and Ecological Constraints

FPDDC actively manages portions of the reforestation and immature forest areas for control of invasive species. Management activities are limited in scope and largely restricted to those areas adjacent to trails, public access points, campgrounds, and recreational facilities, especially around Silver Lake and the Dog Exercise Area. Because these ecosystems were heavily impacted by prior land uses, remnant flora has likely been extirpated and restoration of high-quality native plant communities may be impractical.

Potential Ecological Services

While the upland reforestation and immature forest ecosystems are unlikely to be restored to high-quality native plant communities, they do provide basic ecological services for generalist wildlife habitat, soil stabilization, and stormwater infiltration. Those services can be increased



NATURAL RESOURCES

DISCOVERY

through efforts to reduce invasive species and promote floristic diversity. Invasive species control, particularly removal of exotic trees and shrubs, may also provide a buffer from invasion in adjacent habitats.

BOTTOMLAND FORESTS

Portions of the riparian corridors along the West Branch of the DuPage River and Spring Brook support immature bottomland forests, wet bottomland forests, and wet-mesic bottomland forests totaling roughly 35 acres. While canopy levels vary across these ecosystems, vegetative cover composition is relatively consistent. Canopy trees consist primarily of colonizing natives such as green ash, cottonwood, and silver maple. Understory vegetation is dominated by invasive shrubs, reed canarygrass, and a sparse mix of exotic forbs and aggressive natives. Larger expanses of reed canarygrass flats occupy much of the North Floodplain. Aerial imagery suggests that these ecosystems were somewhat more open historically and likely supported grassland ecosystems such as wet prairies, wet-mesic savannas, and sedge meadows. Evidence suggests that bottomland forests at Blackwell were not significantly impacted by agricultural or commercial development.

Current Management Regime and Ecological Constraints

The bottomland forest ecosystems at Blackwell are generally not managed for control of invasive species or re-establishment of native plant communities. Because the bottomland forests and floodplain were not significantly impacted by development, there may be potential to restore remnant plant resources. However, restoration

of these communities is complicated by several ecological constraints. Since these areas are subject to seasonal flooding from relatively low-quality surface waters, repeated invasion by persistent wetland invasives (particularly reed canarygrass) may be difficult to overcome. Soil moisture and bottomland topography also complicate management access and may make canopy reduction and removal of exotic shrubs challenging.

Potential Ecological Services

Bottomland forest communities at Blackwell provide important ecological services for stormwater management, flood control, and wildlife habitat. These services may be increased through targeted invasive species control, prescribed burning, and efforts to restore native plant communities which more closely resemble historic conditions within the riparian corridors. However, management of floodplain plant communities can be challenging based on site access constraints, dynamic hydrology, and ongoing disturbance vectors from flooding and upstream seed sources. Where effective control may be impractical (eg. persistent wetland invasives within the floodplain) value may still be gained from remedial management that reduces the spread of invasive species into adjacent habitats. Bottomland forests are almost exclusively wetlands, riparian habitats, and floodways that are protected by federal, state, and local regulations. These areas are generally not appropriate for expansion of cultural elements or further development, unless that development is designed to directly improve flood storage, stormwater treatment, habitat value, or access for site management.

Prairie Re-Creation

Approximately 68 acres of former agricultural fields at Blackwell have been converted to tallgrass prairie ecosystems. These are de novo systems, or re-creations of historic prairies which likely existed at the site prior to European settlement. Dominant plant species include warm season native grasses and low to moderately conservative native forbs, with competition from Eurasian forage grasses, exotic shrubs, and weedy herbaceous species.

Current Management Regime And Ecological Constraints

FPDDC actively manages prairie re-creations at Blackwell through regular prescribed burning, periodic mowing, and limited chemical control of invasive species. These management practices are applied relatively evenly across the various ecosystems, but frequency is limited by capacity and available resources. Where management is performed less frequently, invasion by exotic brush, cool season grasses, and weedy forbs is a consistent threat. This is particularly evident along the edges of the prairies, where adjacent forested areas, roads, and trails provide a seed source for exotic species.

Potential Ecological Services

While prairie re-creations generally do not have the potential to match the floristic quality of remnant plant communities, they do provide important ecological services for stormwater infiltration, soil stabilization and nutrient enrichment, carbon sequestration, and wildlife habitat. Prairie re-creations are particularly beneficial to pollinators and grassland birds. Those services are generally increased relative to floristic diversity and recruitment of a wide variety of deep-rooted

native perennials with range of flowering times. Consistent management, particularly prescribed burning and control of invading woody species, is necessary to promote diversity in de novo prairie systems. Ecological services may also be increased through expansion of the prairie re-creation ecosystems into adjacent mowed turf areas.

EURASIAN MEADOWS

Eurasian meadow ecosystems at Blackwell include shrub meadows, tallgrass meadows, and wet meadows totaling approximately 231 acres. Generally, Eurasian meadows consist of old-field plant communities dominated by a mix of perennial Eurasian grasses, common native and exotic forbs, and invasive shrubs. However, two of the meadows at Blackwell (McKee Meadows and Shop Meadow) contain significant native grass components and higher overall floristic quality than is typical in this community type. Examination of historic aerial imagery indicates that all of the Eurasian meadow communities at the preserve have been impacted by historic agricultural development and cultivation.

Current Management Regime And Ecological Constraints

FPDDC actively manages McKee Meadows and Shop Meadow with prescribed burning and limited invasive species control. The remaining Class 1 and 2 Eurasian meadow areas are generally not managed. On their current trajectory, these systems are likely to succeed toward mesic or wet-mesic forest systems driven by encroachment from invasive shrubs and shade tolerant canopy trees. This process often results low overall species diversity and poor wildlife habitat.

NATURAL RESOURCES

DISCOVERY

Potential Ecological Services

McKee Meadows and Shop Meadow are both contiguous with the McKee Marsh wetland complex and therefore provide critical services for wildlife habitat and act as a buffer from invasive species. Continued management of these systems, including efforts to reduce woody invasives, is important to maintaining and improving those services over time. As stable perennial plant communities, the remaining Class 1 and 2 Eurasian meadows do provide important ecological services through soil stabilization and stormwater infiltration. They also offer marginal wildlife habitat as cover and forage for mammals, and moderate value for pollinators and grassland and shrubland birds. These services may be improved through periodic control of invasive species and/or burning to discourage woody encroachment and increase plant diversity. While restoration of Eurasian meadows is unlikely to result in highly conservative native plant communities, ecological services may increase by converting these areas to native prairie re-creations.

MARSHES AND FEN

Blackwell's wetland ecosystems vary widely in character and plant species composition. They include wetland re-creations, diverse marshes, shrub and tree marshes, and a disturbed fen. Collectively, they occupy roughly 214 acres of the preserve. In the northern sector, McKee Marsh and the contiguous Pond Prairie provide critical wildlife habitat and boast relatively high-quality plant communities as compared to other on-site wetlands. In the southern sector, Mack Road Marsh and Butterfield wetlands support relatively diverse

native vegetation along the floodplains of Spring Brook and the West Branch of the DuPage River. The remaining Class 1 and 2 wetlands are generally degraded and are dominated by persistent wetland invasives such as reed canarygrass and exotic cattails, as well as invasive brush.

Current Management Regime And Ecological Constraints

FPDDC actively manages the Class 3 and 4 marshes with prescribed burning and invasive species control to maintain floristic diversity and wildlife habitat quality. Much of the Mack Road Marsh was recently restored as part of the Phase 2 Spring Brook No. 1 Wetland and Creek Restoration project which included dam removal, stream re-meandering, channel and bank improvements, and re-vegetation of floodplain and adjacent upland communities with native vegetation. These areas will likely require continued, long-term management to ensure successful vegetation establishment and limit competition from reed canarygrass and other persistent wetland invasives. In lower quality wetlands, invasive species populations are well established and may be impractical to control given existing seed sources and localized hydrology.

Potential Ecological Services

In addition to their value to wildlife and plant species richness, the wetland ecosystems at Blackwell provide important watershed-scale services for stormwater treatment and flood attenuation. The greatest potential for gain in ecosystem services may result from increased efforts to control invasive species, increase native

plant diversity, and improve species-specific wildlife habitat requirements. Critical to those efforts is a detailed evaluation of stormwater inputs into each community, and where practical, taking steps to mitigate the volume, input frequency, temperature, suspended sediments, and pollutant load of surface water entering marsh communities throughout the preserve. Marshes and fens are protected by federal, state, and local wetland regulations.

AQUATIC COMMUNITIES

Blackwell contains rather extensive surface water resources which collectively occupy almost 104 acres of the preserve. Stream systems include the West Branch of the DuPage River and two of its largest tributary streams, Kress Creek and Spring Brook No. 1. The river and its tributaries drain almost half of DuPage County's total land area, a highly urbanized watershed which includes extensive residential and commercial development relative to open space. There are also six ponds and lakes present at the site, including Silver Lake, White Pine Pond, and Sand Pond which are heavily used for recreational fishing and boating. Silver Lake and Sand Pond were both man-made through past quarry operations.

Current Management Regime And Ecological Constraints

The aquatic ecosystems at Blackwell are heavily managed relative to other aquatic resources in the District. Spring Brook No. 1 has undergone two phases of restoration to date, the most recent of which was completed in 2021. Those efforts have been undertaken, in part, to restore stream

hydraulics which were previously affected by damming and channelization, improve aquatic habitat within the stream channel, and reconnect the creek to its historic floodplain. Downstream portions of Spring Brook No. 1 remain channelized and suffer similar ecological constraints. Silver Lake, White Pine Pond, and Sand Pond are managed as recreational fisheries, which includes regular stocking of gamefish and forage species. Sanctuary Pond, Scout Pond, and Purnell Pond are not managed for aquatic resources outside of very limited invasive species control along their banks.

Potential Ecological Services

While it is beyond FPDDC's capability to manage off-site stormwater inputs and overall watershed characteristics which influence aquatic communities at Blackwell, there is potential to increase the ecological services they provide, including important local wildlife habitat and improved downstream water quality. Increased ecological services may be realized through additional restoration along Spring Brook No. 1, enhancement of floodplain plant communities throughout the watershed, and efforts limit sources for sediment and pollutants. The West Branch DuPage River Watershed Plan, prepared by DuPage County Division of Stormwater Management in 2006, provides a comprehensive summary of land management practices and watershed protection measures which may provide the best opportunities for influencing habitat quality downstream.

NATURAL RESOURCES

DISCOVERY







SOILS & GEOLOGY

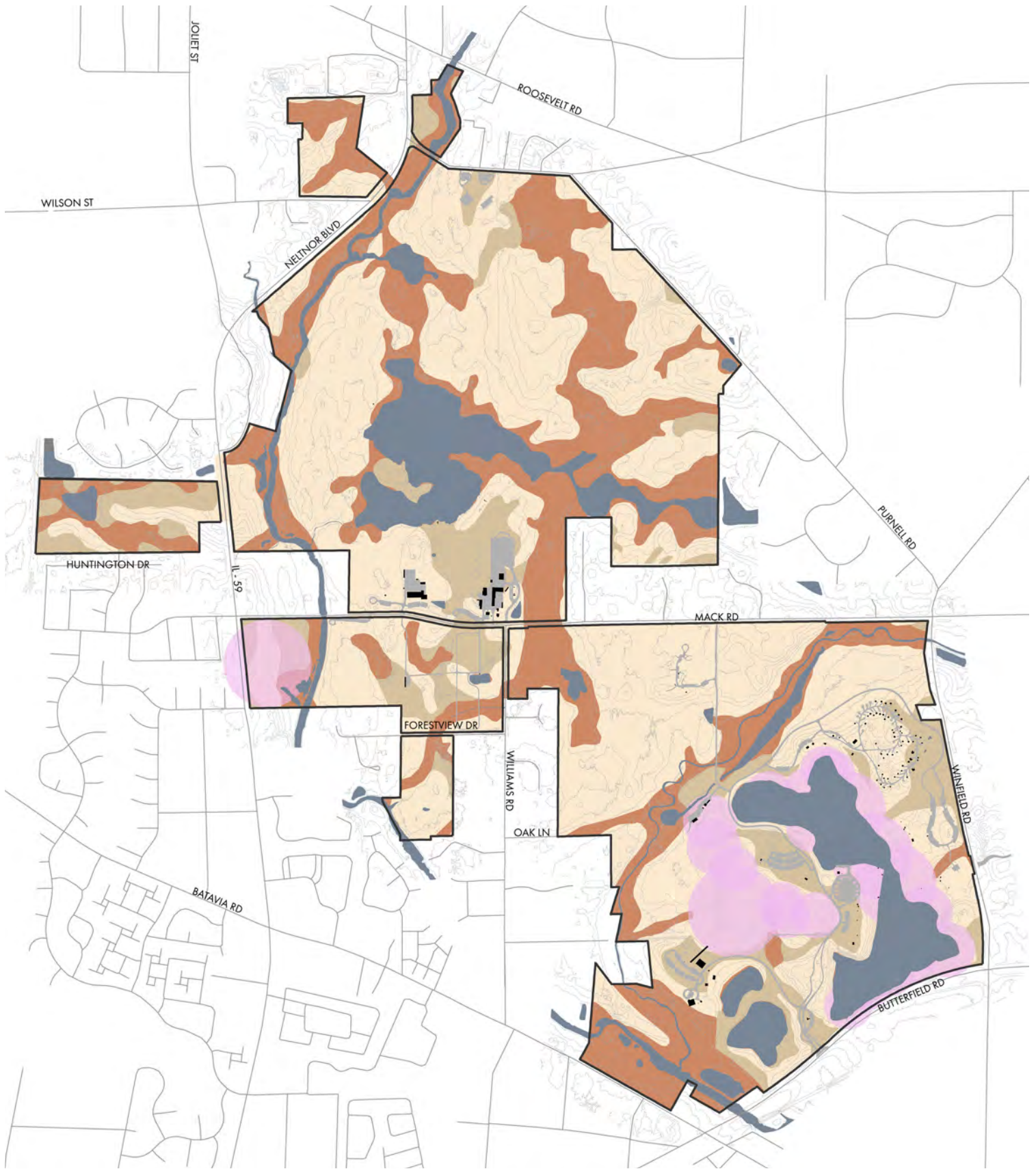
Blackwell has dozens of soil types, ranging from clay soils to silty loam soils. Most of the soil types are some variation of loam, and many include a silt component. The most common type of soil is Fox silt loam, but other common types are Orthents (near the ponds and Silver Lake), and Del Rey silt loam (near the nursery and McKee Marsh).

Hydric soils are soils that are classified as “very poorly draining” or “poorly draining” and retain water long enough that the soils become anaerobic. These areas shown on the map to the right include some of the soil types / areas listed above: The areas associated with the Orthents soil type are not ideal for future infrastructure, as they all are related to water bodies and therefore Hydric soils.

The soils information together with other considerations will be used by the master planning team in subsequent stages of work to indicate the best places to focus on ecologic restoration, storm water management, recreation areas, trails, pavilions and other shelters, access drives, parking areas, etc.

LEGEND

-  Preserve Boundary
-  Water Bodies
-  Steep Slopes
-  Hydric Soils
-  Hydric Inclusive Soils
-  Non-hydric Soils



NATURAL RESOURCES

DISCOVERY

HYDROLOGY & PHYSIOGRAPHY

Blackwell is comprised of creeks, ponds, a lake, the West Branch DuPage River, and McKee Marsh. These systems are connected by ecologies and landforms like Mt Hoy and other hilly, rolling landforms.

Slope Analysis

In general, there are not too many steep slopes in Blackwell. The steepest slopes are around Silver Lake and at Mt. Hoy. There are some steeper slopes along waterways, but most of the preserve has gentle topography.

Floodplain and Floodway

The Federal Emergency Management Agency (FEMA) has a Flood Map Service Center (MSC) that provides the public flood hazard information produced in support of the National Flood Insurance Program (NFIP). FEMA creates maps showing floodplain and floodway limits based on the communities local flood risk.

A floodplain is comprised of the floodway and the floodway fringe. The floodway is the primary conveyance area of a channel that naturally manages flood waters. The floodway must remain open to drain flood waters. The flood fringe refers to the areas outside of the floodway located below the Base Flood Elevation. The 100 year floodplain refers to any area that has one percent chance of experiencing a base flood in any given year. It is important to understand the implications of making improvements along West Branch DuPage River and the other water bodies in the preserve.

West Branch DuPage River

The West Branch DuPage River snakes through the preserve on the northwestern edge. The river is accessible by users from the kayak launch near the off-leash dog park. It is within a watershed by the same name: the West Branch DuPage River Watershed.

Watershed

Blackwell is within the West Branch DuPage River Watershed, which includes 128 square miles of DuPage, Cook and Will Counties. The main stem of the river is 34 miles long, and the watershed includes 21 municipalities, and 7 publicly owned treatment plants discharge to the West Branch.

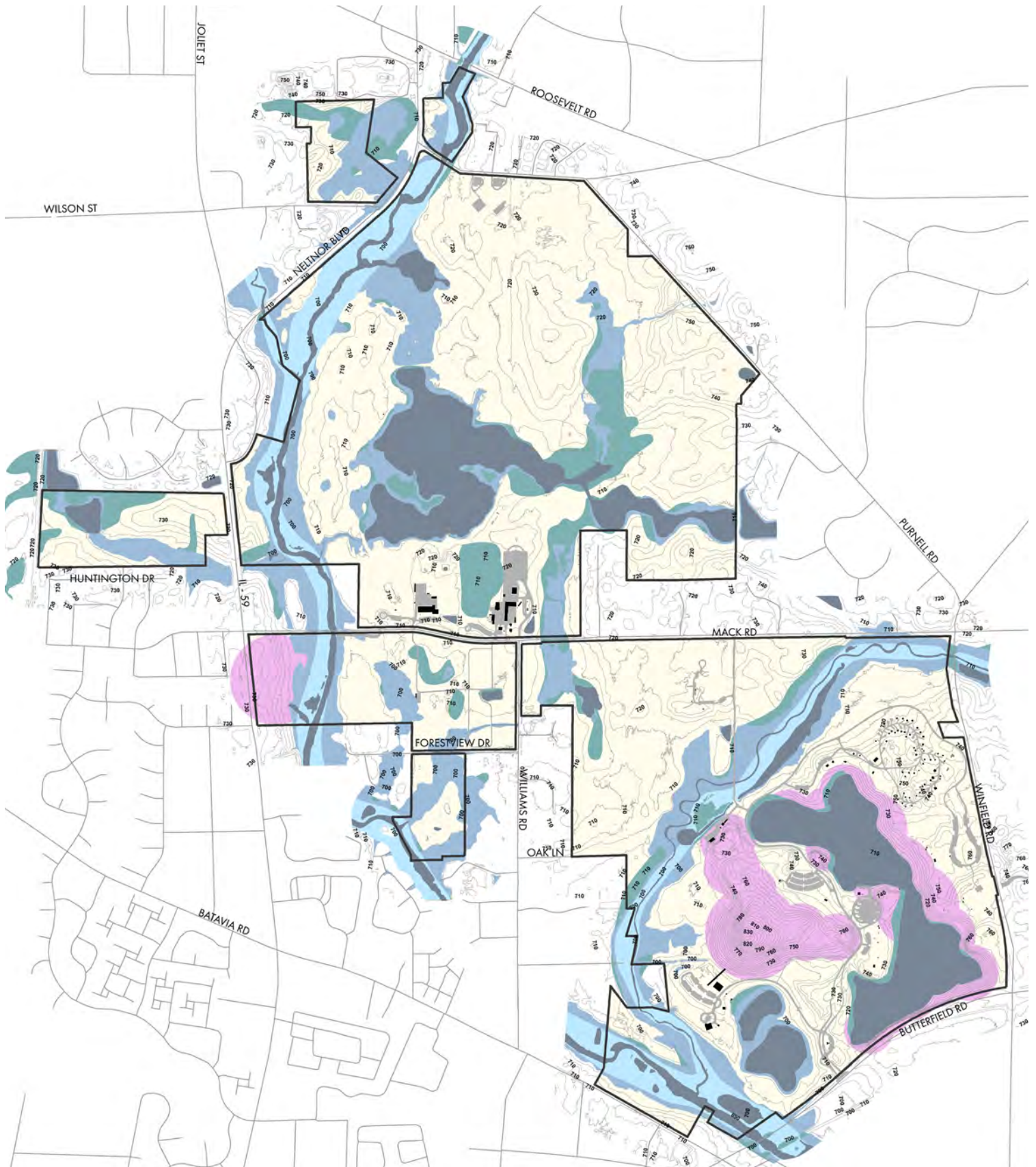
North Blackwell

Kress Creek

Kress Creek feeds into the West Branch DuPage River from the northwest and connects the preserve to the Kress Creek Farms Park.

LEGEND

-  Preserve Boundary
-  Water Bodies
-  100 Year Flood Way
-  100 Year Flood Zone
-  Wetlands
-  Steep Slopes



NATURAL RESOURCES

DISCOVERY

McKee Marsh

McKee Marsh was the first wetland restoration project in the District. During the restoration, members of the restoration team found the skeleton of a Woolly Mammoth that roamed the county nearly 14,000 years ago. Now, the marsh has become home to many migratory birds, and visitors use the two bird blinds to watch as these birds enjoy the marsh habitat.

Sanctuary Pond

The sanctuary pond is the smallest pond in the preserve. It recently became home to non-native zebra mussel species, and visitors are encouraged to help stop their spread by following a few steps after their visit. In general, visitors are helpful and happy to be stewards of a healthy habitat.

South Blackwell

Silver Lake

Silver Lake is a man-made lake due to historic quarry activity on the site and the largest water body in the preserve. The lake provides the most recreation opportunities with 68 acres and 1 mile of shoreline. The lake is large enough to accommodate active water sports. In addition to a boat launch, Silver Lake also has kayak, canoe and paddle boards available for rent. The pond is stocked with trout in the fall and spring for anglers to enjoy and participate responsibly.

Sand and White Ponds

With a total acreage of 13 acres, these two ponds are home to many different kinds of fish. Visitors are allowed to fish the waters using the fishing platform and shorelines. There they can find fish like bass, bluegill, channel catfish, crappie, green sunfish, carp and redear sunfish.

Spring Brook

A recent large scale restoration project along the brook is mostly complete as of the publishing of this report. The only work remaining is the vegetative maintenance and tree plantings, and a small section of tree and brush removal. The project accomplished the following:

1. Meandered the waterway to convey upstream stormwater and created wetlands
2. Connected the creek to the floodplain to allow floodwaters to more easily flow into the surrounding areas of the preserve
3. Removed the dam to allow fish to swim freely
4. Added gravels, cobbles and boulders to the creek to improve habitats for macro-invertebrates, fish and freshwater mussels
5. Enhanced drier, higher ground along the creek by removing invasive vegetation
6. Replaced a deteriorating bridge and moved the West Branch DuPage River Trail out of the floodplain

Mt. Hoy

Mt. Hoy is a former landfill that accepted waste from 1965 to 1973. The landfill was capped and filled, and the resulting mountain now rises 150 feet above the original ground surface. The site was placed on the EPA's Superfund program National Priorities List in 1990, and the EPA then repaired the caps and treated the site. They continue to monitor the site for safety. The FPDDC worked with the EPA and Illinois EPA, as well as the PRP to address potential risks to allow safe public access and recreation on Mt. Hoy. Now, the site is used for exercise, hiking, observation and snow tubing in the winter.



West Branch DuPage River



McKee Marsh



Water Body and Pipe



Creek



2 PHYSICAL RESOURCES

DISCOVERY

INFRASTRUCTURE

The access points within the preserve serve users and staff by providing safe access to the preserve amenities and throughout the area. This includes parking, trails, a boat launch and other elements in Blackwell. The map on the opposite page shows areas indicated as Focus Areas. These areas identified by the FPDDC are discussed in more detail in the Strengths, Weaknesses, Opportunities and Threats section.

Focus Areas

Below are focus areas identified and further detailed later in the chapter.














North Blackwell

- Future Bridge Over Roosevelt Road
- McKee Marsh, Facilities Management, Grounds Management, Natural Resource Management and Blackwell Site Operations

South Blackwell

- Off-Leash Dog Area
- Native Plant Nursery
- Youth Campground
- Spring Brook and Ranger Office
- Family Campground and North Shelter
- Silver Lake, Boat Launch, Parking, South Shelter, Sledding Hill
- East Picnic Shelter, Connection to Illinois Prairie Path and St. James Farm
- Sand and White Pine Ponds, Parking, Archery Range, and Urban Stream Research Center, Trail to Batavia Road

LEGEND

	Preserve Boundary		Campground
	Water Bodies		Parking
	Limestone Trail		View / Overlook
	Unmaintained Trail		Point of Interest
	Turf Trail		Focus Area
	Wooded Prairie		Vehicular / Bike & Ped Conflict
	Internal Roads and Parking		



PHYSICAL RESOURCES

DISCOVERY

Vehicular Access and Parking

The vehicular access points serve the parking lot near Butterfield Road, the lot at the Silver Lake boat launch and base of Mt. Hoy, the “light bulb” lot and the parking lots at the grounds division and facilities management buildings. Dog park users use a small lot located next to the off-leash area, and there is plenty of parking available at both campgrounds. Users identified additional access to the campgrounds as desired, since there is difficulty getting in and out of the area at certain times of the day.

1. West Branch River Trail | 4.0 Miles of Limestone
2. Bobolink Trail | 1.3 Miles of Limestone
3. Catbird Trail | 0.8 Miles of Turf
4. Nighthawk Trail | 0.4 Miles of Limestone
5. Cenacle Trail | 0.6 Miles of Limestone
6. Egret Trail | 0.6 Miles of Turf
7. Other Trail Links

Regional Trails

The West Branch DuPage River Trail is a 26-mile long regional trail, roughly paralleling the DuPage River-West Branch that, when complete, will connect the North Central DuPage Regional Trail on the north to Naperville and into Will County on the south, where it will intersect with the East Branch DuPage River Trail and continue south as the DuPage River Trail to Channahon.

The only unfinished trail segment is the segment located between Blackwell and West DuPage Woods. This segment is approximately 0.7 miles in length and includes a bridge crossing both the West Branch DuPage River and Roosevelt Road (IL-38). See the focus areas for more information about this project.

Trails

A total of 9 miles of trails connect the north and south portions of the preserve. The trails are made up of seven different sections. Those sections are:



Limestone Trail



Educational Signage



Stairway Near Boat Launch



Campground

PHYSICAL RESOURCES

DISCOVERY

Bridges and Crossings

There are four bridge crossings in the preserve:

1. Crossing at Sanctuary Pond, located in North Blackwell
2. Bridge over Spring Brook, near the Maintenance Complex and Ranger Office
3. Small bridge over Spring Brook on the western side of the Urban Stream Research Facility
4. Larger bridge over the West Branch DuPage River on the southern edge of the preserve

Youth Campground

Each of the 12 sites at Blackwell's youth-group campground holds 25 campers and have their own picnic tables and fire rings.

The campground is open year-round. However, it is exclusively for recognized youth groups such as Girl and Boy Scouts and nonprofit organizations whose members are 17 or younger. Only members of qualifying groups with their accompanying leaders may camp here.

Family Campground

Campsites for tents, trailers or motor homes are available for rent Friday and Saturday nights, with selected extended holiday weekends, May – September. Each site has electricity, a gravel parking pad, fire ring and picnic table, but none have sewage or water hookups. The family campground also has a shelter and restroom facilities.

Fishing

Visitors are welcome to fish in Silver Lake, White Pine Pond and Sand Pond. Sand Pond has a small dock where anglers can set up and enjoy the pond's bluegill, catfish, largemouth bass, northern pike, rainbow trout and walleye. At Silver Lake, the boat launch gives anglers the opportunity to fish further out in the water, and the nearby concession building has bait available for purchase.

SURROUNDING LAND USE

St. James Forest Preserve

The 595-acre St. James Farm Forest Preserve contains more than 100 acres of woodlands, prairies and wetlands. St. James Farm has rentable facilities, horse programs, picnicking and trails. The Spring Brook tributary traverses both St. James and Blackwell, and a crossing at Butterfield Road provides a connection for pedestrian and cyclists.

Warrenville Grove Forest Preserve

Warrenville Grove is a 127-acre preserve that has trails, woodlands, picnic areas and the shoreline of the West Branch DuPage River. It was acquired in 1923 and has a rich history and beautiful amenities. Users enjoy fishing and boating, as well as a connection to the Illinois Prairie Path - Aurora Branch, which connects to Blackwell, St. James Farm, Herrick Lake and Danada forest preserves.

Residential Neighborhoods

There are several adjacent residential subdivisions near the preserve. Residents of these neighborhoods utilize the preserve and seek safe pedestrian and bike access into and out of the preserve, and across roads on the perimeter of the Blackwell.



St James Farm



Warrenton Grove



PHYSICAL RESOURCES

DISCOVERY

FACILITIES

Buildings

There are a few buildings in the preserve, indicated on the map to the right. Some of these are associated with recreation and public use, while others are for maintenance and other staff needs.

Buildings that exist in Blackwell are:

- 1** Latrines
- 2** Picnic shelters
- 3** Ranger office
- 4** Boat rental building
- 5** Urban Stream Research Facility
- 6** Facilities, Grounds, and Natural Resource Management Divisions

Latrines

There are several existing latrines throughout the preserve. They are located near the following areas:

- Archery
- Boat Launch
- Maintenance Complex
- Dog Park
- Hawthorn Grove
- Family Campground

Many stakeholders expressed a desire to add restrooms in high-traffic areas and to convert the latrines to flush toilet facilities.










Picnic Shelters

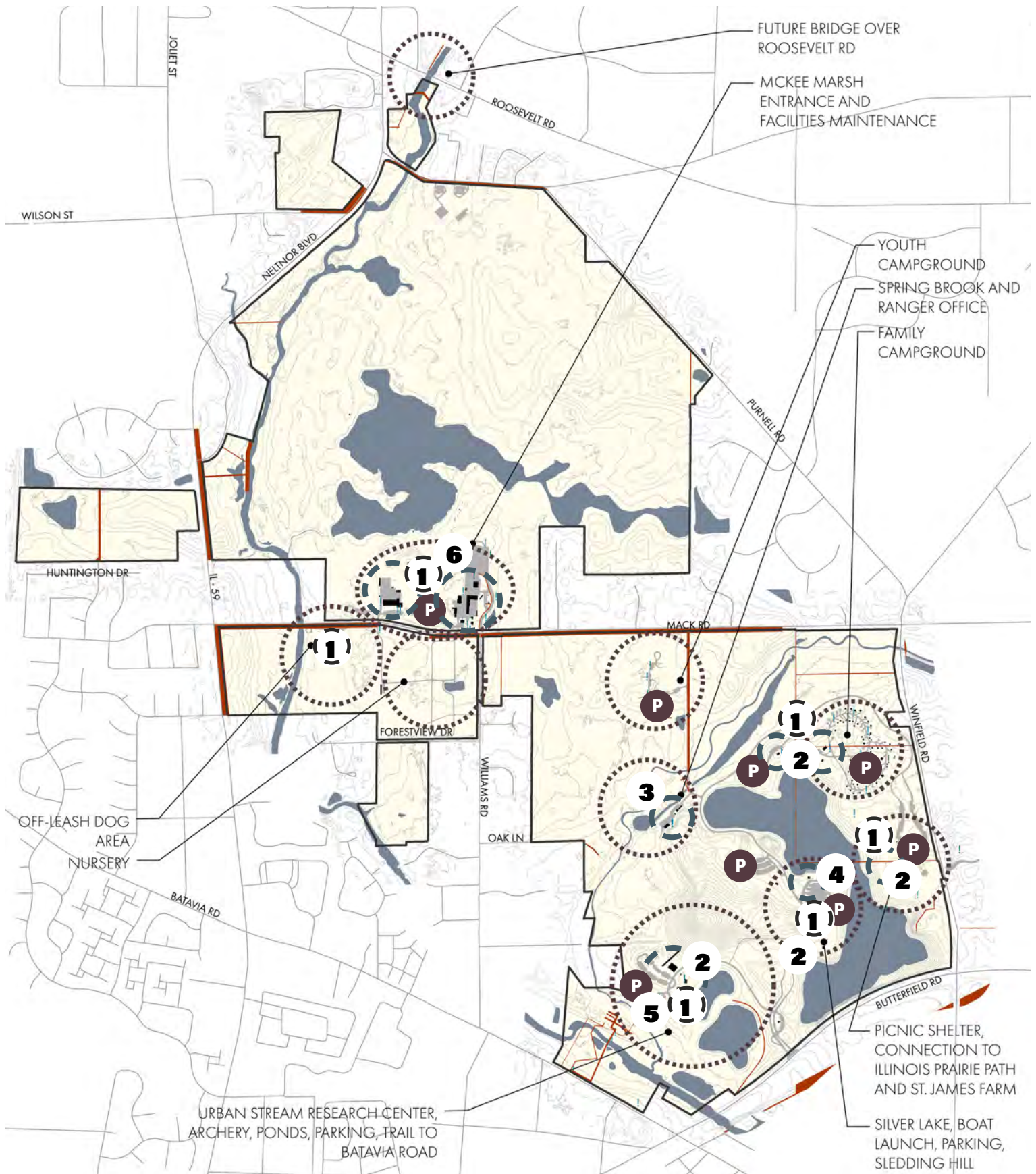
There are many of picnic areas in Blackwell, many with shelters that can be rented. The largest is in Hawthorn Grove and holds up to 300 people. The other four shelters hold 100 people and some have electrical connections and grills.

Ranger Office / Maintenance Complex

The ranger office located in south Blackwell is near the recent Spring Brook restoration project. This area is somewhat secluded, and feedback from staff suggest the office is not large enough nor equipped for the amount of staff, and the amount of work that is done there. Conversely, nearby residents do not wish to see the facility expanded or enlarged. A separate buildings and facilities study is underway to determine the best approach for various district facilities.

LEGEND

-  Preserve Boundary
-  Water Bodies
-  Utility Easement
-  Internal Roads and Parking
-  Well
-  Parking
-  Buildings
-  Latrines
-  Focus Area



PHYSICAL RESOURCES

DISCOVERY

Urban Stream Research Center

The Urban Stream Research Center (USRC) serves as the Forest Preserve District's facility for aquatic conservation programs and is the only facility of its kind in Illinois. Its main purpose is to augment common native freshwater mussels that were historically more abundant and diverse within the Des Plaines River Basin. The building opened in 2012 and was funded by a grant from the National Oceanic and Atmospheric Administration (NOAA) (From the FPDDC Website)



Urban Stream Research Facility



Ranger Office

HUMAN HISTORY

Visitors at Blackwell walk on land shaped by the retreating Wisconsin Glacier 12,000 to 15,000 years ago. After the glacier's retreat, savannas with widely spaced oak trees formed on the higher ground while the lower-lying ground became home to marsh and prairie plants. At Blackwell's McKee Marsh, the 13,000-year-old skeleton of a woolly mammoth — one of the oldest finds of its kind in northeastern Illinois — was discovered in 1977.

In the 1830s, Erastus Gary, one of Winfield Township's first settlers and a founder of Gary, Indiana, made his home on the land that is now Blackwell Forest Preserve. There, he operated a grist mill — Gary's Mill — east of the West Branch DuPage River. The Forest Preserve District of DuPage County purchased the land 130 years later and named it after Roy C. Blackwell, a former District president.

The District converted a quarry on the south side of the preserve into a multi-use area to retain stormwater and provide visitors with a variety of recreational activities. The quarry became Silver Lake. Authorities later chose Blackwell for the site of a county landfill, which operated from 1965 to 1973 and provided valuable knowledge about managing solid waste. Today, Mount Hoy serves as a scenic overlook and popular birding site, as well as, a winter tubing hill.

(Source: Forest Preserve District website)



Woolly Mammoth Skeleton | Image from FPDDC Facebook Page



Educational Signage at the Preserve



3 CULTURAL RESOURCES

DISCOVERY

HUMAN USE

In addition to the trails, the Mt. Hoy overlook, and the off-leash dog area, there are other programs available as well. Some of these include: boating, fishing, snow tubing, snowshoeing, cross-country skiing and camping.

Camping

Users interested in camping at Blackwell have two options to do so.

1. The Youth Campground is located off of Mack Road and is available for use by organizations year-round.
2. The family campground located near Winfield Road, on the eastern edge of the preserve, is available for use by anyone during certain months of the year. While adjacent to Winfield Road, the campground facility is not currently accessible from Winfield.

Fishing

Combined, Silver Lake, White Pine Pond and Sand Pond offer great fishing for bluegill, catfish, largemouth bass, northern pike, rainbow trout and walleye.

Places to Gather, Rest and Reflect

Of the three preserves in this study, Blackwell has the most places to gather. Users can congregate at the campground shelters, shelter near the ponds, Hawthorn Grove, and the boat launch to name just a few. Additional seating may be considered along pathways so visitors have more opportunities to take breaks along longer sections of trail.

Support Amenities

Interpretive signs throughout Blackwell allow the community to learn about its diverse ecology and wildlife and be informed about programming and events available. Additional signs offering information about restoration efforts, the history of the preserve, or other interesting facts might make the public feel even more connected to Blackwell.



Bridge Crossing



Picnic Shelter



Kayak Rental



Archery



4 STRENGTHS, WEAKNESSES OPPORTUNITIES & THREATS ANALYSIS

The purpose of the Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis is to identify areas within the preserve to target for improvement. This exercise also highlights elements and/or programming in Blackwell operating well and to remain.

The SWOT analysis brings together elements and programming from the previous sections within this chapter and combines them with observations and possibilities. The map to the right provides an overview of key items found in the SWOT analysis. The following pages show enlargements of the Focus Areas and SWOT observations.

STRENGTHS

- 1 Diverse ecosystems
- 2 Passive and active recreation
- 3 Looped trail in McKee Marsh
- 4 Silver Lake is a natural asset; provides views and recreation opportunities
- 5 Hawthorn Grove provides a beautiful natural setting
- 6 Well-maintained trails and amenities
- 7 Proximity of Maintenance Operations and Grounds Management to one another and to the nursery
- 8 Scenic views from Mt. Hoy
- 9 Recreation provided by Mt. Hoy

OPPORTUNITIES

- 1 Trail around Silver Lake
- 2 Mt. Hoy improvements
- 3 Elimination of large turf areas
- 4 Educational programming and partnership in the nursery
- 5 Reduction in vehicular traffic
- 6 Hawthorn Grove is a unique, underutilized area

WEAKNESSES

- 1 Vehicular and trail conflicts
- 2 Disjointed vehicular access
- 3 Lack of trail connection to St. James Farm Preserve
- 4 Lack of trail connections to West DuPage Woods
- 5 Lack of trail connections from the family campground to the other preserve amenities
- 6 Lack of in/out vehicle connections without the assistance of a ranger at the Family Campground
- 7 Ranger office is inadequate to serve the current and future needs of the rangers
- 8 Lack of a continuous loop on the south side of the preserve
- 9 Grounds and Natural Resources Complex is inefficient and deficient
- 10 Crossing conflict

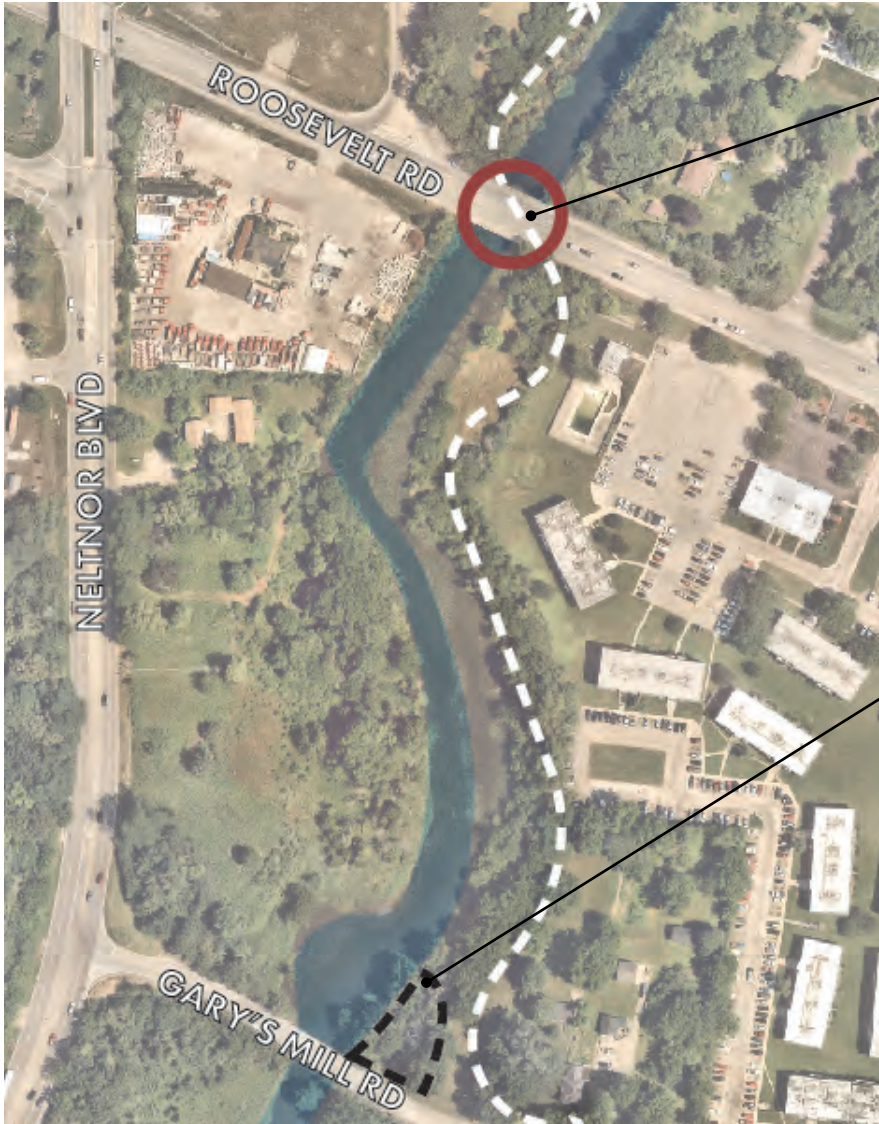
THREATS

- 1 Mt. Hoy landfill has erosion, settling, leaching, and a muddy base due to winter use, etc.
- 2 Lack of in/out vehicle connections without the assistance of a ranger
- 3 Heavily used
- 4 Bike/pedestrian crossing at the intersection of Winfield Road and Butterfield Road
Mack Road on-road trail access is a challenge
- 5 Crossing from the nursery to the Grounds and Natural Resource Management Divisions is not optimal

STRENGTHS WEAKNESSES OPPORTUNITIES & THREATS ANALYSIS

FOCUS AREA

FUTURE BRIDGE OVER ROOSEVELT BLVD



Future Bridge

Will provide critical connection across Roosevelt Road to DuPage Woods

River Activation

Opportunity to activate river in this area and allow users to explore other parts of the preserve

LEGEND



Possible Improvements



Access Improvement



Potential Connection



Water Body



Future Bridge Connection

Future Bridge

A future pedestrian bridge across Roosevelt Road is planned as part of the greater West Branch of the DuPage River Trail. This bridge will provide a safe connection for preserve users to the north side of Roosevelt Road and other preserves like West DuPage Woods, making the greater open space network stronger.

River Activation

During the stakeholder engagement process, users mentioned that providing a kayak launch in proximity to this new bridge might allow visitors to experience this branch of the river in a different way.



STRENGTHS WEAKNESSES OPPORTUNITIES & THREATS ANALYSIS

FOCUS AREA OFF LEASH DOG AREA



Kayak Launch

Existing launch can be slippery and muddy

Parking Lot

Parking lot in poor condition, reconfiguration and expansion could be explored. Relocation of entrance may be evaluated to the off leash area could alleviate congestion at the current entrance

Connections

The proximity to the river could be an opportunity for trail connections / activities related to the river

LEGEND



Possible Improvements



Vehicular Access



Existing Trail



Potential Connection



Water Body



Off Leash Dog Area



West Branch DuPage River

Off Leash Dog Area

The off-leash dog area is one of the most used areas in Blackwell. During the public engagement sessions, users indicated that this area can get crowded, especially in the warmer months and that expansion should be considered. They also mentioned that connections to the river from the dog park trails would allow users to access and experience the river.

Users also stated that providing a secondary entrance, or even a new primary entrance, might make it easier to access the park and avoid having to deal with the traffic along Mack Road. The parking lot is also small and can be a challenge

to navigate when pulling into and out of parking spaces, especially when it is crowded.

Kayak Launch

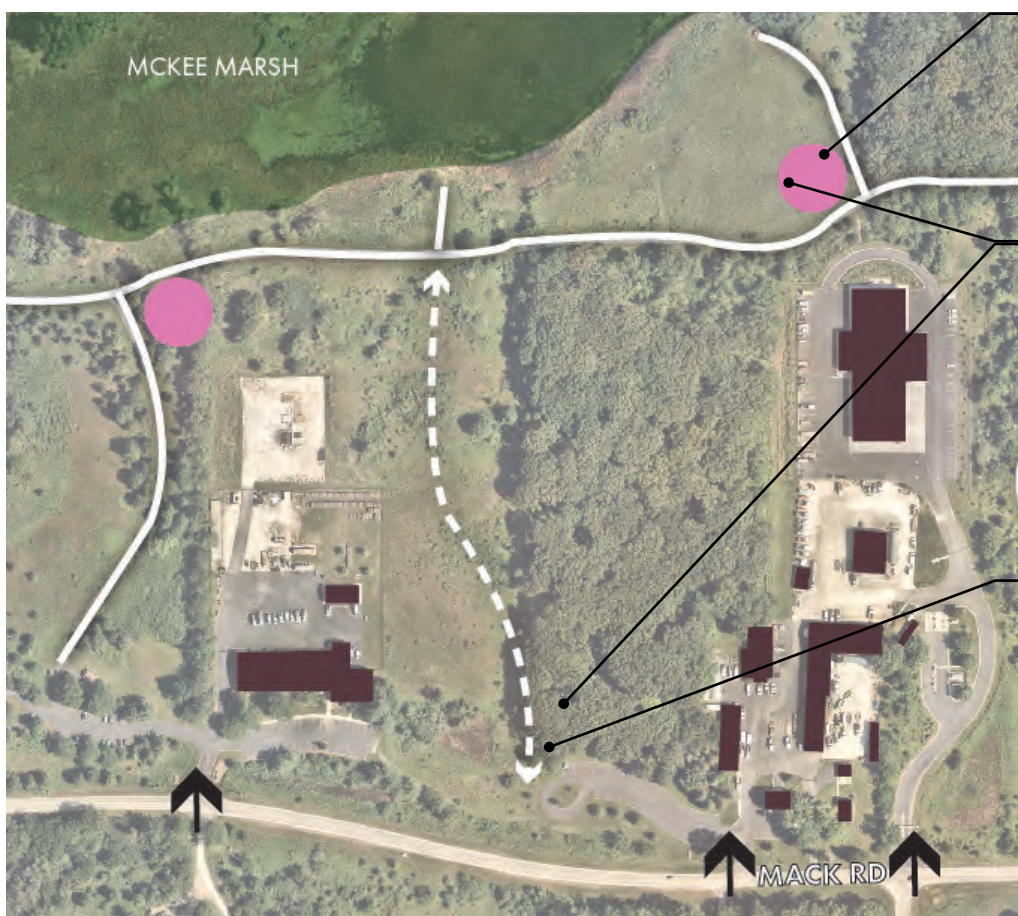
Users indicated that the kayak launch is informal and can become slippery and muddy at times, and that it could be improved with some paving or platforms to help people in and out of the water. Preserve users also noted the ability to kayak between preserves using the West Branch DuPage River would be desirable.



STRENGTHS WEAKNESSES OPPORTUNITIES & THREATS ANALYSIS

FOCUS AREA

MCKEE MARSH ENTRANCE, FACILITIES
MAINTENANCE, GROUNDS DIVISIONS



Wayfinding

Opportunity to enhance McKee Marsh with wayfinding and signage

Signage

There is some confusion about parking areas and trail segments due to lack of signs

Connections

Possible additional trail connections to the marsh through the natural area and an opportunity to expand or connect the parking lots

LEGEND



Existing Trail



Potential Connection



Marsh



Existing Building



Possible New Amenities



Vehicular Access



Facilities Building



Bird Blind / Platform

Facilities, Grounds and Natural Resource Management Divisions

Users indicated during the stakeholder engagement sessions that they have seen the maintenance and grounds divisions area expanding, which impacts the natural areas. They stated that they would prefer these areas stay the size they are now and not expand any further.

Additionally, users indicated that creating a trail connection from the eastern parking lot to the Marsh would make it much easier for users to access the marsh, especially since it is used and beloved by many user groups, including birdwatchers.

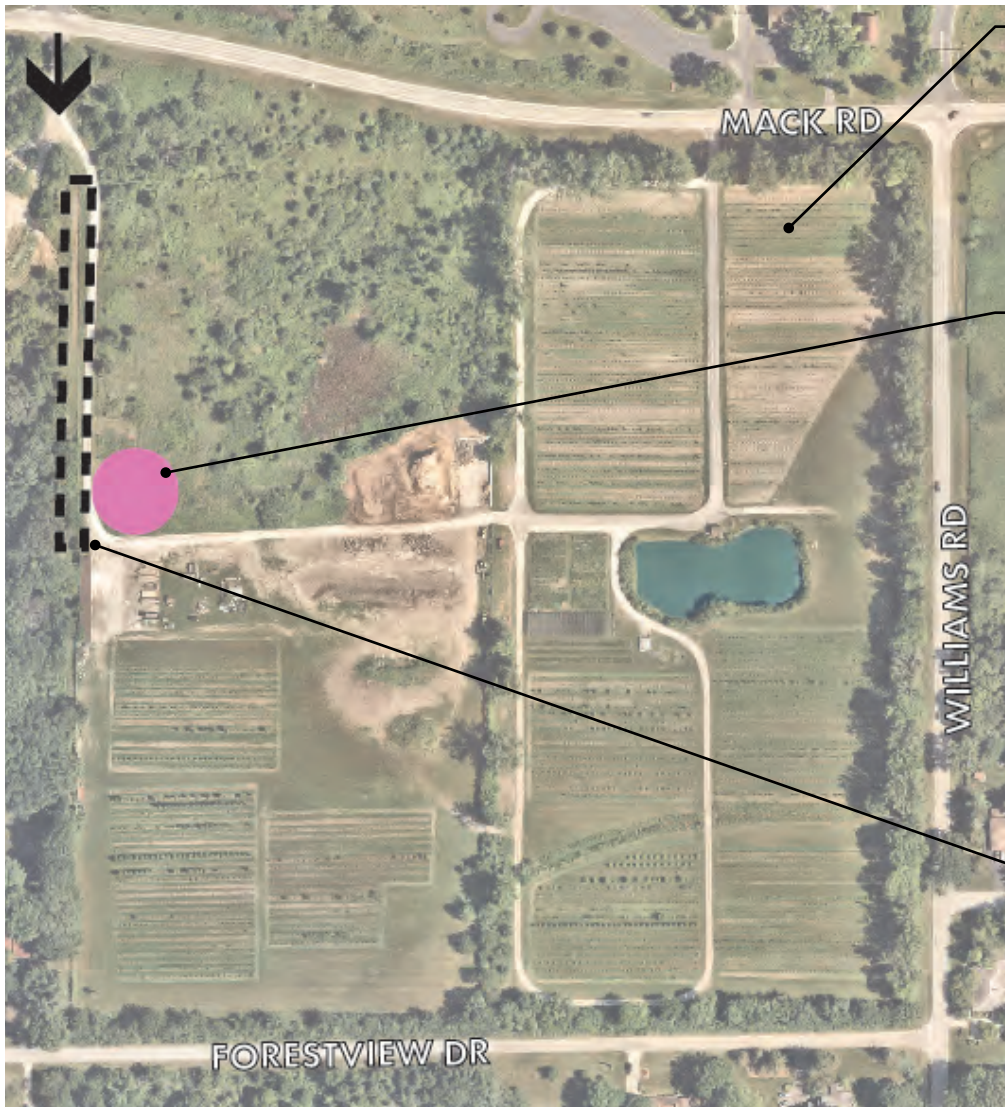
Additional Amenities

This area is rich with wildlife and biodiversity, and has a rich history as well. Users enjoy this area for running, walking and birdwatching, and stated during the stakeholder engagement sessions that additional educational signs and wayfinding would benefit this area greatly.

Parking is limited in this area and some users stated that expanding the existing lot would be a good thing to consider. The possibility of connecting the parking lots between the two sites would provide additional parking capacity, but also provide a link between the facilities without using Mack Road.

STRENGTHS WEAKNESSES OPPORTUNITIES & THREATS ANALYSIS

FOCUS AREA NURSERY



Education

Potential to provide education and volunteer opportunities to the public about the nursery and plant species

Amenities

If the native nursery were opened up to the public drinking fountains, restrooms and other amenities could be provided

Drainage Issues

There are drainage issues along the access drive

LEGEND



Possible Improvements



Water Body



Possible New Amenities



Vehicular Access



Nursery



Nursery in Bloom

Education

This area is open to the public at certain times so that users and volunteers can interact with the nursery and learn about what goes on there. However, users did indicate that the nursery is not well-known or advertised very widely to the public. Additional information and marketing might engage more of the public who do not currently know about opportunities at the nursery.

Amenities

Users indicated that this area could benefit from additional amenities such as flush toilets (or any kind of restroom facility) and a drinking fountain, as it is sometimes used by the public and would benefit the workers in the nursery on a daily basis.

STRENGTHS WEAKNESSES OPPORTUNITIES & THREATS ANALYSIS

FOCUS AREA YOUTH CAMPGROUND



Cycling

A divergent opinion of some cyclists who use Mack Road and others who believe cycling on the road should be prohibited

Restoration

Continued restoration would provide educational and environmental benefits to the area

Access

Access to the campground is limited and could be improved

Wildlife Signage

This area has many turtles who tend to be killed on the roadways

LEGEND



Possible Improvements



Vehicular Access



Existing Trail



Access Improvement



Campground Entrance



Campsite

Restoration

Continued restoration in the area could provide high-quality education opportunities for the groups that come to the youth campground.

Access

During the public engagement sessions, users indicated concerns about access to the youth campground. Users mentioned a better access road and additional signs might help regulate access to the area. It was also mentioned that many cyclists use Mack Road to access areas of the preserve and that encouraging cyclists to use other paths would increase safety.

Wildlife Signs

Users indicated that many turtles are killed in this area and that additional signs about wildlife crossings might help people to be more aware. Additionally, there is broad support for interpretive signs that describe the flora, fauna and ecological restoration efforts.

STRENGTHS WEAKNESSES OPPORTUNITIES & THREATS ANALYSIS

FOCUS AREA SPRING BROOK AND RANGER OFFICE



Habitats

Habitats around the stream should continue to be restored and maintained

Ranger Office

Station is not large enough and does not contain the needed facilities and amenities

Connections

Trail does not connect through this area

LEGEND



Possible Improvements



Water Body



Existing Trail



Existing Building



Potential Connection



Trail Near Ranger Office



Ranger Office

Ranger Office / Maintenance Complex

During the public engagement sessions, it was stated that the ranger office needs additional investment to provide rangers with the supplies and space they need.

The location of the complex is secluded, yet easily accessible to rangers and other staff, but might not be large enough to accommodate the amount of work done and items stored here.

Trails

Currently, the area lacks direct pedestrian and bike access from the ranger office to Silver Lake. Creating a connection here would allow rangers to more easily access the area, and allow users to get from the Lake to the Spring Brook restoration.

STRENGTHS WEAKNESSES OPPORTUNITIES & THREATS ANALYSIS

FOCUS AREA FAMILY CAMPGROUND AND SHELTER



Access

Potential to provide additional access point from Winfield Road and a separate gate for campground access

New Trail Loop

Providing a loop trail around Silver Lake would allow campers to easily walk to boat launch and other activities

LEGEND



Potential Connection



Water Body



Existing Building



Possible New Amenities



Access Improvement



Campsite



Campsite

New Trail Loop

A loop trail around Silver Lake would allow users at the family campground and shelter to easily access other areas of the preserve, like the boat launch and Mt. Hoy.

Access

During the public engagement session, users stated this area of the preserve would benefit from an additional access point along Winfield Road. Getting into the family campground is relatively easy, but getting out can be complicated as the gate is locked after a certain time of night. Providing an additional point of entry and exit on the Winfield Road side of the campground might alleviate those concerns. Users were also interested in trail access into the preserve from the corner of Mack and Winfield Roads.

Amenities

This area would be a good candidate for an amenities upgrade. Changing from a latrine to a flush facility would benefit users of the campground.

STRENGTHS WEAKNESSES OPPORTUNITIES & THREATS ANALYSIS

FOCUS AREA

SILVER LAKE, SLEDDING HILL, SHELTER &
BOAT LAUNCH



Mt. Hoy

Mt. Hoy is used heavily by visitors for exercise, recreation and a place to enjoy the views

Lopped Trail

Opportunity to make a trail loop that incorporates the top of Mt. Hoy

Boat Launch

An accessible kayak launch will be installed by Fall of 2021

New Amenities

Opportunity to add amenities such as restrooms and food & beverage concessions to the boat launch area

LEGEND

	Existing Trail		Existing Building
	Potential Connection		Possible New Amenities
	Water Body		



Boat Rental Building

Boat Launch

The boat launch area has adequate parking, options for rentals and is enjoyed by many visitors of the preserve. During the engagement sessions, users indicated this area would also be a good candidate for amenity upgrades. The high visitation numbers indicate that amenities like a concession stand and flush facilities would be utilized. Some users wondered if the parking lot for this area needed to be so large.



Mt Hoy

Mt. Hoy

Mt. Hoy is used heavily by many different user groups. During the warmer months, it is used for exercise and hiking. In colder months, it's used for tubing and snowshoeing. The location, view, high visitation, and access to parking and other amenities make it a popular place for visitors. During the public engagement sessions, users commented this area would ideally accommodate amenity upgrades such as drinking fountains or flush toilet facilities.

STRENGTHS WEAKNESSES OPPORTUNITIES & THREATS ANALYSIS

FOCUS AREA

SHELTER & CONNECTION TO ILLINOIS
PRAIRIE PATH & ST. JAMES FARM



New Trail Loop

Potential to create a trail loop around Silver Lake

Additional Connection

Opportunity to create additional connection to St James Farm

Hawthorn Grove

This area is currently underutilized but has potential to be a beautiful natural area within the preserve

LEGEND



Possible Improvements



Existing Trail



Potential Connection



Water Body



Existing Building



Access Improvement



Vehicular Access



View of the Lake from the Grove



Picnic Table in the Grove

Hawthorn Grove

Hawthorn Grove is a beautiful setting within the preserve, but is somewhat underutilized. Currently there are picnic tables and access to parking, but the area has a lot of potential to be a major point of interest for visitors of the preserve. It's close to other amenities and has a desirable view of Silver Lake, making it a place for visitors seek.

Additionally, the area has an excess of mowed lawn that was more heavily used in the past. If reduced, it would decrease maintenance requirements, and restoring part of the area to a native condition would also provide educational and ecological benefits.

Additional Connection

With St. James Farm right across the street, there is an opportunity to create a safe pedestrian and bike connection to it from Blackwell. During the stakeholder engagement sessions, many users mentioned they would utilize a second grade separated connection and that it would enhance the greater open space network.

New Trail Loop

A loop trail around Silver Lake was one of the most common recommendations received during the public engagement sessions. This loop trail would allow users of St. James Farm and the campground to access the amenities at the Lake easily.

STRENGTHS WEAKNESSES OPPORTUNITIES & THREATS ANALYSIS

FOCUS AREA

PONDS, ARCHERY, URBAN STREAM RESEARCH
CENTER & TRAIL TO BATAVIA ROAD



Mt. Hoy

Mt. Hoy is used year round but sometimes access is unclear

Restroom

There is an opportunity to locate a flush restroom building in this area.

Lawn Maintenance

There is a great deal of lawn area around the ponds that require a lot of maintenance

Trail Conflict

Users must cross the parking lot to continue along the trail

LEGEND



Possible Improvements



Existing Trail



Water Body



Existing Building



Access Improvement



Vehicular Access



Research Facility



View from Mt Hoy

Turf Grass

The amount of turf grass around White Pine Pond and Sand Pond requires frequent mowing and maintenance resources. A reduction in the lawn area would decrease maintenance demands if portions of it were restored to native species.

Trails

Trail continuity in this area could be improved if the trails connected without requiring crossing the parking lots. There is also potential to provide an additional trail along the road and around the ponds to provide users with a small loop in the area.

Urban Stream Research Center

The research center provides a unique opportunity to engage and educate the community about stream restoration. While the facility hosts open houses throughout the year to allow visitors to tour the facility, users stated that more access would be appreciated and enjoyed by many of the visitors.

KEY TAKEAWAYS

NATURAL ECOSYSTEMS

Restoration

District staff have been restoring pieces of the preserve since its inception and this remains a major element of the mission. Defining and prioritizing areas for restoration will help staff work effectively and implement a clear vision for the preserve and allocate limited resources.

Maintenance

Continuing to maintain the areas of the preserve identified as heavily-used will keep spaces safe and usable throughout the preserve.

PHYSICAL CONNECTIVITY

Trails

Where appropriate, the District could consider additional trail spurs and/or loops to alleviate congestion in problem areas. Also, providing a new loop trail around Silver Lake would connect many of the existing amenities.

New Trails

New trails that create smaller loops within the preserve would allow users to see additional areas of the preserve and allow for shorter walks and runs. It also would provide users with a chance to experience new areas of the preserve, like the perimeter of Silver Lake.

Roosevelt Road Pedestrian Bridge

The proposed new trail and pedestrian bridge over Roosevelt Road will be a major asset to users of Blackwell preserve. The connection to the north side of Roosevelt and the completion of the DuPage River Trail will make this area even more active and enjoyable.

FUTURE RESOURCES

Future resources should be placed in areas that have suitable soils, slopes and are not within wetlands or floodplains. They should also be located in areas that are accessible from either existing parking lots / roadways, or have the potential to have new and easily accessed parking.

POINTS OF INTEREST

Overlooks

The topography and access to Mt. Hoy provides an opportunity for scenic views within and off the preserve. The overlook could benefit from additional seating and continued maintenance. Additionally, the bird blinds at McKee Marsh are used frequently, and if possible, the FPDDC could consider creating more opportunities for viewpoints around the marsh.

SIGNS

Wayfinding

While there are wayfinding signs throughout the preserve, additional signs for points of interest, secondary trails, mile markers for training and other amenities within the preserve would help users navigate easier.

Educational

Additional signage about the history of the preserve, natural resources, ecosystems and flora & fauna within it would be welcomed by many visitors interested in learning more about the environment as they explore Blackwell.

AMENITIES

Flush Facilities

Prioritizing which latrines should be upgraded to flush facilities would help the preserve to allocate investment to the most utilized facilities.

Additional Seating

Another common comment from users was the desire for additional seating along the trail and at points of interest. Some segments of trail have long stretches without seating. Users, especially seniors, would benefit from additional resting places.

CULTURAL HISTORY

Telling the story of how the preserve came to be, what it was used for over time and how it has played a role in the local culture is of interest to some of the stakeholders. Opportunities to enhance this messaging on the District's website or physically within the preserve would be welcomed by some of the users.

PROGRAMMING

Blackwell represents one of the most visited preserves within DuPage County and represents a social gathering place for many people. This includes friends, families, and groups both large and small. Additional programming for events, food & beverage with food trucks and festivals would be welcomed by many users.

GREENE
VALLEY
FOREST
PRESERVE

Discovery &
Analysis

IN THIS SECTION:



NATURAL
RESOURCES



PHYSICAL
RESOURCES



CULTURAL
RESOURCES



SWOT
ANALYSIS

DISCOVERY

EXISTING CONDITIONS

GREENE VALLEY

Greene Valley, located near Naperville Illinois, is a 1,388-acre unique and ecologically diverse preserve.

The preserve offers a total of 19.8-miles of marked trails that link all areas within it. The trails provide space for runners, walkers, bicyclists, horseback riders and cross-country skiers to enjoy their respective activities in a safe way.

In addition to the trail, the preserve is home to unique habitats, Greene Valley Hill, a youth campground, picnic areas, and a model airplane field.

Greene Valley is home to wetlands, meadows, savannas and woodlands that showcase more than 540 native plant species and 370 different types of native species of mammals, birds, fish and amphibians.

Within the preserve is the East Branch River, which links habitats and wildlife to the preserve and provides a unique ecosystem itself.

With lots of residential neighborhoods nearby, Greene Valley is a source of natural wonder for those residents, as well as visitors from other areas of the county, state and beyond.

Chapter Summary

This chapter is organized into four sections:

1 NATURAL RESOURCES

This section provides an overview of the existing conditions of Greene Valley regarding the ecosystems, soils, hydrology and physiography, and wildlife. Observations about each of these categories inform the analysis of the preserve's strengths and weaknesses related to the natural resources.

2 PHYSICAL RESOURCES

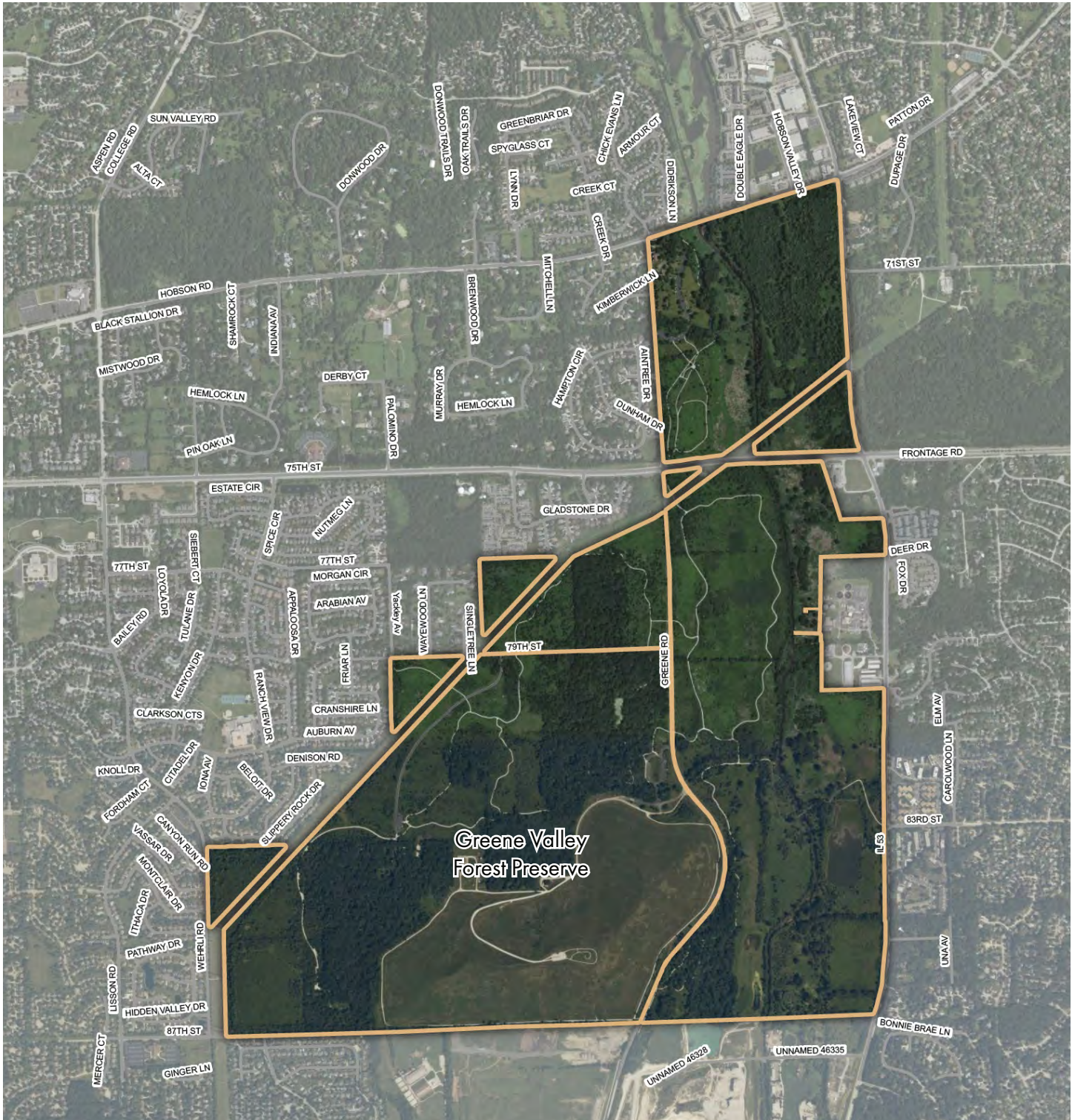
This section provides an overview of the existing conditions of Greene Valley regarding the surrounding land use, context, physical infrastructure and facilities. Observations about the condition of physical assets are noted in the analysis of the preserve.

3 CULTURAL RESOURCES

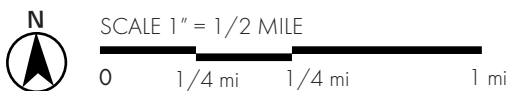
This section will provide an overview of the existing conditions of Greene Valley regarding the historical and current human uses of the preserve.

4 STRENGTHS, WEAKNESSES, OPPORTUNITIES & THREATS ANALYSIS

This section synthesizes the information from sections 1-3 to illustrate an assessment of the existing conditions of the preserve including what users, staff and stakeholders believe is functioning well and what could be improved.



Greene Valley Forest Preserve



1 NATURAL RESOURCES







DISCOVERY

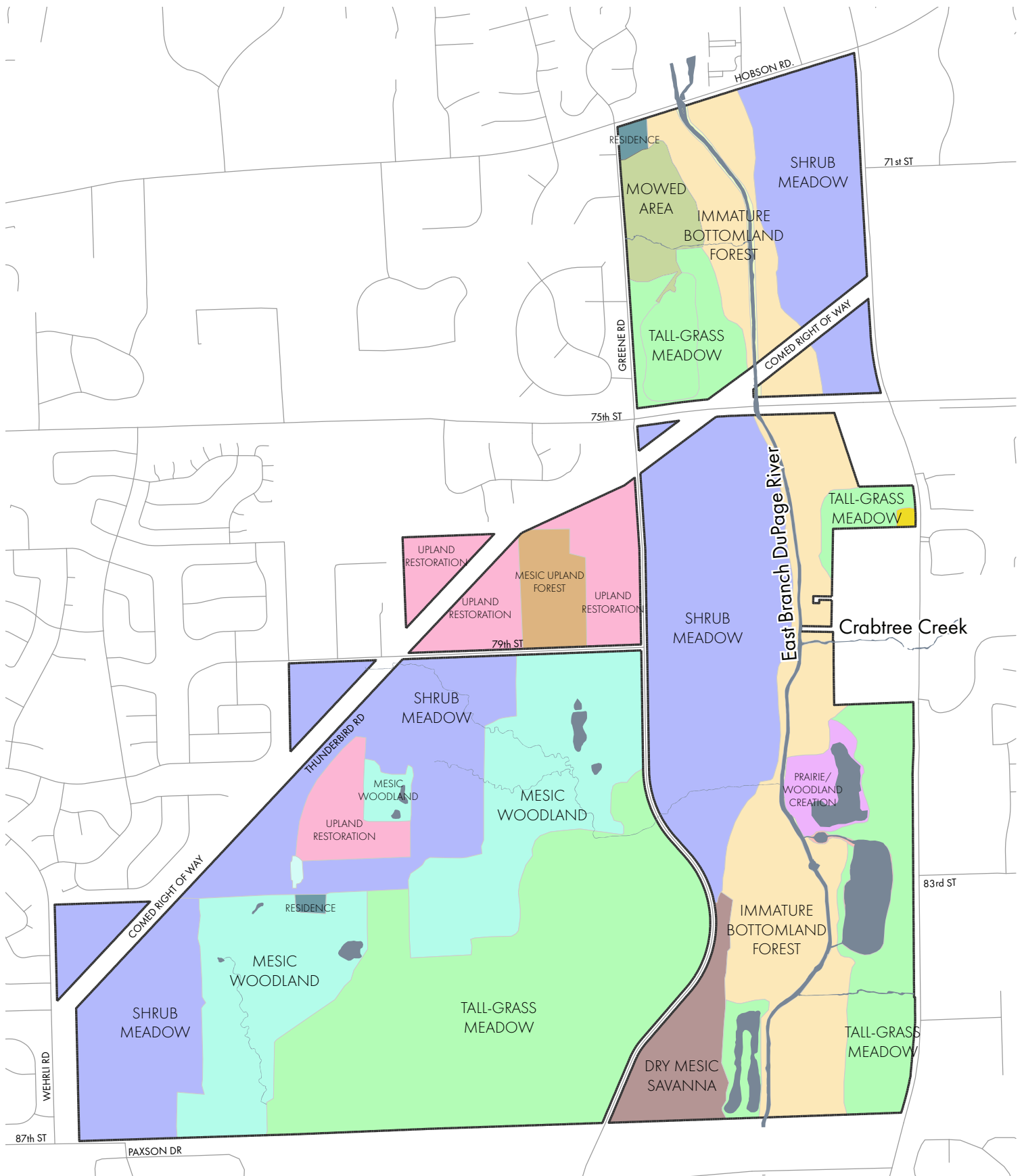
ECOSYSTEMS

Greene Valley Forest Preserve is home to more than 540 native plant species and 370 different species of native animals, making it one of the county's more ecologically diverse sites. The ecological landscape at Greene Valley includes high-quality oak woodlands, savannas, extensive meadows, and bottomland forests flanking the East Branch of the DuPage River which bisects the preserve from north to south.

Existing conditions within the natural areas of Greene Valley are summarized below based on preliminary site reconnaissance conducted by Stantec staff in April 2021 as well as background data provided by FPDDC and publicly available GIS resources. Existing conditions summaries are organized according to FPDDC ecosystem divisions and are grouped according to their assigned community type.

LEGEND

	Preserve Boundary
	Immature Upland Forest
	Immature Bottomland Forest
	Water Bodies
	Mesic Upland Forest
	Mesic Woodland
	Mowed Areas
	Prairie / Wetland Creation
	Residence / Facility Complex
	Shrub Meadow
	Tall-Grass Meadow
	Upland Reforestation
	Dry Mesic Savanna



NATURAL RESOURCES

DISCOVERY

UPLAND FORESTS

Upland forest ecosystems at Greene Valley consist of a single tract of mesic upland forest (Hinterlong Woods) as well as a small parcel of successional, immature forest located along the eastern boundary of the preserve (Route 53 Woods). Route 53 Woods lies on the site of historic farmstead and is largely disconnected from other forest and woodland communities at the preserve. The floristic and wildlife value of this community is relatively low. Based on examination of historic aerial photography, Hinterlong Woods is a remnant, closed-canopy forest which was spared from cultivation during post-settlement agricultural development. As a result, this approximately 21-acre tract is floristically rich and provides critical wildlife habitat within the context of a surrounding landscape which has been degraded by cultivation.

CURRENT MANAGEMENT REGIME AND ECOLOGICAL CONSTRAINTS

Route 53 Woods adjoins low-quality forested areas adjacent to a municipal water treatment facility, outside the boundaries of the preserve. Collectively, these communities are characterized by a dense understory of invasive brush which offers little opportunity for native plant and animal diversity and is subject to ongoing disturbance from adjacent land uses (high-traffic roadways and residential development). This parcel is not actively managed by the FPDDC.

Hinterlong Woods is actively monitored and managed by FPDDC staff to preserve remnant plant resources, improve wildlife habitat, and reduce competition from invasive species. The primary ecological threat to this ecosystem is invasion by exotic and mesophytic native trees and shrubs which can reduce light levels in the ground

plane and limit native plant cover and diversity. Because the areas adjacent to this parcel were heavily impacted by agricultural development, its ecological value is also constrained by its overall size and disconnection from other forest and woodland communities of the site.

POTENTIAL ECOLOGICAL SERVICES

The mesic upland forest at Hinterlong Woods provides relatively high-quality wildlife habitat and supports a high diversity of native plants, but ecosystem services are limited by the overall size of the tract and its disconnection from other woodland communities. The greatest potential for increased ecological services comes from expansion of the forest into adjacent areas to create a larger, contiguous habitat which favors use by forest-dependent birds and mammals. FPDDC is actively pursuing this goal through restoration and reforestation of adjacent meadows and retired agricultural fields. These efforts would be complemented by continued control of invasive species, particularly through removal of exotic brush and understory trees, as well as continued control of woody re-sprouts and common herbaceous competitors such as garlic mustard through targeted herbicide application, manual controls, and prescribed burning.

UPLAND REFORESTATION

Areas adjacent to Hinterlong Woods and the Central Grove in the northwest sector of the preserve were heavily degraded by historic agricultural development which, based on examination of aerial imagery, likely included tree clearing, minor drainage improvements, and cultivation. When cultivation was discontinued, those fields were allowed to naturalize as Eurasian meadows. More recently, FPDDC has undertaken efforts to restore these areas through

reforestation. As such, current conditions within the Hinterlong Meadow and Thunderbird Meadows are transitional, with a relatively immature native canopy and dominant cover of exotic forage grasses, non-conservative native forbs, and scattered exotic shrubs. Collectively, upland reforestation ecosystems occupy approximately 80 acres of the site.

CURRENT MANAGEMENT REGIME AND ECOLOGICAL CONSTRAINTS

FPDDC actively manages portions of the reforestation areas through mowing, burning, and invasive species control to promote a trajectory toward native forest or woodland communities. These practices are limited by maintenance capacity and are not applied evenly across the reforestation areas. As a result, the majority of these ecosystems (particularly Thunderbird Meadows) remain dominated by Eurasian meadow species. Expansion of exotic shrubs, herbaceous invasive species, and aggressive native forbs such as tall goldenrod are a recurring threat which will likely require ongoing management. Agricultural practices through the mid-late 1900s have likely left these ecosystems with little potential for restoration of remnant plant resources, though they do offer opportunities for establishing permanent native plant communities and improved wildlife habitat.

POTENTIAL ECOLOGICAL SERVICES

Ecological services provided by upland reforestation ecosystems are currently limited by relatively low plant species diversity and wildlife habitat quality. However, these areas have high potential for increased services as they mature toward established forest communities. Specifically, reforestation areas may serve to expand the overall size and function of adjacent forest and woodland tracts which favors use by native wildlife species and provides a buffer against invasion by exotic

and aggressive native plants. Those services may be increased by continued management to reduce invasive species cover and revegetate the areas with native grasses, sedges, and forbs.

WOODLAND AND SAVANNA COMMUNITIES

The oak woodlands and savannas of Greene Valley are the core of the ecological landscape, hosting the highest native species diversity on the site and the only significant remnant native plant communities at the preserve. These include four woodland ecosystems of varying floristic quality which total approximately 225 acres. These communities were not substantially impacted by agricultural or municipal development and remain largely intact, despite more recent influences from invasive species pressure and mesophication.

CURRENT MANAGEMENT REGIME AND ECOLOGICAL CONSTRAINTS

The woodland and savanna communities at Greene Valley are actively managed through prescribed burning, thinning, and invasive species control. However, these management practices are limited by capacity and are not applied evenly across the communities. As a result, invasion by exotic shrubs and shade-tolerant tree species is a recurring threat which will likely require ongoing management, including follow-up treatment of woody re-sprouts. Based on examination of historic aerial imagery, it is likely that canopy levels in the oak woodlands were lower prior to settlement, particularly along their outer boundaries where they transitioned to open savannas and grasslands. As is common within many woodland communities of the region, canopy closure may be a limiting factor for native plant and wildlife diversity within the woodlands at Greene Valley.



NATURAL RESOURCES

DISCOVERY

POTENTIAL ECOLOGICAL SERVICES

The greatest potential for increased ecological services within the woodland communities at Greene Valley likely comes from efforts to conserve the existing diversity of plants and wildlife habitat, and to increase that diversity where practical. This may be accomplished through continued invasive brush reduction and canopy thinning, as well as monitoring and management of herbaceous invasive species, particularly through prescribed burning. Given adequate resources, these efforts should be expanded into areas of the site which are less actively managed, including portions of the Thunderbird Woods and Central Woods where invasive brush is currently heavy. Existing trails within the woodlands are generally limited to narrow foot paths which are not a significant detriment to ecological function.

EURASIAN MEADOW COMMUNITIES

Occupying approximately 759 acres of the preserve, Eurasian shrub meadows and tallgrass meadows make up the largest general community type at Greene Valley. Excepting the Landfill area, these ecosystems are generally relics of previous agricultural land use. When cultivation was discontinued, these areas were allowed to naturalize as Eurasian meadows, developing a dominant cover of exotic forage grasses, non-conservative native forbs, and exotic shrubs. Within the shrub meadows, invasive brush and aggressive native shrubs such as grey dogwood dominate. Native plant diversity in the Eurasian meadow communities is generally low, with the exception of the West Meadows where some high-quality plant species do remain. Wildlife habitat is generally restricted to generalist species, shrubland birds, and pollinators. While examination

of historic aerial imagery is inconclusive, it is likely that pre-settlement conditions supported a mix of grasslands, open woodlands, and savannas.

CURRENT MANAGEMENT REGIME AND ECOLOGICAL CONSTRAINTS

FPDDC actively manages portions of the Eurasian meadow communities through mowing and occasional burning, though the majority of the area is managed only passively to maintain public access along trails. As such, much of the meadow ecosystem is subject to ongoing invasion from exotic brush which threatens to decrease overall biodiversity and habitat quality. Because of the extensive disturbance from agricultural development and construction of the municipal landfill, the Eurasian meadows have very low potential for restoration of remnant native plant communities.

POTENTIAL ECOLOGICAL SERVICES

The primary ecological services provided by Eurasian meadow communities are associated with basic stormwater infiltration and habitat for generalist wildlife species and pollinators. These services may be improved through additional management actions which promote diverse, perennial vegetative cover and discourage encroachment from invasive species, particularly trees and shrubs. To the extent practical, this may also include revegetation with native grassland species. Additionally, the Eurasian meadows may extend ecological services to adjacent high-quality forests and woodlands by providing buffers from off-site disturbance vectors and opportunities for habitat expansion. This is exemplified by the upland reforestation communities which are working to increase the overall size of forest tracts in the northwest sector of the preserve.

IMMATURE BOTTOMLAND FORESTS AND WETLAND CREATION

The areas flanking the East Branch of the DuPage River consist of mixed density bottomland forests which total approximately 183 acres, as well as a 19-acre wetland complex (Route 53 Marsh) which lies within a broad depression in the floodplain. Dominant vegetative cover varies widely across these ecosystems, from open flats dominated by reed canarygrass and intermittent native canopy trees, to dense thickets of invasive brush, to hemi-marsh. Historic aerial imagery indicates that these areas were heavily cropped following settlement and channelization of the river.

CURRENT MANAGEMENT REGIME AND ECOLOGICAL CONSTRAINTS

FPDDC manages portions of the bottomland forests through periodic prescribed burns but does not actively target invasive species or pursue re-establishment of native plant communities in these ecosystems. Because the bottomland forests and floodplain were heavily impacted by early agricultural development, the potential to restore remnant plant resources is very low. Additionally, these areas are subject to seasonal flooding from relatively low-quality surface waters which may promote invasion by persistent wetland invasives and complicate management access.

POTENTIAL ECOLOGICAL SERVICES

Bottomland forest and marsh communities at Greene Valley provide important ecological services for stormwater management, flood control, and wildlife habitat. These services may be increased through targeted invasive species control and management of off-site stormwater inputs. However, management of floodplain plant communities can be challenging based on site access constraints, dynamic hydrology, and ongoing disturbance vectors from flooding

and upstream seed sources. Where effective control may be impractical (eg. persistent wetland invasives within the floodplain) value may still be gained from remedial management that reduces the spread of invasive species into adjacent habitats. Bottomland forest and marsh communities are almost exclusively wetlands, riparian habitats, and floodways that are protected by federal, state, and local regulations. These areas are generally not appropriate for expansion of cultural elements or further development, unless that development is designed to directly improve flood storage, stormwater treatment, habitat value, or access for site management.

AQUATIC COMMUNITIES

Surface water communities at Greene Valley consist of two natural streams and a shallow lake which was created as part of wetland mitigation project associated with the construction of Interstate I-355 (Route 53 Lake). Hydrology within the Route 53 Lake is generally driven by seasonal flooding and is therefore highly variable and subject to siltation. Vegetation in the lake basin includes several emergent native plant species, but is generally dominated by persistent wetland invasives (chiefly reed canarygrass) and mud flats which fluctuate between bare soil and annual forbs.

Stream systems include the East Branch of the DuPage River as well as a first-order tributary which drains residential developments east of the preserve (Crabtree Creek). The East Branch of the DuPage River is a highly urbanized waterway which has undergone extensive channelization within the boundaries of the preserve. While water quality and aquatic wildlife habitat is generally poor, the river supports an important riparian corridor which connects terrestrial ecosystems on a regional scale and provides wildlife habitat and migration routes.



NATURAL RESOURCES

DISCOVERY

CURRENT MANAGEMENT REGIME AND ECOLOGICAL CONSTRAINTS

The aquatic ecosystems at Greene Valley are generally not managed by FPDDC, except general maintenance to maintain trail access and mitigate the effects of flooding on existing infrastructure. As a result of channelization and urbanization of the larger watershed, overall habitat quality is constrained by relatively poor water quality, extensive bank erosion, and sediment transport throughout the system. Any efforts to control invasive species in these ecosystems is complicated by these factors, and by the consistent influx of invasive germ materials from off-site sources.

POTENTIAL ECOLOGICAL SERVICES

While it is beyond FPDDC's purview to manage off-site stormwater inputs and overall watershed characteristics which influence aquatic communities at Greene Valley, there is potential to increase the ecological services they provide, including important local wildlife habitat and improved downstream water quality. Increased ecological services may be realized through channel and bank stabilization, enhancement of floodplain plant communities, and efforts to limit sources for sediment and pollutants. The East Branch DuPage River Watershed Plan, prepared by DuPage County in 2015, provides a comprehensive summary of land management practices and watershed protection measures which may provide the best opportunities for influencing habitat quality downstream.

This page intentionally
left blank



NATURAL RESOURCES

DISCOVERY







SOILS & GEOLOGY

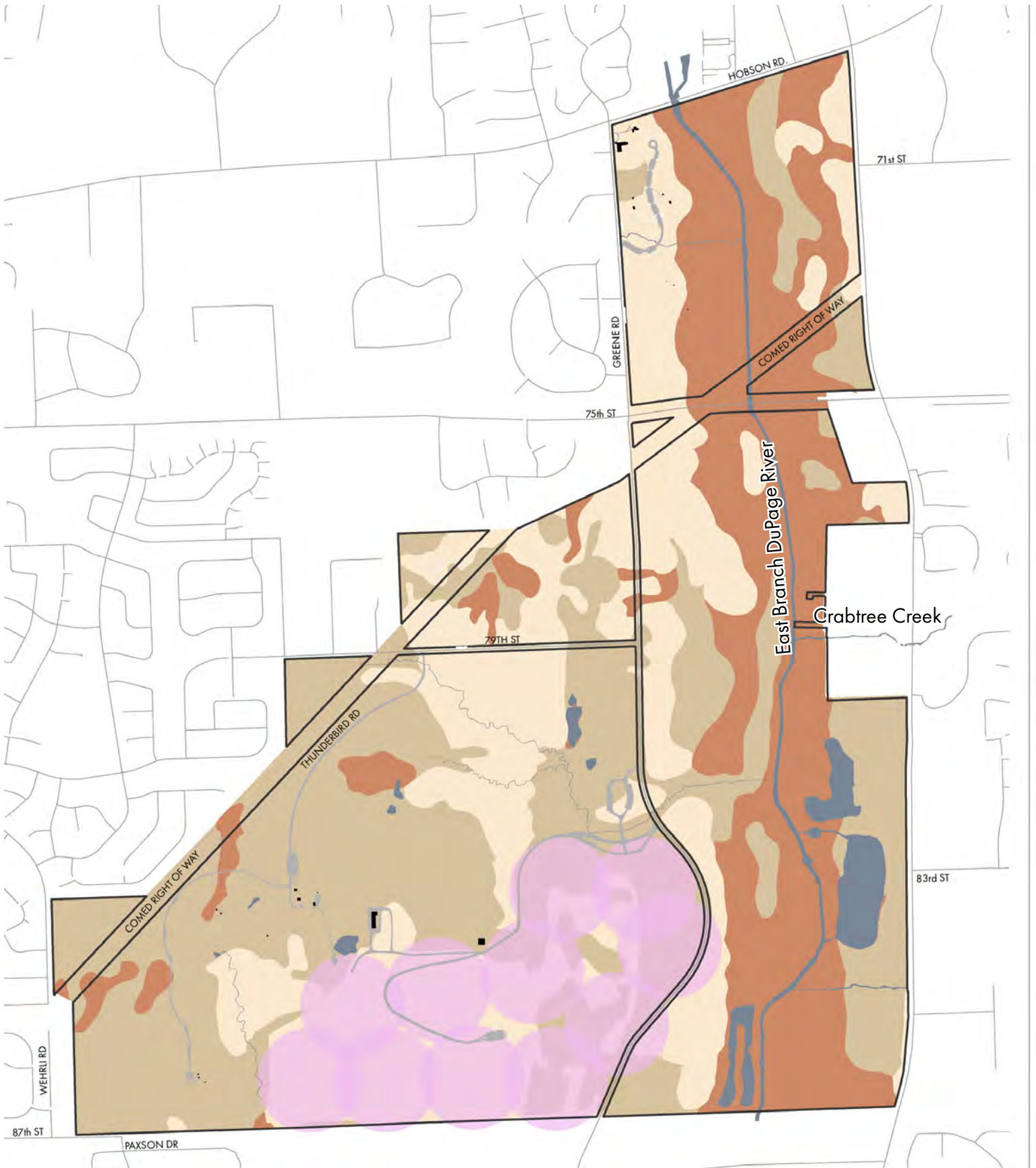
Greene Valley has dozens of soil types, ranging from clay soils to silty loam soils. Most of the soil types are some variations of loam, and many include a silt component. The most common type of soil is Ozaukee silt loam, but other common types are Orthents Loam (on Greene Valley Hill), Ozaukee Silt Loam (mostly on the western sides of the preserve). Along the river, soils are Sawmill Silty Clay Loam, Muskego and Houghton mucks, as well as Grundelein Silt Loam.

Hydric soils are soils that are classified as “very poorly draining” or “poorly draining” and retain water long enough that the soils become anaerobic. These areas shown on the map to the right include some of the soil types / areas listed above: Sawmill silty clay loam, Muskego and Houghton mucks and Grundelein Silt Loam, as they all are related to water bodies and therefore Hydric soils.

The soils information along with other considerations will be used by the master planning team in subsequent stages of work to evaluate the best places to focus ecologic restoration, storm water management, recreation areas, trails, pavilions and other shelters, access drives, parking areas, etc.

LEGEND

-  Preserve Boundary
-  Water Bodies
-  Steep Slopes
-  Hydric Soils
-  Hydric Inclusive Soils
-  Non-hydric Soils



NATURAL RESOURCES

DISCOVERY

HYDROLOGY & PHYSIOGRAPHY

How water moves through the preserve and where it stays for periods of time is determined by the hydrology and physiography of the site. The interconnected system of water bodies and waterways at Greene Valley is comprised of streams, ponds, East Branch DuPage River and marshes. These systems are connected by ecologies and landforms that are largely determined by the water movement through them.

Slope Analysis

In general, the upland portion of the preserve is comprised of a gentle, rolling topography that many people enjoy on the trail system. This upland area contains a series of ponds and low areas that provide rich ecological habitat and beautiful areas for visitors to enjoy. The Greene Valley Hill and overlook is located on the south end of the preserve which has steeper slopes. The water ultimately drains to the East Branch DuPage River. Overall, the highest parts of the site exist at elevation 870-880 feet and fall to elevation 640 feet near the river.

Floodplain and Floodway

The Federal Emergency Management Agency (FEMA) has a Flood Map Service Center (MSC) that provides a source to the public for flood hazard information produced in support of the National Flood Insurance Program (NFIP). FEMA creates maps showing floodplain and floodway limits based on the community's local flood risk. A floodplain is comprised of the floodway and the floodway fringe. The floodway is the primary conveyance area of a channel that naturally manages flood waters. The floodway much remain open to drain flood waters. Flood fringe refers to

the areas outside of the floodway that below the Base Flood Elevation. The 100-year floodplain refers to any area that has one percent chance of experiencing a base flood in any given year.

Wetlands

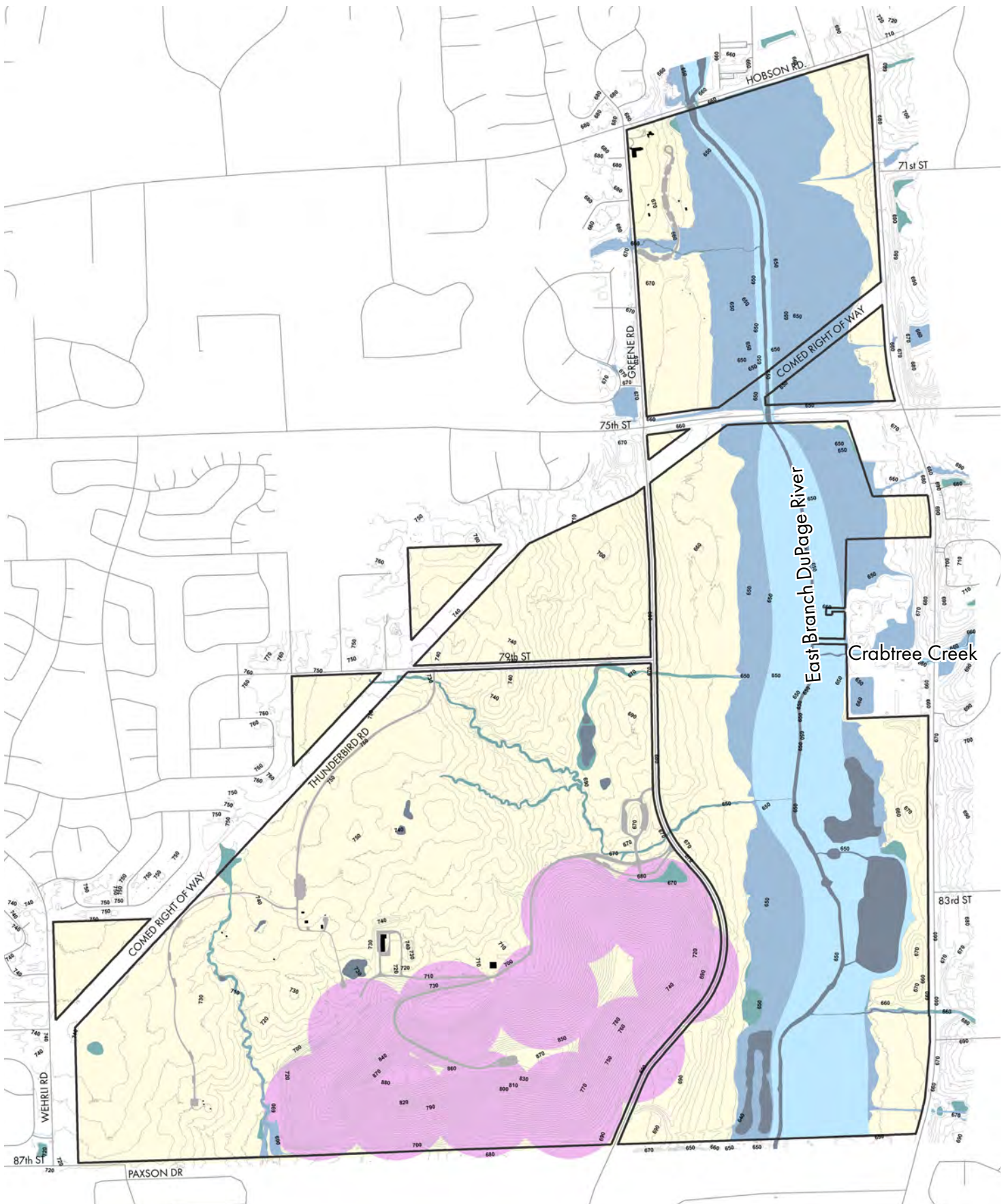
There are a few areas within the preserve that are identified as wetlands. Wetland regulation is complex. In Illinois five government agencies with primary regulatory authority over wetlands. These agencies work cooperatively with one another for the protection of these resources.

Watershed

Greene Valley is part of the East Branch DuPage River Watershed. In March 2015, a Watershed Resiliency Plan was created for East Branch DuPage River, which outlined a strategy for assessment and management of the watershed. Greene Valley's hydrology is comprised of standing water bodies, rivers, creeks and wetlands. Anderson Creek runs from the middle to west of the preserve and is within the 100-year floodway where it joins East Branch DuPage River. Crabtree Creek flows on the eastern side of the preserve and is within the 100-year floodway.

LEGEND

-  Greene Valley Boundary
-  Water Bodies
-  100 Year Flood Way
-  100 Year Flood Zone
-  Wetlands
-  Steep Slopes



NATURAL RESOURCES

DISCOVERY

East Branch of the DuPage River

The East Branch of the DuPage River runs on the eastern part of the preserve which is prone to flooding. The DuPage River is a tributary of the Des Plaines River. Currently, the river is not accessible throughout the preserve, although it is visible from certain points. The East Branch DuPage River Trail runs along the river and several branches of the Southern DuPage Regional Trail cross the river.

83rd Street Marsh and the Marshes Near Anderson Creek

83rd Street ponds are located on the southeastern part of the preserve adjacent to the East Branch DuPage River. With diverse wildlife and a beautiful view, this area is used by birdwatchers and enjoyed by users of the Southern DuPage Regional Trail. The ponds fall within the 100-year floodplain which frequently requires maintenance. These ponds were man made as part of a land bank. They are currently not functioning well they have been known to fill up with invasive species, almost eliminating it from the landscape. The ponds near Anderson creek provide ecosystems for variety of wildlife. There is no direct access to these ponds, but the White Oak Trail runs parallel to it.

WILDLIFE

Biodiversity is critical to maintaining health ecosystems, and Greene Valley contains a variety of ecosystems with unique vegetation and diverse plant communities that are ideal habitats for the many species of wildlife in the preserve. With more than 370 species of mammals, birds, fish, amphibians, reptiles and invertebrates, Greene Valley is refuge for all kinds of species, including migratory birds and pollinators. The wetlands are home to creatures such as waterfowl, herons,

egrets and other aquatic life flourish, and choruses of toads and frogs call during the spring breeding season. There are also coyotes, meadowlarks, and bobolinks within the meadows. Great horned owl, white-tailed deer, and fawns can be spotted in the forest (FPDDC website).





Meadow



Trail through Campground



East Branch of the DuPage River



83rd Street Marsh



NATURAL RESOURCES

DISCOVERY

SURROUNDING LAND USE

Greene Valley Forest Preserve is located in unincorporated DuPage County and is adjacent to Naperville, Woodridge and Bolingbrook. There are various types of lands uses adjacent to Greene Valley including additional park and open space, residential neighborhoods, a quarry, industrial and commercial facilities. The following are some of the adjacent parks and open spaces near the preserve:

Hickory Grove Forest Preserve

Hickory Grove Forest Preserve, formerly part of the Seven Bridges Golf Club, is a 31-acre undeveloped natural area north of Greene Valley. Hickory Grove is a variable oak woodland with a small ephemeral stream that hosts a rich diversity of native plant and animals, including Cooper's hawks, great horned owls, red-headed woodpeckers, tufted titmice, wood thrushes and tiger swallowtail butterflies.

Seven Bridges Golf Club

Seven Bridges Golf Club is public 18-hole course located north of Greene Valley. The golf club also has a bar and grill, and hosts events such as weddings and banquets. While it is connected by the river corridor, there are no public trails.

Hawthorne Hill Park

Hawthorne Hill Park is 72-acre park located east of Greene Valley. The Park is managed by the Woodridge Park District and it features natural trails, biking and walking trails, multi-purpose open play area, and woodlands.

ComEd Right of Way

The ComEd Right of Way contains high voltage power lines that are highly visible in the landscape, but generally are not a physical barrier. The ROW runs through the preserve and is crossed by adjacent neighbors to enter the preserve property.

East of I-53

While possible, access to the preserve by walking and biking is limited to the communities east of I-53 due to heavy traffic on this route. There is one trail access point on 83rd Street.

Whalon Lake Park and DuPage River Park

Whalon Lake is a 249-acre preserve south of Greene Valley and is managed by the Forest Preserve District of Will County. The preserve is home to diverse wildlife and variety of plant species. Amenities and activities include trails, dog park, picnicking, and fishing. Whalon Lake is part of the DuPage River preservation system, which conserves more than 1,500 acres.

DuPage River Park is located southwest of Greene Valley and is owned by the Naperville Parks Department. The Park features a picnic shelter, trails, parking lot, restrooms, and a pond. Whalon Lake Park and DuPage River Park are accessible from Greene Valley by car.

Vulcan Materials Company (Quarry)

Vulcan Materials Company produces construction aggregates such as stone, sand, and gravel. The aggregate facility is located south of Greene Valley. Truck traffic from the facility is heavy on Greene Road and IL-53, adjacent to the preserve, and concerns regarding safety and noise arose from the public.

Winston Woods Park

Winston Wood's Park is a 42.10-acre park owned by the City of Bolingbrook located southeast of the Greene Valley. Most of the park is undeveloped and is home to a variety of wildlife. There are currently no trail connections from Greene Valley. The Park is accessible from Greene Valley by car.



Whalon Lake Forest Preserve



Hickory Grove Forest Preserve



Hawthorne Hill Park



Seven Bridges Golf Club



2 PHYSICAL RESOURCES

DISCOVERY

DuPage County Public Works and CubeSmart Self Storage

The DuPage County Public Works facility is located east of Greene Valley. The agency provides water and sewer services to portions of DuPage County consisting of approximately 200,000 residents. Near the DuPage County Public Works facility is CubeSmart Self Storage.















Cedarhurst of Naperville

This is assisted living facility located at 75th Street and I-53. There are currently no trails that connect the facility to the east side of the preserve. Further connectivity could be considered from the facility to the preserve if desired.

Residential Neighborhoods

There are several adjacent residential subdivisions near the preserve. Along the west side of Greene Road and North of 75th Street, are clusters of single family homes which include a gated subdivision called Woods of Hobson Greene. These residents would like more direct access into the preserve. There are a mix of single family and multi-family housing units between 75th Street and 79th Street west of the preserve. South of 79th Street single-family housing is predominant, while East of IL-53 there is a combination of single and multi-family housing.

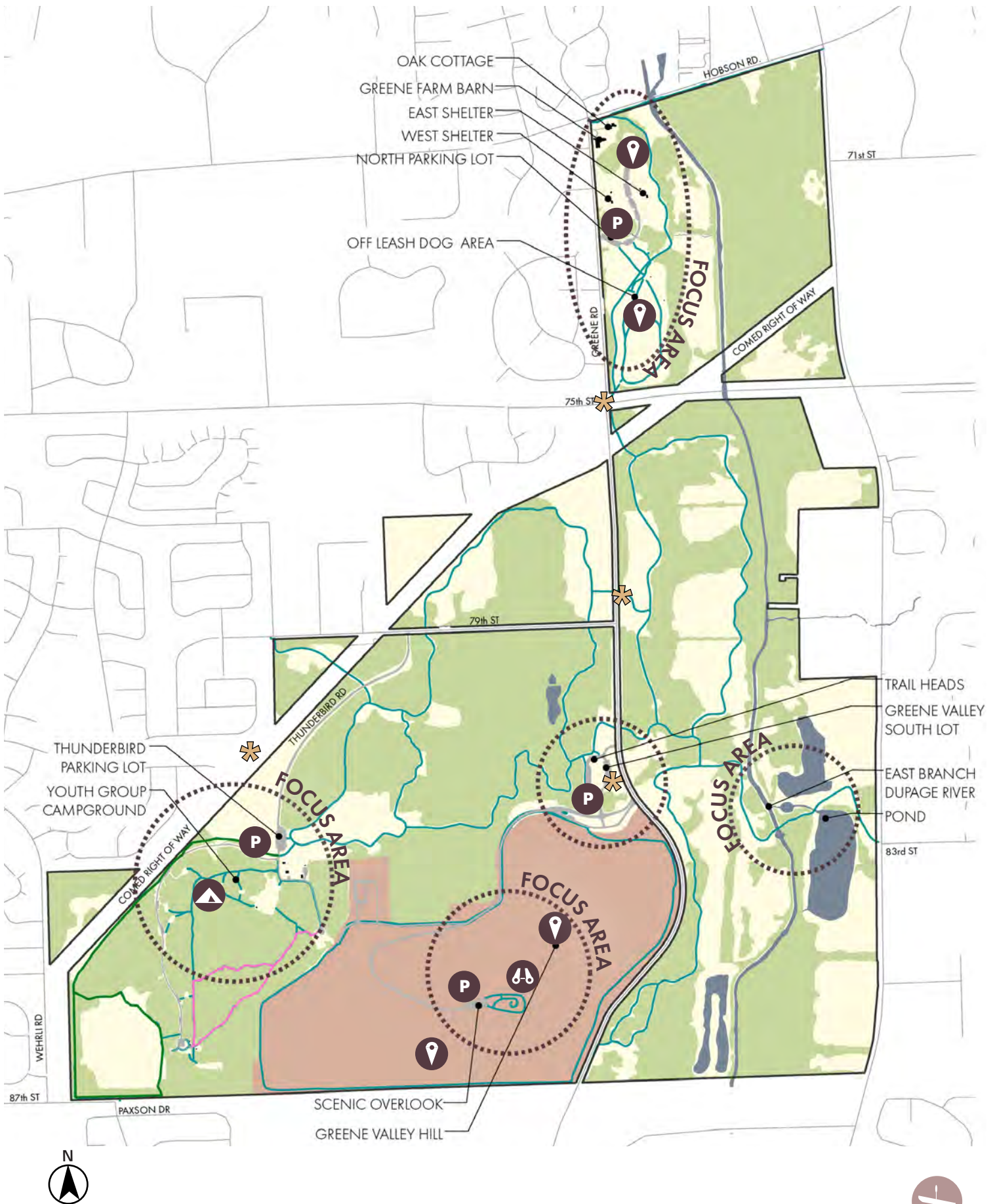
LEGEND

	Preserve Boundary		Campground
	Water Bodies		Parking
	Limestone Trail		View / Overlook
	Turf Trail		Point of Interest
	Mixed Trail		Focus Area
	Wooded Prairie		Vehicular / Bike & Ped Conflict
	Internal Roads and Parking		
	Landfill		

Focus Areas

The following focus areas are highlighted later in the chapter in detail.

- Greene Farm Barn, Oak Cottage, Picnic Shelters, Off-Leash Dog Area
- Thunderbird Parking, Youth Campground
- Greene Valley Hill, Scenic Overlook
- Greene Valley South Lot, Trail Heads
- East Branch DuPage River, Pond



PHYSICAL RESOURCES

DISCOVERY

INFRASTRUCTURE

There are a variety of facilities within the preserve used by visitors and staff that provide safe access to and throughout the space. This includes parking lots, trails, pavilions, a scenic overlook and other elements that are in and adjacent to Greene Valley. The map on the previous page shows areas indicated as Focus Areas; these areas were identified by FPDDC staff and are discussed in more detail in the Strengths, Weaknesses, Opportunities and Threats section of this chapter.

Vehicular Access and Parking

There are three (3) primary vehicular access points to Greene Valley. The main entrance at the north serves the Greene Farm Barn, Oak Cottage, Picnic Shelters, and the Off-Leash Dog Park. The Youth Campground and Thunderbird lot can be accessed via 79th Street. There is an entrance south of 79th street off Greene Rd that provides access to additional parking and the scenic overlook. During peak months, the south parking lots fill up quickly. The vehicular circulation in the South Lot contains a Horse Trailer Parking lot that could be converted to standard parking and consolidated with the balance of the lot. Parking access from Greene Road can be challenging due to limited sight lines, a steep grade change and heavy traffic at times. Theft in parked cars in the north lot has also been an issue in the past.



Off Leash Dog Park



Gravel Road to Scenic Overlook



West Picnic Shelter



Parking Lot near Campground



Wooded Trails near Campground



Visitor Information Sign



PHYSICAL RESOURCES

DISCOVERY

The Preserve has a total of eight (8) trail segments:

- The East Branch of the DuPage River Trail is a 2.7 mile limestone trail running from north to south of the preserve. It shares part of its alignment with the Southern DuPage Regional Trail. The Southern DuPage Regional Trail segment within Greene Valley is 2.3 miles long and crosses the East Branch DuPage River in two locations.
- The White Oak Trail is a 2.7 mile loop limestone trail west of the preserve.
- The Valley Trail is 1.0-mile limestone trail that connects to the Southern DuPage and East Branch trail on the east side of the preserve creating a loop.
- The Thunderbird Trail is a 1.4 mile turf trail on the southwestern most part of the preserve.
- The Kestrel Trail is a 0.3 mile limestone trail connected to the White Oak Trail.
- The Hawk Trail is a 2.6 mile limestone trail around the Greene Valley Hill.
- The Caruso Trail is a 0.8-mile mixed surface trail near the Youth-Group Campground.

There are opportunities to create additional connections to these trails as well as improve way-finding signs throughout the preserve.

Circulation Conflict Points

While the trails are well maintained within the preserve, these pedestrian and bicycle routes are bisected by roads such as 75th Street, the ComEd Right-of-Way, and Greene Rd. Conflicts for cyclists and pedestrians occur mostly where the trail crosses Greene Road north of 79th Street and at the intersection of Greene Road and 75th Street.

The mowed trails and unmaintained pathways throughout the preserve are off-shoots of the main trails and do link some of the trails together.

Bridges and Crossings

The Southern DuPage Regional Trail crosses via a single span bridge over the Eastern Branch of the DuPage River near 83rd Street. The bridge is in good condition but has flooded in the past during significant rain events. The trail also crosses the river on the north end of Greene Valley along Hobson Road.

Regional Trails

The Southern DuPage Regional Trail is a 49-mile regional trail and 2.3-miles of this trail traverse through Greene Valley. The trail connects to other major forest preserves such as Waterfall Glen and Springbrook Prairie. It also connects 11 communities across the southern third of DuPage County.

The East Branch DuPage River Trail is a planned 28-mile regional trail which will connect forest preserves with parks, waterways, and different municipalities. Some major key connections include connections to the Great Western Trail, Illinois Prairie Path, and Morton Arboretum.

Youth-Group Campground

This facility is located on the southwest part of the preserve near the Thunderbird Parking Lot. The campground provides an opportunity for groups in the area to enjoy the preserve and learn about the wildlife and vegetation that exist within it. Greene Valley's youth campground has 10 sites, 8 of which can accommodate up to 25 campers and 2 of which can accommodate 50 and 100 campers. While open year-round, the campground can only be used by youth groups. These groups are "recognized, nonprofit organizations whose members are 17 or younger."



Southern DuPage County Regional Trail



Bridge Crossing



Latrines near Campground



Youth Campground

PHYSICAL RESOURCES

DISCOVERY

FACILITIES

Utilities

The ComEd Easement runs diagonally through the preserve. The easement limits formal pedestrian and vehicular access from the adjacent neighborhoods west of the preserve.

Buildings

There are a few buildings in the preserve, indicated on the map to the right. Some of these include the Greene Farm Barn, Oak Cottage, and picnic shelters. There is a building near the landfill that could be adapted for use as a Natural Resource Management Program Support Building.

Buildings that exist in Greene Valley are:

- 1** Latrines
- 2** Picnic shelter
- 3** Greene Farm Barn
- 4** Oak Cottage
- 5** Potential Natural Resource Management Program Support Building

Latrines and Port-O-Johns

There are several locations of existing latrines throughout the preserve. They are located in the following locations:

- North Parking Lot
- Thunderbird Parking Lot
- Greene Valley South Lot
- Scenic Overlook

Many stakeholders expressed a desire to add restrooms in high-traffic areas and to convert the latrines to flush toilet facilities.











East and West Shelters

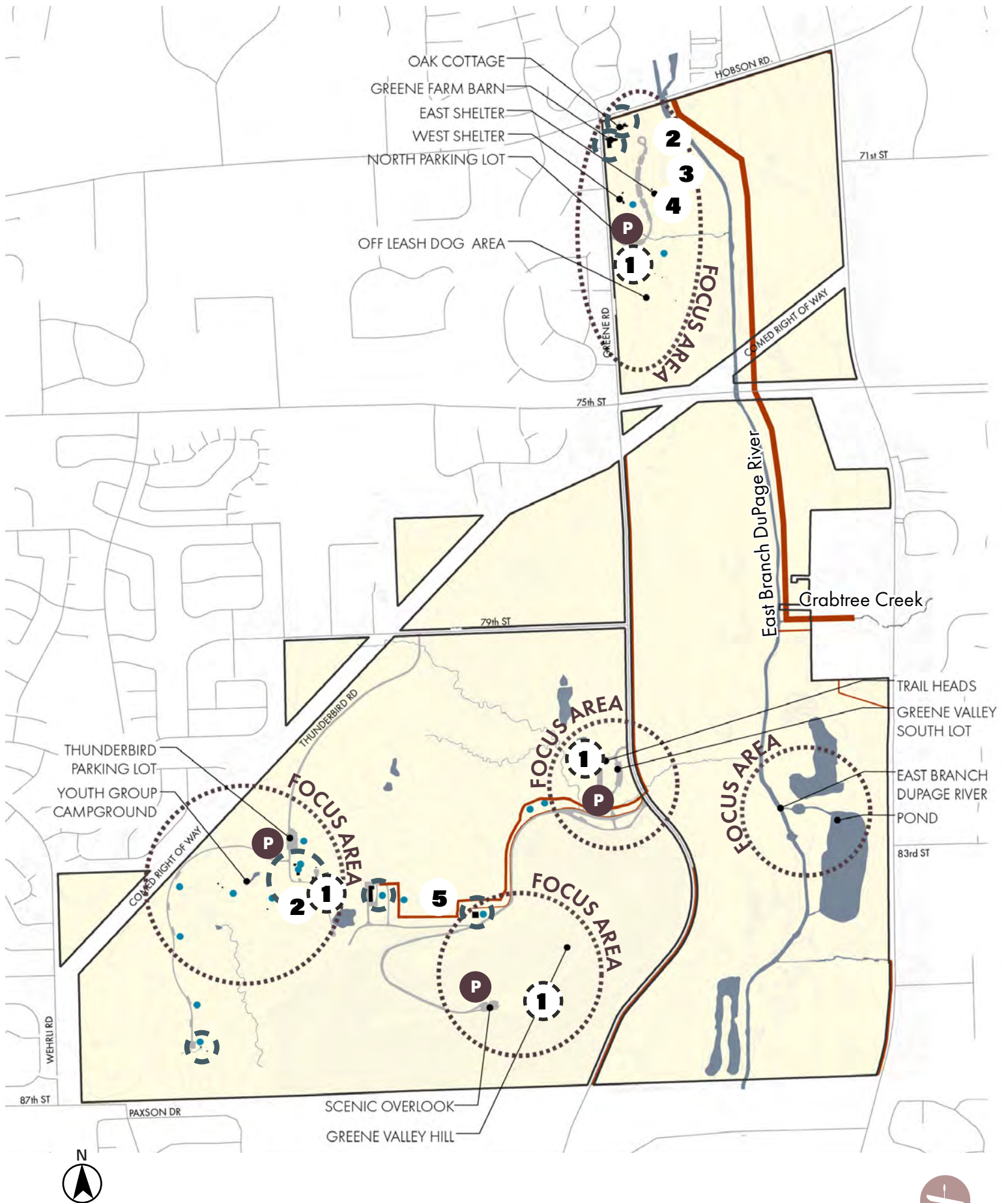
The East Shelter and the West Shelter are located on the north end of the preserve. Each shelter has picnic tables available to the public, but reservations are available for groups of 15 or more people. Each shelter has a capacity of 50 people and area capacity of 100 people.

Greene Farm Barn Oak Cottage

Built by the Greene Family in the 1840s, the Greene Farm Barn is a historic picturesque structure located on the northwestern part of the preserve. The barn and its surrounding grounds are used for events, but the facility itself is limited as it has no facilities that are required for public use. The Oak Cottage is an 1841 farmhouse built by William Greene and is situated in the northwestern part of the preserve.

LEGEND

-  Preserve Boundary
-  Water Bodies
-  Utility Easement
-  Rail Corridor and Power Line
-  Internal Roads and Parking
-  Well
-  Parking
-  Buildings
-  Latrines or Port-O-Johns
-  Focus Area



PHYSICAL RESOURCES

DISCOVERY

Natural Resource Management Program Support Building

The District has been evaluating the possibility of relocating the Natural Resource Management Program Support Building facility from Waterfall Glen to Greene Valley.

Youth Group Campground

The Youth-Group Campground is located in the Southwest corner of the preserve near the Thunderbird parking area. The campground is near Thunderbird Trail and Caruso Trail.

Restrooms

All restroom facilities in the preserve are either latrines or port-a-potties. There are certain locations that would likely be prioritized to be converted first, as they are near the most activity and have the most use. For more information about these options, see the Focus Area enlargements later in this chapter.



Greene Farm Barn

HUMAN HISTORY

"In 1835, William Briggs Greene acquired 200 acres of present-day Greene Valley Forest Preserve from Daniel Greene, his uncle. When surveyors mapped the land in 1840, they reported how they "left Brill's wheat field and entered hazel and red oak brush and scattering timber." This and other descriptions of stunted oak trees mixed with thorn thickets and wooded ravines offer an idea of how the area once looked.

The Forest Preserve District of DuPage County first purchased land at the site in 1926. An acquisition in 1969 — the same year that the District officially named the property — added the historic Oak Cottage, the 1841 farmhouse that William Greene had built. By the mid-1970s, the District had completed its acquisitions at Greene Valley Forest Preserve."

(Source: Forest Preserve District website)



Oak Cottage



Maintenance Facility



3 CULTURAL RESOURCES

DISCOVERY

HUMAN USE

Most programming at Greene Valley is self-directed and organized programming is limited. Visitors come for the hiking trails, horseback riding, snowshoeing, scenic overlook, picnicking, camping, and the dog park.

Greene Valley Hill and Scenic Overlook

Greene Valley Hill is located in the south part of the preserve and is open to the public from 11 a.m. to 6 p.m. on Saturdays and Sundays in the months of May through October. During public engagement, participants expressed that they would like the hill to be open for extended times and also on weekdays. The scenic overlook on the hill is loved by visitors as it offers a bird's eye view of DuPage County and the Chicago Skyline. The hill is used heavily for bird watching and watching the sunset. The hill can be accessed by a gravel road from the base of the hill and a parking lot is available on top. However, the surfacing of the road is difficult for bikers to use. Improvements on the landfill are difficult because of settling, erosion, landfill gas and leachate management.

Picnicking

Picnicking is a popular activity at Greene Valley and the preserve offers two shelters with dozens of picnic tables as well as plenty of green space where visitors can lay out their picnic blankets.



Greene Valley Overlook view of Chicago Skyline



Greene Valley Landfill



Gravel Road at the base of Greene Valley Hill

Hiking, Horseback Riding, Cross Country-Ski, Biking

Hiking, horseback riding, biking, and cross-country skiing are common uses of the trails within Greene Valley. Parking is available for equestrian trailers on the west side of Greene Rd and South of 79th Street.

Places to Gather, Rest and Reflect

Greene Valley offers several places to formally gather. This includes the picnic shelters, overlook, youth-group campground, dog area, and benches along the trail. Bird-watching groups, walkers, groups, families and friends are just a few of the groups who utilize the preserve space as a place to gather. While there are places to gather, rest, and reflect, there is potential for adding amenities such as more frequent seating for seniors or disabled users. Additional shelters may be considered along with pathways for people of all abilities.

Support Amenities

Interpretive signs throughout Greene Valley allow the community to learn about its diverse ecology and wildlife, and provide information about programming and events. Additional signs offering more information about restoration efforts, the history of the preserve, or other interesting facts might make the public feel even more connected to Greene Valley.



Visitor Information Sign



4 STRENGTHS, WEAKNESSES OPPORTUNITIES & THREATS ANALYSIS

The purpose of the Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis is to identify areas within the preserve that are optimal for improvements. This exercise also highlights elements and / or programming in Greene Valley that are operating well and should remain as they are.

The SWOT analysis brings together elements and programming from the previous sections within this chapter and combines them with observations and possibilities. The map to the right provides an overview list of items in the SWOT analysis, and the following pages show enlargements of the Focus Areas.

STRENGTHS

- 1 Diverse ecosystems
- 2 Greene Valley Hill / Scenic Overlook - views of Downtown Chicago and surrounding areas
- 3 Variety of trail uses allowed (hiking, biking, cross country ski and horseback)
- 4 Historic Greene Farm Barn and Oak Cottage
- 5 Several looped trail options on the south side of the preserve
- 6 Off-Leash dog area
- 7 Model aircraft area
- 8 North side of Greene Valley is really well maintained
- 9 Youth-group campground

WEAKNESSES

- 1 Lack of looped trail on the north side of the preserve
- 2 Floodplain/floodway
- 3 Preserve is fragmented by 75th street and ComEd Right of Way
- 4 Vehicle speeds and Quarry truck traffic on I-53
- 6 Unsightly gas powerplant that will be there for the foreseeable future
- 7 Confusing vehicular circulation/duplicative drives at the Horse Trailer Parking lot off of

Greene Road

- 8 Limits on what can be done to the landfill
- 9 Disjointed vehicular access
- 10 Limited hours for use of the Greene Valley Hill/ Scenic Overlook (11am-6pm Saturdays and Sundays only May through October)
- 11 Invasive species in the high quality woodlands by youth campgrounds
- 12 Latrines vs. flush toilets
- 14 Lack of drinking water sources

OPPORTUNITIES

- 1 Greene Valley Hill/ Scenic Overlook Improvements (seating, shade etc.)
- 2 Extended use of the Greene Valley Hill/ Scenic Overlook, including programming activities
- 3 Relocating the Natural Resource Management Program Support Building use to Greene Valley from Waterfall Glen here will tuck this use back into a lower-visibility area.
- 4 Extended hours/access to Greene Valley Hill/ Scenic Overlook
- 5 Extending the camping offerings at Greene Valley to families/other large groups (corporate or large family campouts)

THREATS

- 1 Parking lot access off Greene Road has poor sight lines.
- 2 Guard house is getting old and a decision may be needed to be made about renovation/ removal
- 3 Parking lot is prone to "smash and grabs" to parked vehicles
- 4 Floodplain/floodway
- 5 Traffic/vehicles traveling on Greene Road, 75th Street
- 6 Truck traffic on IL-53
- 7 Landfill: erosion, settling, long term landfill gas and leachate management issues
- 8 Trail crossing on Greene Road north of 79th Street



STRENGTHS WEAKNESSES OPPORTUNITIES & THREATS ANALYSIS

FOCUS AREA

GREENE FARM BARN, OAK COTTAGE, PICNIC
SHELTERS, OFF LEASH DOG AREA



Greene Farm Barn and Oak Cottage

Opportunity to educate the public about the history of the former dairy operations

Trail

Possible connections from Off Leash Dog area and an additional trail East of the river

North Parking Lot

Opportunity to improve access and sight lines at Greene Road

Off Leash Dog Area

This area is well used & has potential for better access

East Branch DuPage River

Opportunity to create access to the river for activities such as fishing, canoeing and kayaking

LEGEND

	Existing Trail		Existing Building
	Potential Connection		Access Improvement
	Water Body		Vehicular Access

Greene Farm Barn

The Greene Farm Barn is a popular historic structure in the preserve and part of a former dairy operation. In 2011, the FPDDC repaired the barn, but it still remains closed to the public. The District, along with interested members of the public have continued to explore potential uses of the barn, but it is challenging due to the cost of renovation and various code issues, as well as viable end uses and needed partnerships.

There is interest by preserve users to highlight the history of the barn, the farm and the Greene Family. There is also a potential to better connect the barn to the river and other trails, as well as opportunities to improve the surrounding grounds for activities such as outdoor events and picnics. The barn has also been noted by preserve users as great backdrop for photos.

Trail

The trail system in this focus area features two regional trails (the Southern DuPage Trail and East Branch Trail). These trails connect the north part of the preserve to the southern portion. While the trails are generally well maintained, improvements to trail signage and wayfinding has been suggested by preserve users. In addition, there's an opportunity to add additional trails and create access to the East Branch DuPage River.

Greene Road Entrance

The entrance along Greene Road is the main vehicular access to the parking lot, dog park, shelters, and the historic structure. Participants in the stakeholder engagement sessions have suggested improving the access point on Greene Road to make it safer and improve sight lines.



Greene Farm Barn



Picnic Shelter



Off Leash Dog Area



North Parking Lot



STRENGTHS WEAKNESSES OPPORTUNITIES & THREATS ANALYSIS

FOCUS AREA THUNDERBIRD PARKING, YOUTH-GROUP CAMPGROUND



Thunderbird Lot

Existing parking lot for preserve users

Youth-Group Campground

Opportunity to create more programming and overall improvements

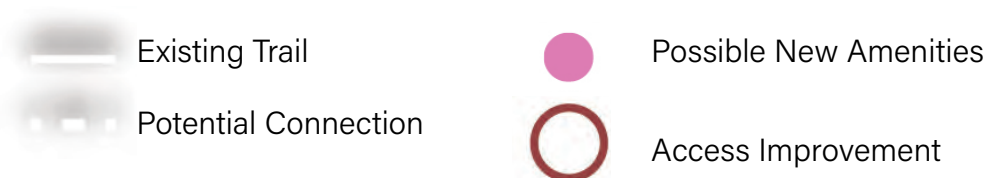
ComEd Right of Way

ComEd Right of way is a barrier to adjacent neighborhood access to the preserve

Campground Entrance

Opportunity to improve signage within the campground as well as adding flush toilets instead of latrines

LEGEND





Youth-Group Campground



ComEd Right of Way

Youth-Group Campground

There is an opportunity to create a separation of cyclists on trails further away from the campgrounds to remove potential conflicts. Some survey participants indicated that they would like more campsites to be open for family use year-round in addition to youth groups. There's also a potential to improve the signage within the campground.

The campground has latrines, but many users would like to see more flush toilets instead. The camp sites include benches, picnic tables and firepits. There are a total of 10 camp sites. Site 1 can accommodate a group as large as 100 people. Site 10 can accommodate 75 people. Sites 2-9 can accommodate 25 people and site 9 is the only ADA compliant camp site.

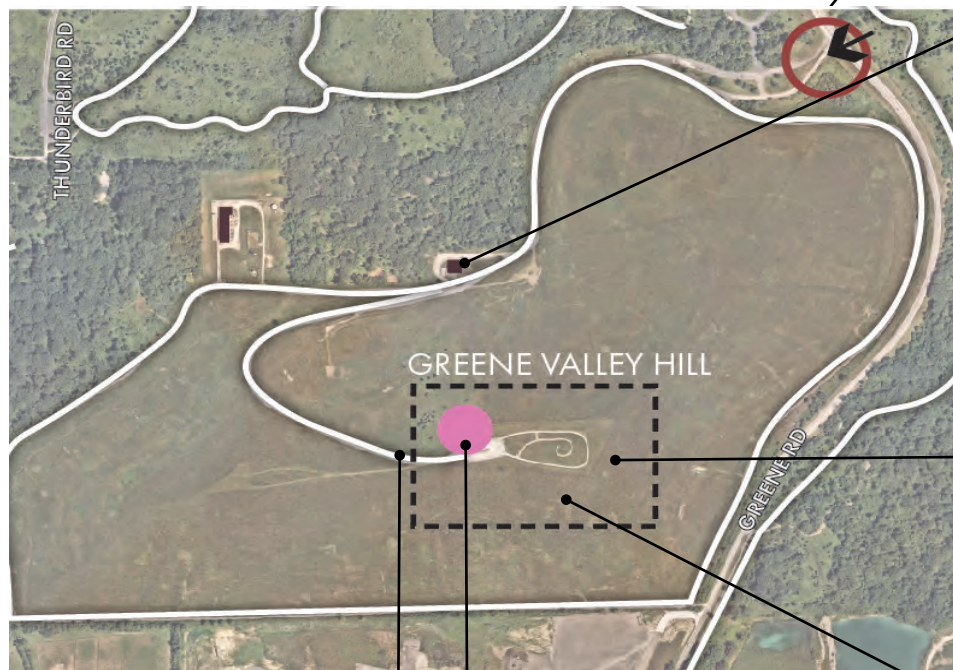
ComEd Right-of-Way

The Com-Ed Right of Way borders the west side of the preserve. The right-of-way limits access from adjacent neighborhoods via formal trails. Residents are allowed to cross the right-of-way to access the preserve. Stakeholder engagement participants expressed interest in creating additional pedestrian and bicycle access points into the West side of the preserve.



STRENGTHS WEAKNESSES OPPORTUNITIES & THREATS ANALYSIS

FOCUS AREA GREENE VALLEY HILL AND SCENIC OVERLOOK



Greene Valley South Lot
Confusing vehicular circulation due to dupliative drive off Greene Rd.

Potential Natural Resource Management Program Support Building Facility
Opportunity to relocate the Natural Resource Management Program Support Building Facility from Waterfall Glen.

Landfill
Improvements on the landfill is difficult due to settling and landfill gas and leachate management infrastructure.

Greene Valley Hill
Existing hill has opportunity for more activities and for it to be open for longer hours and throughout the year.

Road Surfacing
Opportunity to improve surfacing for bikers and walkers

Overlook
Opportunity to add more amenities, such as picnic tables, shade structure, site furnishings, binoculars

LEGEND

- | | | | |
|--|-----------------------|--|------------------------|
| | Possible Improvements | | Possible New Amenities |
| | Existing Trail | | Access Improvement |
| | Potential Connection | | Vehicular Access |
| | Existing Building | | |



Greene Valley Hill

Greene Valley Hill and Overlook

The Greene Valley Hill is a former landfill and a significant attraction within the preserve. The hill is the highest point in the immediate vicinity and offers amazing views of the preserve and the city skyline. Visitors use the hill for a variety of activities including exercise, kite flying, 360-degree views, watching sunsets, bird watching, or picnicking.

The landfill is currently operated by Waste Management of Illinois and will continue to be until at least 2028. As a result, use of the landfill hill is limited until the landfill reverts to the District.

Due to its popularity, users suggest extending hours for public use as well as making it open all year round for winter activities. In addition, some



Potential Natural Resource Management Program Support Building Facility

survey and engagement participants would also like easier access to the hill via biking or walking. While there are opportunities to improve the hill, it's important to consider the threats of erosion, settling, and leaching.

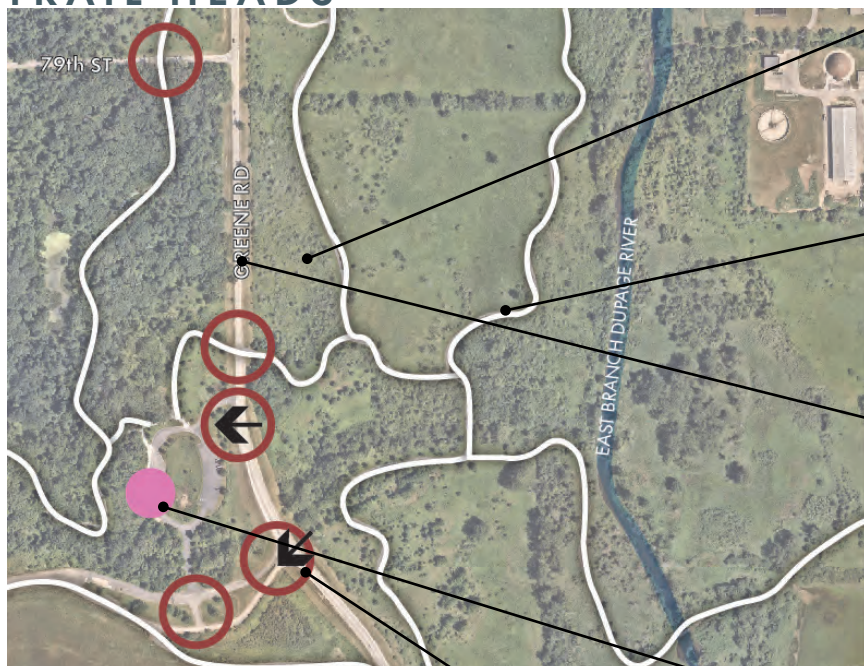
Potential Natural Resource Management Program Support Building Facility

Relocation of the Natural Resource Management Program Support Building Facility from Waterfall Glen to Greene Valley has been discussed by FPDDC Staff. Updates to the structure to accommodate the program needs will be required.



STRENGTHS WEAKNESSES OPPORTUNITIES & THREATS ANALYSIS

FOCUS AREA GREENE VALLEY SOUTH LOT, TRAIL HEADS



Habitat

Potential to continue improving and maintaining shrubland habitat

Trail Management

Opportunity to connect trails with additional trails to create more loops

Greene Rd

Greene Road is high stress for cyclists and pedestrians due to gravel freight trucks and lack of pedestrian accommodations






Amenities

Opportunity to add drinking fountains and flush toilets instead of latrines near parking lot

Circulation

Opportunity to improve circulation at South Lot

LEGEND

-  Existing Trail
-  Water Body
-  Possible New Amenities
-  Access Improvement
-  Vehicular Access



Greene Valley South Parking Lot



Limestone Trail

Greene Valley South Parking Lot and Trailheads

The Greene Valley South Parking Lot is one of the main access points to the preserve. There are issues with circulation due to the multiple lanes for horse trailer parking, traffic and gravel trucks on Greene Road, and the connection to the landfill road. The lot is also used by dog sledders. The lot is often full during peak months in the winter time.

Amenities such as flush toilets, better wayfinding, and water fountains near the parking lot and trail head were also suggested by the public.

Trails and Habitat

During the virtual engagement, the public noted the need to create smaller loops within this focus area. Additional wayfinding signs would also be beneficial. In addition, the public also noted the potential to continue improving and maintaining the landscape for habitat creation and ecological restoration.



STRENGTHS WEAKNESSES OPPORTUNITIES & THREATS ANALYSIS

FOCUS AREA EAST BRANCH DUPAGE, POND



East Branch DuPage River

Opportunity to create additional access to the river

Trail Management

This is a popular crossing, but is subject to flooding

Access

This trail entrance on 83rd St and IL-53 is the only access to the preserve from the East side.

LEGEND

- Existing Trail
- Water Body
- Access Improvement

Ponds

The ponds were originally installed as stormwater detention but have become an important asset for wildlife and bird habitat, however they do flood periodically



East Branch DuPage River

East Branch DuPage River

Access to the East Branch DuPage River is limited in Greene Valley, however, the river is visible from the trail system. Users would like to access the river more for activities like canoeing and kayaking. In addition, the river is important ecologically as it provides habitat for wildlife. The river floods along with the ponds and there are opportunities for additional stormwater management and other improvements to trails that would mitigate flooding.



Pond

83rd St Ponds

The ponds are a beloved features of this area, and are enjoyed by bird-watchers and trail users. Currently, Southern Regional DuPage Trail runs near the ponds. The public has indicated the need to maintain the functionality of the pond and to control invasive species. The public also indicated that this area would benefit from additional interpretive signs about the wildlife and habitat at the pond, so users could learn and understand the importance of ecosystems like this one.



KEY TAKEAWAYS

NATURAL ECOSYSTEMS

Restoration

The FPDDC staff have been restoring pieces of the preserve since its inception, and this remains a major element of its mission. This restoration is critical and a clear outline and prioritization for restoration efforts would help staff have a clear vision to allocate limited resources.

Maintenance

Continuing to maintain the areas of the preserve that have been identified as heavily-used will keep spaces safe and usable throughout the preserve.

PHYSICAL CONNECTIVITY

Trails

What preserve users love most about Greene Valley are the well-maintained trails. Where appropriate, FPDDC could consider additional trail spurs and/or loops for areas separated from trails to alleviate some of the congestion and more variety for visitors.

Spurs & New Trails

The public also mentioned that more spur trails would help alleviate some of the traffic during peak season as well as to create shorter loops. New trails that create smaller loops within the preserve would provide variety, make it more accessible for seniors, and provide users with a chance to experience new areas of the preserve.

EXISTING RESOURCES

Building Re-Use

There is a potential for a Natural Resource Program Support Building to be relocated from Waterfall Glen to Greene Valley in an existing building near the landfill.

FUTURE RESOURCES

Future recreational resources should be placed in areas that have suitable soils, slopes and are not within wetlands or floodplains. They should also be located in areas that are accessible from either existing parking lots or roadways, or have the potential to have new and easily accessed parking.

POINTS OF INTEREST

Greene Valley Hill and Overlook

The scenic overlook on Greene Valley Hill is loved by users and there is a potential to increase the times that it is open to the public as well as introducing different activities on the hill. There's also an opportunity to add more benches and make the access easier for bikers and walkers.

Greene Farm Barn

Restoration efforts have been completed to stabilize the barn, but it remains closed to the public. There is an opportunity to highlight the history of the barn and the Greene Family and improve surrounding grounds for events, but the feasibility of opening it for public use remains challenging.

Model Air Field

The model airfield has seen a decline in use over the past few years, but is in a great location in the preserve. Introducing new programming options such as picnicking would reactivate this space when it is not being used for aircraft.

SIGNAGE

Wayfinding

While there is wayfinding throughout the preserve, additional signage about points of interest, secondary trails, mile markers for training and other amenities within the preserve would help users navigate areas more easily.

Interpretive

Additional signs about the history of the preserve, natural resources and ecosystems within it would be beneficial to visitors interested in learning as they move through Greene Valley.

Trail Use

Many attendees of the stakeholder engagement sessions mentioned that there are some points of conflict along the trails, primarily roadways. By introducing additional safe crosswalk areas, signage about trail etiquette and pointing out potential hazards, some of these conflicts may be reduced.

AMENITIES

Flush Facilities

Greene Valley currently only has latrine facilities and port-a-potties, but prioritizing which latrines should be upgraded to flush facilities would help the preserve to allocate investment to those facilities that get the most use.

Additional Seating

Another common comment from users of the preserve was that additional seating along the trail and at points of interest would be appreciated. Some areas of the loop trail have long stretches without any seating, and users, especially senior users, would benefit from having more places to rest along the way.

CULTURAL HISTORY

Quite a few participants of the Stakeholder Engagement sessions wished to celebrate and highlight the history of the preserve as an opportunity to educate the public about Greene Valley. This includes Native Americans, the Greene Family, the dairy operation, the landfill and natural resources on site.

WATERFALL
GLEN
FOREST
PRESERVE

Discovery &
Analysis

IN THIS SECTION:



NATURAL
RESOURCES



PHYSICAL
RESOURCES



CULTURAL
RESOURCES



SWOT
ANALYSIS

DISCOVERY

EXISTING CONDITIONS

WATERFALL GLEN

Waterfall Glen, located near Darien, Illinois, is a unique, ecologically diverse preserve. This donut-shaped open space encircles the Argonne National Laboratory and occupies over 2,500 acres.

The shape of the preserve lends itself to the 9.5-mile loop trail that links all areas within it. This trail provides space for runners, walkers, bicyclists, horseback riders and cross-country skiers to enjoy their respective activities.

In addition to the trail, the preserve is home to unique habitats, a youth campground, areas for fishing, an orienteering course, and a model airplane field.

Waterfall Glen has prairies, savannas and woodlands that showcase 740 native plant species. The preserve is also home to 300 species of mammals, birds, fish and amphibians, and another 300 species of invertebrates.

Adjacent to the preserve is the Des Plaines River, which links habitats and wildlife to the preserve and provides a unique ecosystem itself. Waterfall Glen is also adjacent to a shooting range, industrial park and the Hindu Temple of Greater Chicago.

With lots of residential neighborhoods nearby, Waterfall Glen is a source of natural wonder for those residents, as well as visitors from other areas of the county, state and beyond.

Chapter Summary

This chapter is organized into four sections:

1 NATURAL RESOURCES

This section will provide an overview of the existing conditions of Waterfall Glen with regards to ecosystems, soils, hydrology and physiography, and wildlife. Observations about each of these categories inform the analysis of the preserve's strengths and weaknesses when it comes to its natural resources.

2 PHYSICAL RESOURCES

This section will provide an overview of the existing conditions of Waterfall Glen with regards to surrounding land use, infrastructure and facilities. Observations about each of these categories inform the analysis of the preserve's strengths and weaknesses when it comes to its physical resources.

3 CULTURAL RESOURCES

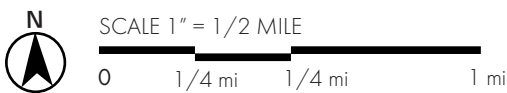
This section will provide an overview of the existing conditions of Waterfall Glen with regards to the history and current human use of the preserve. Observations about each of these categories inform the analysis of the preserve's strengths and weaknesses when it comes to its cultural resources.

4 STRENGTHS, WEAKNESSES, OPPORTUNITIES & THREATS ANALYSIS

This section synthesizes the information from sections 1-3 to illustrate what the preserve is currently doing well and what could be improved.



Waterfall Glen Forest Preserve



1 NATURAL RESOURCES

DISCOVERY

ECOSYSTEMS





















Waterfall Glen is home to prairies, savannas and oak-maple woodlands that contain 740 native plant species.

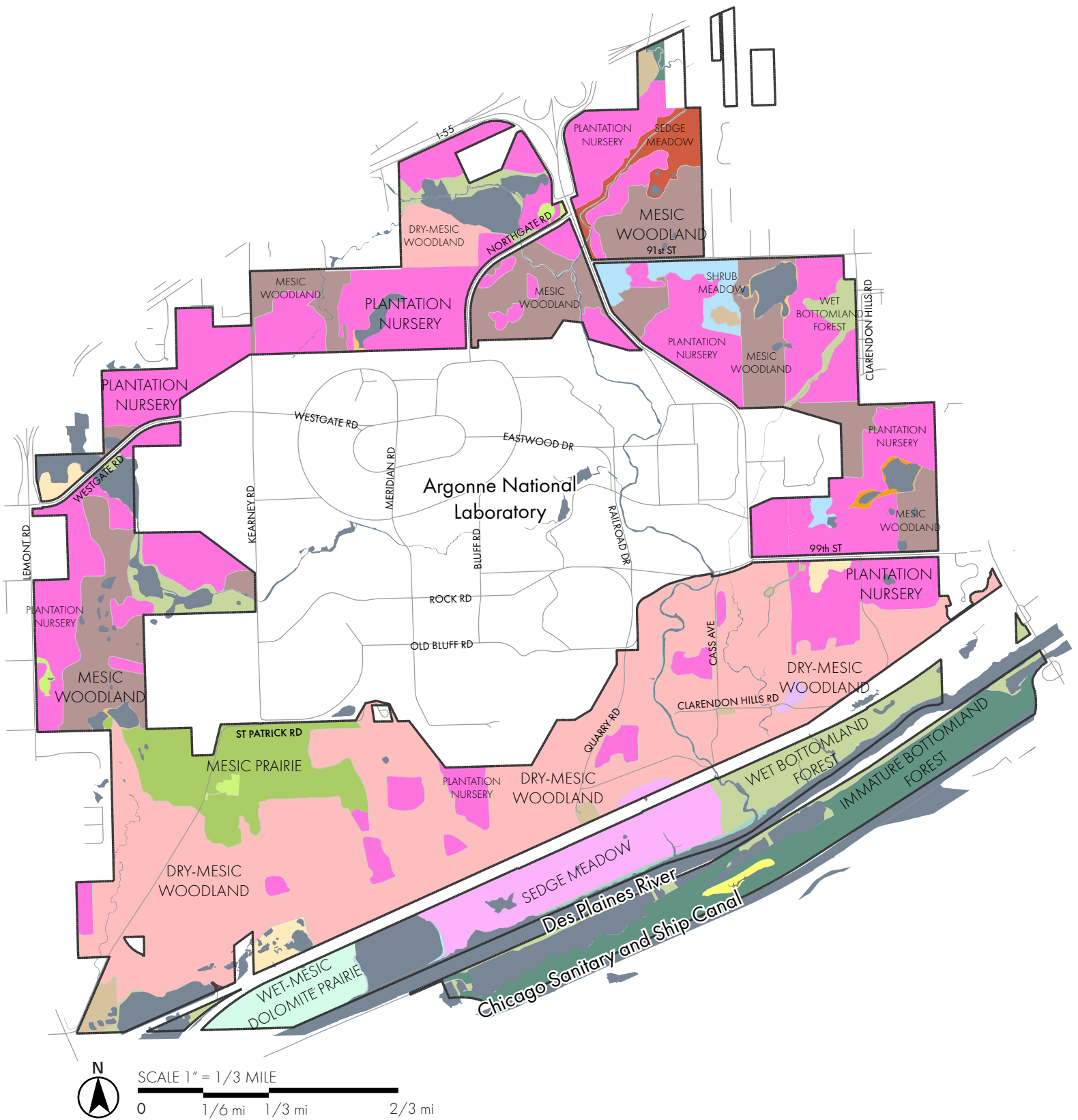
More than 750 acres of bluff savanna exists on the southern portion of the preserve. The savanna alone provides a diverse plant community of more than 400 native species, which provides a home to wildlife.

The poverty prairie makes up more than 120 acres of the preserve, and contains more than 300 native plant species.

Existing conditions within the natural areas of Waterfall Glen Forest Preserve are summarized below based on preliminary site reconnaissance conducted by Stantec staff in April 2021 as well as background data provided by FPDDC and publicly available GIS resources. Existing conditions summaries are organized according to FPDDC ecosystem divisions and are grouped according to their assigned community type.

LEGEND

	Preserve Boundary
	Tree Marsh
	Shrub Fen
	Shrub Meadow
	Wet Bottomland Forest
	Wet-Mesic Dolomite Prairie
	Sedge Meadow
	Ruderal Site
	Prairie Re-Creation
	Plantation Nursery
	Monoculture Marsh
	Mesic Woodland
	Mesic Prairie
	Immature Upland Forest
	Immature Bottomland Forest
	Dry-Mesic Woodland
	Diverse Marsh
	Water Bodies
	Mowed Areas
	Residence / Facility Complex



NATURAL RESOURCES

DISCOVERY

PLANTATIONS & NURSERIES

Plantation and nursery communities at Waterfall Glen are comprised of 33 individual tracts of pine and hardwood species planted in the mid-1950s as part of a reforestation effort initiated by Argonne National Laboratory. Generally, plantation and nursery tracts of this type are considered cultural relics with no naturally occurring counterpart in the ecoregion. Discussion of existing conditions within plantation and nursery communities is organized below according to their landscape position, relative to extant remnant ecosystems within the preserve.

PLANTATIONS AND NURSERIES WITHIN MESIC WOODLANDS AND FORESTS

The northern, eastern, and western portions of Waterfall Glen are generally characterized by a complex of mesic woodland communities which are intersected by low marshes, Eurasian meadows, and cultural spaces. Plantations are interspersed throughout. In the northern sector, plantations are comprised exclusively of jack pine (*Pinus banksiana*). Plantations in the eastern and western sectors are more diverse, including discreet plots of white pine (*Pinus strobus*), red pine (*Pinus resinosa*), sycamore (*Platanus occidentalis*), red gum (*Liquidambar styraciflua*), black walnut (*Juglans nigra*), tulip poplar (*Liriodendron tulipifera*), green ash (*Fraxinus pennsylvanica*), and soft maple (*Acer* sp.).

Current Management Regime and Ecological Constraints

Plantation and nursery communities within mesic woodlands and forests are generally not managed by FPDDC natural resources staff or contractors. Portions of these communities which are adjacent to trails, parking areas, and other cultural facilities are occasionally managed by grounds maintenance staff to improve aesthetics and maintain access. Typical conditions include dense invasive brush within plantation understories and generally depauperate ground plane vegetation. Shade tolerant, herbaceous invasive plants, such as garlic mustard, are present within portions of the plantations. Canopy tree mortality within the jack pine and green ash plantations is high. Canopy tree mortality in red pine, white pine, and hardwood stands is low-moderate.

Potential Ecological Services

Plantation communities which are interspersed within mesic woodlands offer few ecosystem services outside of basic cover habitat for generalist wildlife species. The greatest potential for increase in ecosystem services lies in restoration or conversion of these communities to their historic cover type (likely a mix of grasslands, savannas, and open oak woodlands based on examination of historic aerial photography) or a similar condition which supports a more diverse assemblage of native plant species. Such gains are limited by stand size and are likely far greater if undertaken at landscape scale alongside the improvement of adjacent woodland tracts. This type of restoration requires a significant front-end effort (and cost) to remove exotic canopy trees and invasive brush, and to actively re-vegetate

depauperate portions of the ground plane. Red pine and white pine stands may contain some marketable timber which could be used to offset restoration costs.

PLANTATIONS WITHIN THE BLUFF SAVANNA

The southern sector of the preserve above the river bluff consists of a large complex of dry-mesic oak woodlands incised by a series of ravines which descend southward toward the marshes and dolomite prairies of the Des Plaines River floodplain. Plantation tracts are interspersed throughout these oak woodlands, planted within former agricultural fields and historic grasslands and savannas which had no significant canopy cover at the time of the Argonne reforestation effort. Plantations in this area are primarily a mix of jack pine, white pine, and red pine with small tracts of hardwoods in the southeast and southwest sectors.

Current Management Regime and Ecological Constraints

The plantation communities are generally not managed by FPDDC natural resources staff or contractors. Edges of those communities which are adjacent to higher quality oak woodlands and ravines do benefit from periodic active management (invasive species control, prescribed burning), but the interior of these units are generally dominated by dense invasive brush and depauperate ground plane vegetation. As such, plantations are currently acting as interruptions in an otherwise contiguous, high-quality oak

woodland complex. Shade tolerant, herbaceous invasive plants, such as garlic mustard, are present within portions of the plantations. Canopy tree mortality within the jack pine plantations is high. Canopy tree mortality in red pine, white pine, and hardwood stands is low-moderate.

Potential Ecological Services

On the whole, plantation communities which are interspersed within the bluff savanna offer few ecosystem services outside of basic cover habitat for generalist wildlife species. The exception to this may be the easternmost units (EWF19 and more mesic plantations to the north) where wildlife associates of coniferous forests, such as red squirrel, have taken up residence. The greatest potential for gain in ecosystem services lies in restoration of these communities to their historic cover type (likely a mix of grasslands, savannas, and open oak woodlands based on examination of historic aerial photography) or a similar condition which supports a more diverse assemblage of native plant species. Such gains are limited by stand size and are likely far greater if undertaken as part of a larger effort to restore a contiguous grassland and oak woodland complex across the bluff savanna tablelands and ravines. Red pine and white pine stands may contain some marketable timber which could be used to offset restoration costs. With restoration efforts such as canopy thinning and invasive brush removal, plantation communities in the bluff savanna may demonstrate passive re-vegetation through remnant germ material or seed sources within adjacent oak woodlands.



NATURAL RESOURCES

DISCOVERY

MESIC WOODLANDS

Mesic woodland ecosystems at Waterfall Glen are comprised of 11 separate communities of closed-canopy forests in the northern, western, and eastern sectors of the preserve. Mesic woodlands exhibit a wide range of floristic and habitat quality based on remnant plant constituents, wildlife habitat features (including critical ephemeral wetlands), and varying levels of disturbance. Based on examination of historic aerial photography, pre-settlement conditions within all mesic woodlands at the site were likely a mix of grasslands and open oak woodlands, many of which were cleared and farmed in the late 19th and early 20th centuries. Following the discontinuation of agriculture, and in the absence of widespread grazing and fire, these ecosystems became dominated by mesophytic trees and shrubs. The introduction of Eurasian shrub species, chiefly buckthorn, bush honeysuckles, and multiflora rose, has further degraded these communities from their historic condition. Individual ecosystem characteristics.

Current Management Regime and Ecological Constraints

The current management regime within mesic woodlands is mixed. Past efforts within the Kettle Woods (EWF45), Tulip Woods (EWF17) and other class 4 woodlands have restored critical ephemeral wetland habitat for salamanders and other amphibians. Portions of the class 4 woods, and to a lesser degree the class 3 woods, have also been periodically managed for removal of exotic brush, limited canopy thinning, and invasive species control by FPDDC staff, contractors, and volunteers. Areas adjacent to trails and cultural features are managed by maintenance staff to

improve aesthetics and maintain access. In many cases, these efforts have not been followed by ongoing chemical control of woody re-sprouts or frequent burning. As such, the majority of these ecosystems remain degraded by encroachment and shading from invasive brush and dense canopy levels. Mesic woodlands are also largely fragmented by plantations.

Potential Ecological Services

The mesic woodlands of Waterfall Glen provide relatively high-quality wildlife habitat and support a high diversity of native plants, but ecosystem services are limited by habitat fragmentation and long-term management capacity. The greatest potential for increased ecosystem services likely comes from additional efforts to maintain previously restored portions of the community, and through expansion of restoration efforts in mesic woodlands and adjacent plantation tracts to create more contiguous habitat. Wildlife, particularly amphibians, will benefit from efforts focused on increasing hydro-period in ephemeral wetlands and increasing plant diversity and native cover in the ground plane. Restoration goals should consider pre-settlement conditions and, to the extent practical, recreate historic woodland structure through canopy reduction (selective removal of mesophytic trees and shrubs) and re-vegetation with grassland and savanna species.

DRY-MESIC WOODLANDS

The largest contiguous community type at Waterfall Glen is the dry-mesic oak woodland which occupies the highlands and ravines of the Des Plaines River bluff (Bluff Savanna) as well as one smaller tract near the northern entrance to

the preserve. The Bluff Savanna provides critical wildlife habitat and remnant plant assemblages which are regionally rare. Based on examination of historic aerial imagery, the pre-settlement conditions in the dry-mesic woodlands were likely far more open than they are today, with open-canopied savannas along the ravine slopes and finger ridges transitioning to grasslands on the tablelands and bluff slopes. Portions of the tablelands were cropped prior to conservation, though the majority of ravine and bluff slopes appear not to have been plowed. These areas retain some of the most conservative native vegetation in the preserve and remains relatively open-structured despite some canopy closure and mesophication in the absence of fire.

Current Management Regime and Ecological Constraints

The dry-mesic woodlands face a number of constraints to ecological function. The Bluff Savanna is highly fragmented by pine plantations which were planted in historic grasslands and savanna edges. The historically open canopy of the ravine and bluff woodlands has infilled with more shade tolerant tree species and invasive shrubs. Drainage patterns and localized hydrology have been altered (particularly in the western sector) by construction of roads and trails along the bluff shoulder. While the dry-mesic woodlands are actively managed through burning, thinning, and invasive species control, these practices are limited by capacity and are not applied evenly across the communities. As a result, invasion by exotic shrubs and shade-tolerant tree species (including re-sprouts) is a recurring threat which will likely require ongoing management.

Potential Ecological Services

Ecosystem services from dry-mesic woodlands are limited by habitat fragmentation and long-term management capacity. The greatest potential for increased ecosystem services likely comes from additional efforts to control woody invasive species in previously restored portions of the community and through expansion of restoration efforts in the Bluff Savanna and adjacent plantation tracts to create more contiguous habitat. To the extent practical, restoration efforts may seek to recreate historic canopy structure through selective removal of mesophytic trees and shrubs and re-vegetation with grassland and savanna species. Restoration of historic drainage patterns through removal or replacement of culverts, channel and bank stabilization, and other practices may reduce erosion within ravine drainage-ways and improve downstream water quality.

FOREST COMMUNITIES

Forest communities include Immature Bottomland Forests, Immature Upland Forests, Wet Bottomland Forests, and Tree Marshes. Above the river bluff, these include a series of forested wetlands or swamps characteristic of poorly drained depressions and broad drainage-ways in the upper portions of the watershed. Below the bluff, these communities include floodplain forests along the Des Plaines River. Historic aerial imagery suggests that the swamps above the bluff were heavily forested following settlement. Floodplains along the river also had a similar overall canopy pattern to the current complex of forest communities, likely based on variations in topography, soil composition, flood frequency, and depth to bedrock.



NATURAL RESOURCES

DISCOVERY

Current Management Regime and Ecological Constraints

The floodplain forests along the Des Plaines River have been subject to degradation from industrial development since early in our settlement history. At Waterfall Glen this includes road and railroad development, fill, borrow excavation, and changes to hydrology and water quality which remain as primary constraints to the ecological function of this area in addition to invasive species expansion. Despite threats to these bottomland forests, they are adjacent to the marshes and dolomite prairie of the floodplain and provide critical wildlife habitat for a number of rare resident species and migrants along the riparian corridor. While swamp communities above the bluff have been degraded by invasive species expansion, they can also provide important wetland habitat for wildlife. FPDDC manages select communities where wildlife value is critical, but capacity and access are both limited, and many forest areas remain relatively degraded.

Potential Ecological Services

Forest communities at Waterfall Glen provide critical services for stormwater management, flood control, and wildlife habitat. These services may be increased through continued invasive species control and management of off-site stormwater inputs. However, management of forest communities (particularly those along the floodplain) can be challenging based on site access constraints, dynamic hydrology, and ongoing disturbance vectors from adjacent industrial development and upstream seed sources. Where effective control may be impractical (eg. persistent wetland invasives within

the floodplain) value may still be gained from remedial management that reduces the spread of invasive species into adjacent habitats. Forest communities are almost exclusively wetlands, riparian habitats, and floodways that are protected by federal, state, and local regulations.

OPEN MARSH AND FEN COMMUNITIES

Marsh and fen communities at Waterfall Glen include a relatively diverse set of ecosystems ranging from sedge meadows to shallow diverse marshes to monocultural marshes dominated by more aggressive perennial wetland plants. This range in hydrology and plant composition is found throughout the preserve, though general patterns in marsh community types can be linked to overall landscape position. Marshes above the river bluff are largely associated with broadened portions of the Sawmill Creek and tributary drainage-ways, or with poorly drained depressions such as the 91st Street Marsh. Marshes located below the bluff lie within the Des Plaines River floodplain over relatively shallow dolomitic bedrock.

Current Management Regime and Ecological Constraints

Several of the marshes at Waterfall Glen provide critical wildlife habitat for wetland birds, amphibians, reptiles, and invertebrates, including the federally endangered Hines Emerald Dragonfly. Some of these systems are floristically rich while others are highly degraded. FPDDC manages higher quality communities through invasive species control, prescribed burning, and targeted wildlife habitat enhancements but management is

limited by capacity and site access. Marshes below the river bluff are also monitored and managed for Hines Emerald Dragonfly habitat, including an ongoing program to support populations through captive breeding. Aggressive wetland plant species (such as exotic cattails, common reed, and reed canarygrass) are the primary threat to system health, particularly where water quality is affected by off-site stormwater inputs and flooding. Where improvements to water quality are impractical, long-term control or eradication of these invasive species may not be possible.

Potential Ecological Services

In addition to their value to wildlife and plant species richness, the marshes of Waterfall Glen provide important watershed-scale services for stormwater treatment and flood attenuation. The greatest potential for gain in ecosystem services may result from increased efforts to control invasive species, increase native plant diversity, and improve species-specific wildlife habitat requirements. Critical to those efforts is a detailed evaluation of stormwater inputs into each community, and where practical, taking steps to mitigate the volume, input frequency, temperature, suspended sediments, and pollutant load of surface water entering marsh communities throughout the preserve. Marshes and fens are protected by federal, state, and local wetland regulations. These areas are generally not appropriate for expansion of cultural elements or further development.

WET-MESIC DOLOMITE PRAIRIE

Dolomite prairie is a regionally rare plant community characterized by thin, often eroded glacial till over shallow, dolomitic limestone bedrock. The resulting hydrology and alkaline, magnesium rich soils support a unique assemblage of plant species, many of which are not found elsewhere. At Waterfall Glen, the Wet-Mesic Dolomite Prairie consists of one 50-acre tract located between the Burlington Northern Railroad tracks and the north bank of the Des Plaines River. Historic aerial imagery indicates that this community lacked significant woody cover prior to settlement, and likely resembled its current vegetative structure and species composition. Although the dolomite prairie was not likely to have been farmed, major disturbances were introduced through road and railroad construction, stream channelization, and significant borrow excavation at its eastern extent.

Current Management Regime and Ecological Constraints

FPDDC monitors and manages the Wet-Mesic Dolomite Prairie through invasive species control and prescribed burning. Management of this specific tract is highly limited by access, as vehicle and equipment access are complicated by ground conditions in the adjacent marsh and are cut off completely by the railroad tracks. Past efforts by FPDDC to gain an access easement across the tracks have been unsuccessful. The primary ecological threats to this community come from woody species encroachment and invasive species competition. Because this area lies within the river floodplain, it is subject to flooding and off-site germ



NATURAL RESOURCES

DISCOVERY

sources for aggressive wetland invasives. More specifically, reed canarygrass occurs at moderate frequency throughout much of the unit, while common reed and cattail are well-established within the wetter margins.

Potential Ecological Services

The dolomite prairie at Waterfall Glen provides critical habitat for highly conservative plants and animals, including federally protected species. Because of its unique soil characteristics, this community type is generally considered to be irreplaceable following significant disturbance. Ecosystem services may be maximized in this community by strictly conserving existing native plant assemblages and wildlife habitat features and reducing the threat from invasive species and woody encroachment. This area is federally protected as critical wildlife habitat.

SHRUB MEADOWS

Shrub Meadows at Waterfall Glen consist of old-field plant communities in various successional stages. They are dominated by a mix of perennial Eurasian grasses, common native and exotic forbs, and invasive shrubs. These communities are relics of anthropogenic disturbance typically associated with agriculture or development which involved broad-scale soil disturbance, grading, or heavy grazing. The Shrub Meadows retain few native plant species.

Current Management Regime and Ecological Constraints

The Shrub Meadows at Waterfall Glen are not currently targeted for native plant community restoration and are not managed for control of invasive species. Exotic and non-conservative native species are well established and relatively stable. On their current trajectory, these systems are likely to succeed toward mesic forest systems driven by encroachment from invasive shrubs and shade tolerant canopy trees. This process often results low overall species diversity and poor wildlife habitat.

Potential Ecological Services

As stable perennial plant communities, the Shrub Meadows do provide important ecological services through soil stabilization and stormwater infiltration. They offer marginal wildlife habitat as cover and forage for mammals, and moderate value for pollinators and grassland birds. These services may be improved through periodic control of invasive species and/or burning to discourage woody encroachment and increase plant diversity. While restoration of Shrub Meadows is unlikely to result in highly conservative native plant communities, ecological services may be increased by converting these areas to native prairie re-creations.

MESIC PRAIRIE AND PRAIRIE RE-CREATION

The prairies of Waterfall Glen consist of one large remnant tract (Poverty Prairie) and a small prairie re-creation within the interior of the Bluff Savanna. Both communities support diverse native plant

assemblages and critical wildlife habitat. Historic aerial imagery indicates that both of the prairies were open (no significant canopy cover) in the mid-twentieth century, and it is likely that pre-settlement conditions in these areas supported mesic to dry-mesic prairie or savanna edge systems which were characteristic of the bluff tablelands.

Current Management Regime and Ecological Constraints

Each of the prairie communities at Waterfall Glen are actively managed with prescribed burning and targeted invasive species control. Primary threats to ecological health come from expansion of invasive species, including encroachment from invasive shrubs in adjacent woodlands and ruderal areas. In addition, both of the prairie communities are subject to soil disturbance and vegetation damage resulting from public use patterns. Poverty prairie is adjacent to high-use trails and roadways as well as the model airplane area. Signal Hill is bisected by a network of trails which are actively eroding due to mountain bike traffic.

Potential Ecological Services

Both Poverty Prairie and Signal Hill provide important habitat for conservative native plant species and wildlife, particularly grassland birds and pollinators. At the watershed scale, large prairie tracts also provide important opportunities for stormwater infiltration which is critical for maintaining downstream water quality. The greatest potential for increased ecological services comes from conservation and enhancement of

native plant diversity, continued control of invasive species, and mitigation of misuse by preserve users.

AQUATIC COMMUNITIES

Waterfall Glen's surface water communities consist of three lake systems and two streams. Lakes include man-made ponds (borrow pits and fish-rearing ponds) which are all located along the floodplain of the Des Plaines River. Both Borrow Lake and Quarry Lakes provide habitat for emergent and submergent vegetation that is important for wildlife use.

Stream systems include the Des Plaines River as well as Sawmill Creek and its tributary drainages. The Des Plaines River is a highly urbanized waterway which has undergone extensive channelization and industrial development. While water quality and aquatic wildlife habitat is generally poor, the river supports an important riparian corridor which connects terrestrial ecosystems on a regional scale and provides important wildlife habitat and migration routes. Sawmill Creek is a second-order stream which drains approximately 12.5 square miles of highly developed suburban communities and bisects the preserve before its confluence with the Des Plaines River. In addition to relatively valuable habitat for aquatic invertebrates, fish, bats, and amphibians, Sawmill Creek provides one of the primary opportunities for public use and recreation in the preserve. Public use of the adjacent trail system and waterfall viewing area is very high.



NATURAL RESOURCES

DISCOVERY

Current Management Regime and Ecological Constraints

Ponds and Lakes in the southern quadrant of the preserve are generally not managed by FPDDC. As man-made systems, their primary influence on the ecology of the area is to provide diversity in wildlife habitat and vegetated shoreline communities. In some cases, that shoreline vegetation may include aggressive wetland invasives which have the potential to expand into adjacent marshes and prairie habitats. FPDDC monitors and manages Sawmill Creek for wildlife usage, public access, and bank stability and erosion. FPDDC has undertaken projects to stabilize eroding banks and arrest soil erosion and bank slumping. Maintenance of the trail system and waterfall viewing area is focused on minimizing the impacts of intensive public use and resulting soil erosion, compaction, and damage to vegetation. Access to cross Sawmill Creek is limited. An established crossing exists near the base of the river bluff which provides both vehicle and foot access, but this area is overused, and the existing footbridge and bank stabilization treatments are inappropriate for the hydraulics of the reach.

Potential Ecological Services

Ecological services provided by the ponds and lakes at Waterfall Glen are generally limited to marginal wildlife habitat within emergent shoreline plant communities. Increases to ecological services may be realized by managing these systems to reduce invasive species and prevent their spread into adjacent communities. While effective management of the Des Plaines River aquatic ecosystem is beyond the reach of FPDDC, its banks and adjacent terrestrial habitats can be

monitored and stabilized as needed to reduce soil erosion and increase overall water quality within downstream portions of the watershed. Sawmill Creek provides important wildlife habitat which may be improved through continued efforts to reduce bank erosion, enable appropriate public use patterns and access, and address water quality in the upper portions of the watershed. Within the limits of the preserve, this equates to conservation or enhancement of native plant communities and continued efforts limit sources for sediment and pollutants. However, the greatest potential for gains in water quality and aquatic habitat are likely outside of the preserve within the larger watershed. A Draft Watershed-Based Plan was prepared by DuPage County in 2017 which provides a comprehensive summary of land management practices and watershed protection measures which may provide the best opportunities for influencing habitat quality downstream.

THIS PAGE INTENTIONALLY
LEFT BLANK



NATURAL RESOURCES

DISCOVERY

SOILS & GEOLOGY

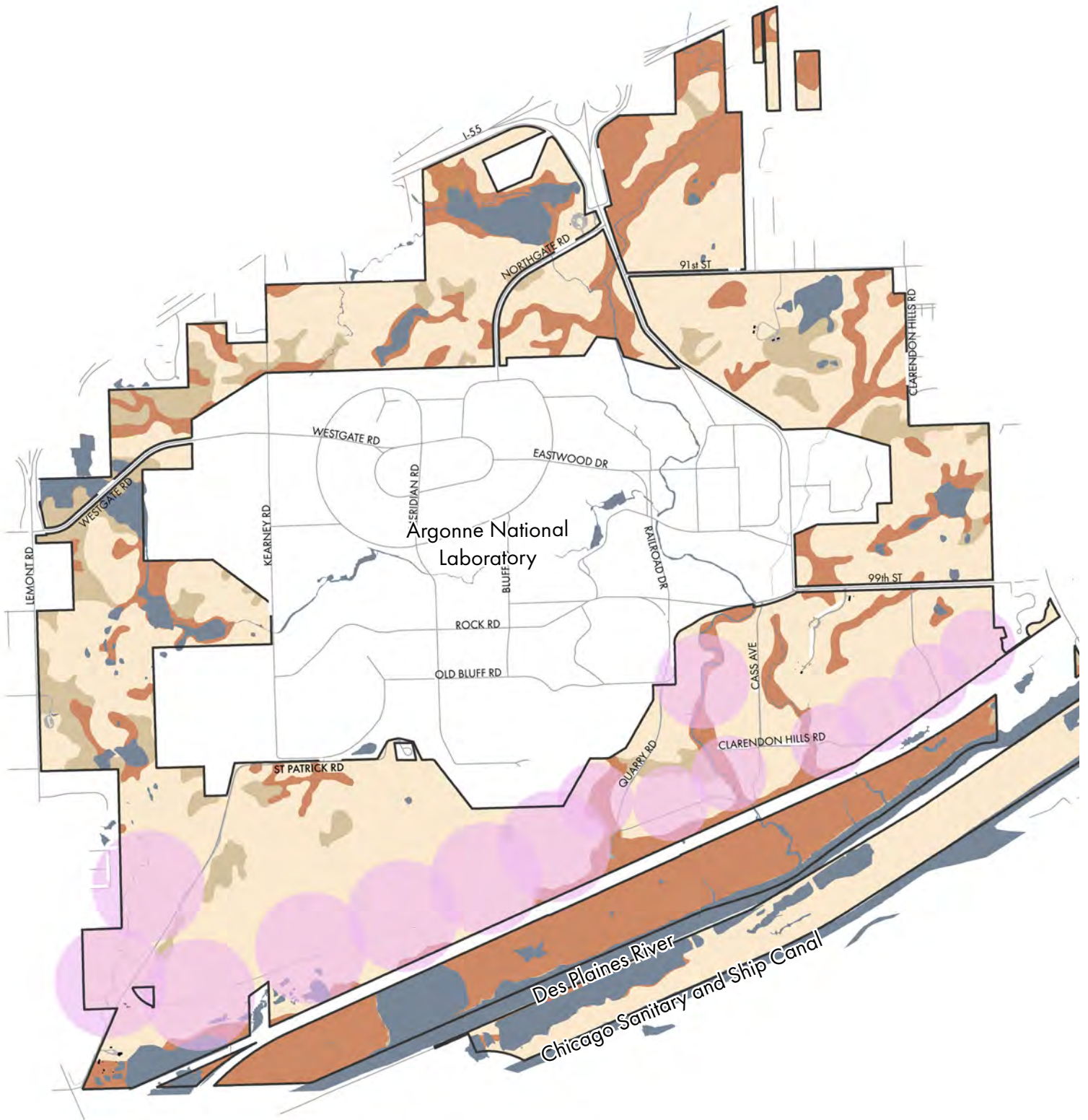
Waterfall Glen has dozens of soil types, ranging from clay soils to silty loam soils. Most of the soil types are some variation of loam, and many include a silt component. The most common type of soil is Ozaukee silt loam, but other common types are Sawmill silty clay loam (along Sawmill Creek), and Beecher silt loam (mostly on the western sides of the preserve). Along the river, soils are Faxon silty clay loam, and Muskego and Houghton mucks, as well as Orthents (clay) soils.

Hydric soils are soils that are classified as “very poorly draining” or “poorly draining” and retain water long enough that the soils become anaerobic. The areas shown on the map to the right include some of the soil types / areas listed above: Sawmill silty clay loam, Muskego and Houghton mucks and Orthents, as they all are related to water bodies and therefore Hydric soils.

The soils information, together with other considerations, will be used by the master planning team in subsequent stages of work to evaluate the best places to focus ecologic restoration, storm water management, recreation areas, trails, pavilions and other shelters, access drives, parking areas, etc.

LEGEND

-  Preserve Boundary
-  Argonne Laboratory
-  Water Bodies
-  Steep Slopes
-  Hydric Soils
-  Hydric Inclusive Soils
-  Non-hydric Soils



SCALE 1" = 1/3 MILE

0 1/6 mi 1/3 mi 2/3 mi



NATURAL RESOURCES

DISCOVERY

HYDROLOGY & PHYSIOGRAPHY

How water moves through the preserve and where it stays for periods of time is determined by the hydrology and physiography of the site. The interconnected system of water bodies and waterways at Waterfall Glen is comprised of streams, waterfalls, ponds, the Des Plaines River, canals, and a former fishery. These systems are connected by ecologies and landforms that are largely determined by the water movement through them.

Slope Analysis

In general the upland portion of the preserve is comprised of a gentle, rolling topography that many people enjoy on the trail system. This upland area contains a series of ponds and low areas that provide rich ecological habitat and beautiful areas for visitors to enjoy. Toward the South end of the preserve, the land falls into a series of ravines and steeper slopes where the water ultimately drains to the Des Plaines River. Overall the highest parts of the site exist at elevation 750-760 and fall to elevation 600 near the river.

Steep Slopes Along the Trail

The topography within the Preserve has contributed to the allure and is one of the main reasons people like to use Waterfall Glen for exercise, physical training and recreation. However, there are some portions of trail that are winding and steep and are not ideal.

From a maintenance perspective these trails are susceptible to erosion and washout during rain events and require frequent and ongoing maintenance to replenish the crushed limestone, grading, compaction, etc.

Signal Hill

Located on the southeastern portion of the preserve, Signal Hill was used by Native Americans living along the surrounding limestone bluffs as a communications vantage point. The Hill is a prominent feature on the landscape and offers spectacular views from the preserve.

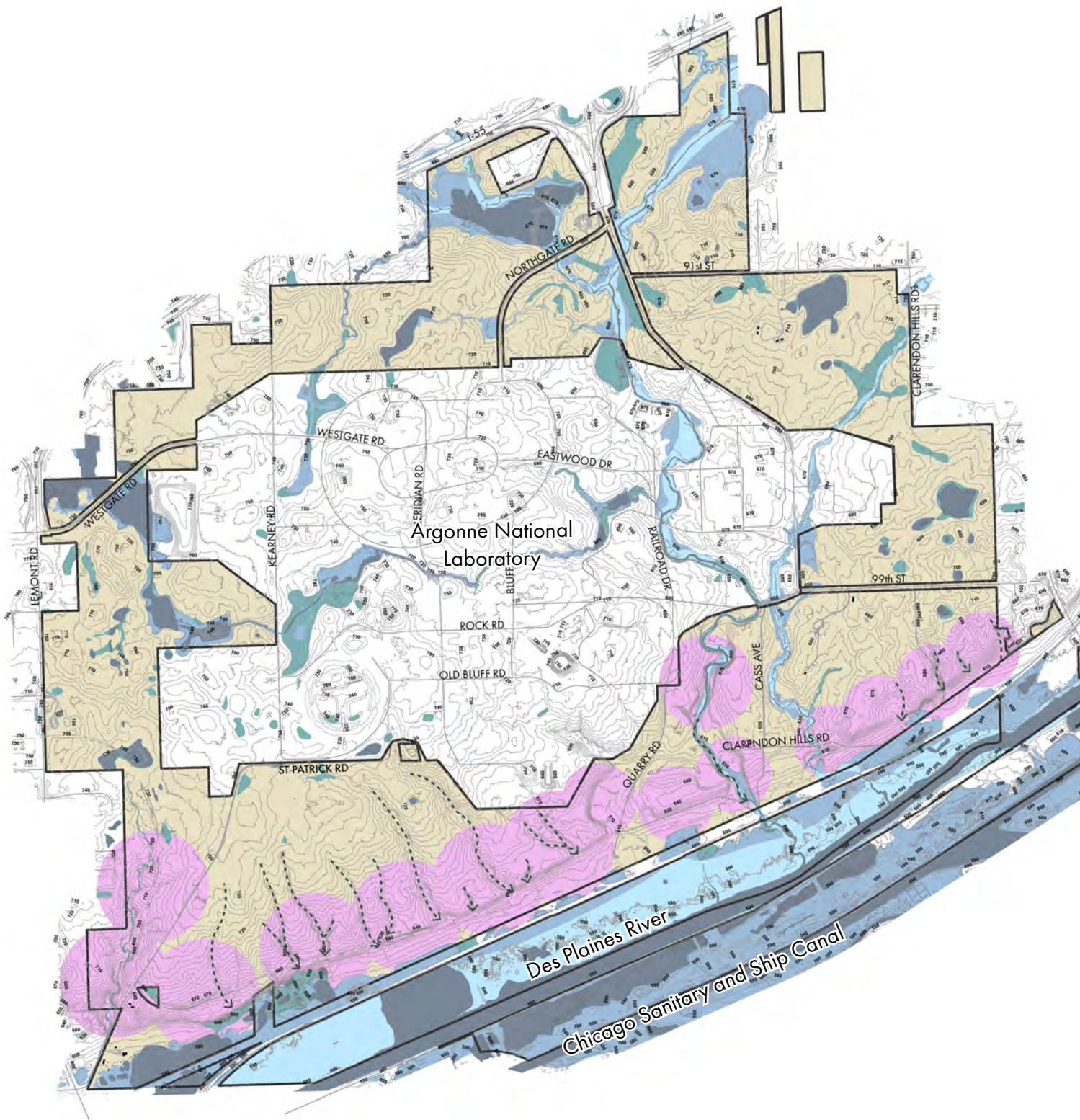
Floodplain and Floodway

The Federal Emergency Management Agency (FEMA) has a Flood Map Service Center (MSC) that provides a source to the public for flood hazard information produced in support of the National Flood Insurance Program (NFIP). FEMA creates maps showing floodplain and floodway limits based on the communities local flood risk.

A floodplain is comprised of the floodway and the flood fringe. The floodway is the primary conveyance area of a channel that naturally manages flood waters. The floodway remains open to drain flood waters. Flood fringe refers to the areas outside of the floodway that are below the Base Flood Elevation. The 100 year floodplain refers to any area that has one percent chance of experiencing a base flood in any given year.

LEGEND

-  Waterfall Glen Boundary
-  Argonne Laboratory
-  Water Bodies
-  100 Year Flood Way
-  100 Year Flood Zone
-  Wetlands
-  Steep Slopes
-  Ravines



SCALE 1" = 1/3 MILE

0 1/6 mi 1/3 mi 2/3 mi



NATURAL RESOURCES

DISCOVERY

Wetlands

There are a few areas within the preserve that are identified as wetlands. Wetland regulation is complex. In Illinois five government agencies have primary regulatory authority over wetlands. These agencies work cooperatively with one another for the protection of these resources.

Watershed

Most of Waterfall Glen is located within the Sawmill Creek watershed. In July 2017, a Watershed-Based Plan was created for Sawmill Creek, which outlined a strategy for assessment and management of the watershed. Waterfall Glen's hydrology is comprised of standing water bodies, rivers, creeks and wetlands.

Des Plaines River

The Des Plaines River is a part of a greater hydrology network, as it connects to the Kankakee River to form the Illinois river, which is a tributary of the Mississippi River. Currently, the river is not accessible throughout the preserve, although it is visible from certain points along the island and from the southern overlook.

Chicago Sanitary and Ship Canal

The canal is adjacent to trails, but is not an accessible water body. There are fences, rubble and wetlands that make the area less appealing to the public, even though there are trails that serve the island between the river and canal. There is an Army Corp of Engineers Electrical Dispersal Barrier located in the ship canal south of the preserve. These features reduce the likelihood of any Asian carp in the Des Plaines River from bypassing the electrical barriers during high-water events.

Sawmill Creek

One of the most significant water bodies is Sawmill Creek, which runs through the preserve and provides not only a diverse ecosystem, but also opportunities for visitors to engage with the creek.

Rocky Glen Waterfall

Rocky Glen Waterfall is on the eastern side of the preserve, and is utilized often by visitors. As a result, it has suffered some wear and tear and erosion, and it could be improved to provide an improved experience for patrons of the preserve.

On the southern edge of the site, the most dramatic terrain exists. There are over a dozen ravines that run through and adjacent to the bluff savanna, and the water they carry is bottle-necked underneath the rail corridor. This causes some flooding issues and erosion in this area near the tracks. However, the ravines themselves are not suffering from any heavy erosion; instead, they provide a diverse micro-biome for wildlife and vegetation.

91st Street Marsh

The marsh near 91st Street is a feature of the preserve. With diverse wildlife and a beautiful view, this area is used by birdwatchers and enjoyed by users of the trail. The area around the marsh has been known to get overcrowded on the weekends where the Southern DuPage County Trail connects to the River. The marsh is known to be a gathering spot and a point of reflection for preserve users. The marsh has been known to fill up with invasive cattails, almost eliminating it from the landscape.



Chicago Sanitary and Ship Canal



Signal Hill



Bike Trail Near Des Plaines River



Steep Slopes at Waterfall Overlook



NATURAL RESOURCES

DISCOVERY

Former Fishery

The former fishery on the southwest edge of the preserve is home to four (4) water bodies. This area provides a unique opportunity to provide an educational element within the preserve for visitors to learn about the hydrology, land form, ecosystems and wildlife.



WILDLIFE

Biodiversity is critical to maintaining healthy ecosystems, and Waterfall Glen contains a variety of ecosystems with unique vegetation and diverse plant communities that are ideal habitats for the many species of wildlife in the preserve. With more than 600 species of mammals, birds, fish, amphibians, reptiles and invertebrates, Waterfall Glen is refuge for all kinds of species, including migratory birds and pollinators.



The Poverty Prairie alone is home to creatures such as meadowlarks, gray catbirds and western harvest mice. The District also maintains initiatives to restore habitats for specific species. For example, habitat for the Emerald Dragonfly has been restored and the wildlife in that area is monitored. However, as funding is limited for the extensive land that the District manages, ecologic restoration must be prioritized annually.



The preserve users love Waterfall Glen for the native habitats, plants and animals. One of the highest rated activities within the preserve by survey respondents was bird watching.



Bluff Savanna



Prairie



91st Street Marsh



Wetland Area



2 PHYSICAL RESOURCES

DISCOVERY

SURROUNDING LAND USE

Argonne National Laboratory

The preserve completely surrounds Argonne National Laboratory, and is an amenity for the staff here as much as residents of DuPage County. For the most part the lab and the preserve co-exist peacefully, however, there are periodic issues with preserve visitors parking on the lab streets during peak times. This is primarily along Northgate Road and at Cass Avenue and Bluff Road.

Lemont Shooting Range

The Lemont Police shooting range is located at the South of the Preserve and is accessible from Lemont Road. Shots are often audible within the preserve and can be disruptive to some visitors. Some have asked if this facility could be located in an alternate location and return this site to preserve use.

















Hindu Temple of Greater Chicago

Located outside the southwestern corner of the Preserve on Lemont Road, this cultural and religious institution sits on 7.6 acres. The location was selected near Waterfall Glen from over thirty (30) possible locations in the Greater Chicago area. The property was selected because of its beautiful wooded bluff hill-side, with its adjacent waterfalls.

Residential Neighborhoods and Industrial

There are several adjacent residential subdivisions near the preserve. Along the west side of Lemont Road, clusters of single family homes are mixed with some industrial uses. There are multi-family housing units along I-55 on the northwest side of the preserve next to an Extended Stay hotel and additional industrial uses. The northeastern and east side of the preserves are bordered primarily by single family residences.

LEGEND

	Preserve Boundary		Campground
	Argonne Laboratory		Parking
	Water Bodies		View / Overlook
	Main Trail Limestone		Point of Interest
	Turf Trail		Focus Area
	Southern DuPage Regional Trail		Vehicular / Bike & Ped Conflict
	Rocky Glen Trail		Internal Roads and Parking
	Centennial Trail		
	Wooded Prairie		

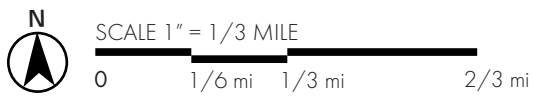
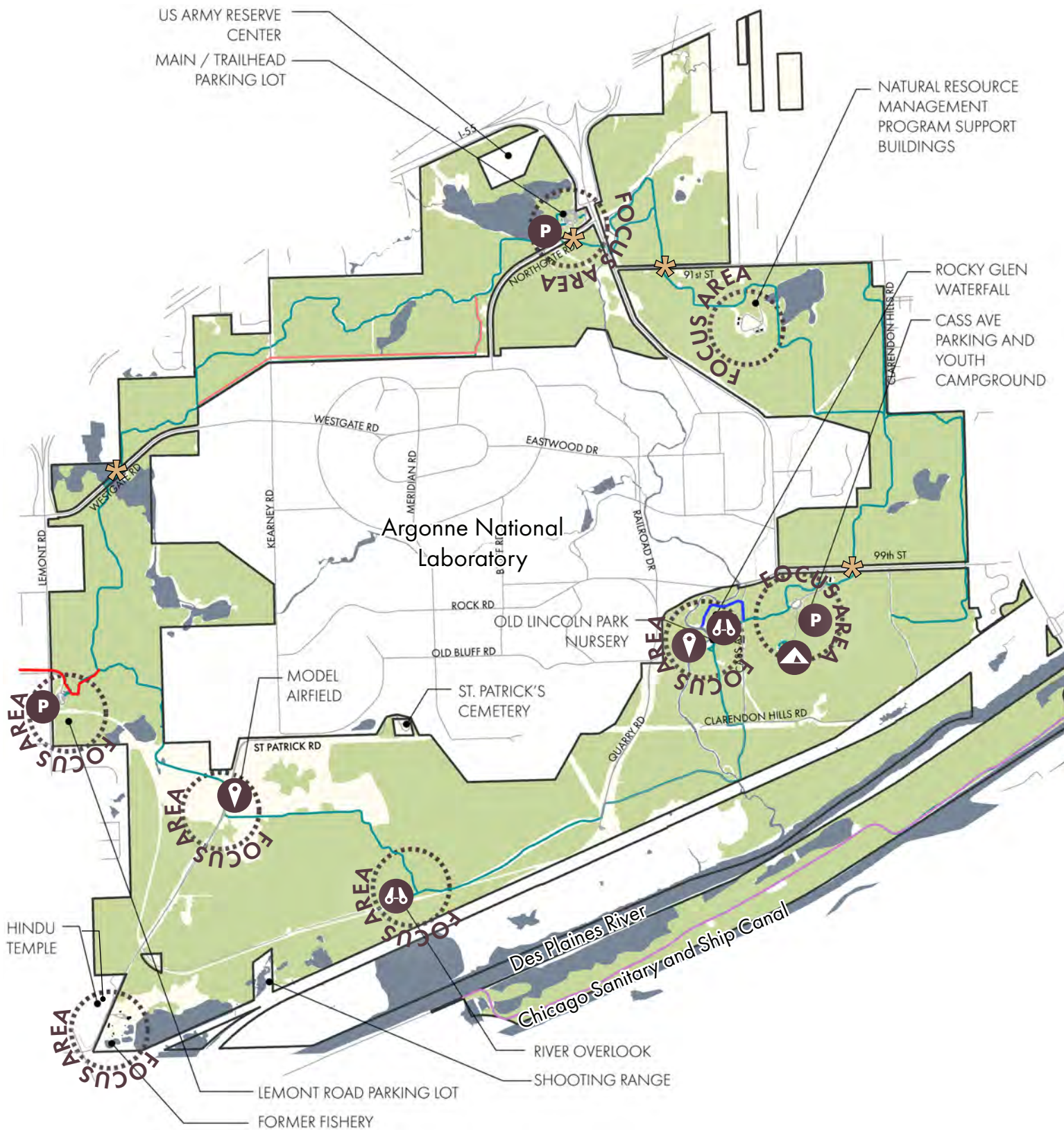
Parkhurst U.S. Army Reserve Center

The Army facility is accessible from the Frontage Road near Cass Avenue near I-55 close to the Main Parking Lot. Since it is not near the main trail network, most preserve users do not notice it, although the soldiers do periodically use the preserve for training purposes.

Focus Areas

The following focus areas are highlighted later in the chapter in detail.

- Main / Trailhead Parking Lot
- Natural Resource Management Program Support Building
- Parking Lot and Youth Campground
- Rocky Glen Waterfall
- River Overlook
- Former Fishery
- Model Airfield
- Lemont Road Parking Lot



PHYSICAL RESOURCES

DISCOVERY

INFRASTRUCTURE

The infrastructure within the preserve serves the users and staff by providing safe access to and throughout the space. This includes parking, trails, overlooks and other elements that are in and adjacent to Waterfall Glen. The map on the previous page shows areas indicated as Focus Areas; these areas were identified by FPDDC staff and discussed in more detail during the Public Engagement sessions.

Vehicular Access and Parking

The main vehicular access points are at the Lemont Road parking lot, the Trailhead parking lot off of Northgate Road, and the waterfall parking area off of Bluff Road. On weekends the Bluff Road parking lot fills up quickly. Due to a lack of parking people have taken to parking wherever they can find space, on-street on Bluff Road and other areas where parking is not desired or is not permitted. The FPDDC is currently working on a plan for an additional 200 car parking lot off of Bluff Road to alleviate this demand.

Railroads

There is a railroad corridor that bisects the site on the southern side. The corridor isolates a portion of the preserve with high quality dolomite prairie. Forest preserve staff do not think public access to the property is a priority but an approved crossing for maintenance purposes is important.

Trails

The preserve has a total of 11 miles of trails throughout, with the bulk of the trail mileage along the Main Trail, which is 9.5 miles.



Picnic Shelter at Campground



Visitor Information Sign and Main Trail Entry



Seating along the Main Trail



Rocky Glen Waterfall



A Visitor Enjoys Fishing at the Preserve



Bridge crossing Sawmill Creek

PHYSICAL RESOURCES

DISCOVERY

The Main Trail is a loop and is heavily used, bringing cyclists, runners, walkers and cross country skiers from all over the county and surrounding areas to enjoy. This crushed limestone trail is beautiful and well-maintained, but at times it is too narrow to accommodate all users. During peak hours on weekends, and with the surge in users during the COVID-19 pandemic, these paths can get crowded and the mix of uses causes some conflicts.

Circulation Conflict Points

While the preserve shape is unique and lends itself to support a natural trail loop, the property is fragmented in some places by internal roads. Conflicts for cyclists and pedestrians occur mostly where the Main Trail crosses streets, causing some right-of-way confusion with vehicles. These locations include trail crossings at:

- Northgate Road
- Westgate Road
- 91st Street
- Bluff Road
- Cass Avenue

The turf trails throughout the preserve are off-shoots of the Main Trail and provide some respite from the busier loop. These trails create smaller loops in some instances, and can be used by runners and walkers as a different route than the Main Trail.

Bridges and Crossings

There are bridge crossings in the preserve including the Sawmill Creek pedestrian bridge, located centrally on the southern edge of the Forest Preserve, north of the railroad tracks. The other is an at grade concrete maintenance vehicle

crossing just south of the Sawmill Creek bridge. Both crossings are subject to flooding and are a challenge to trail users. There are also crossings along the main trail: a bridge and a boardwalk immediately west of the Northgate parking lot. The main trail also crosses Sawmill Creek on-street, on Cass Avenue, just south of Northgate Road.

Regional Trails

The preserve has connections to both the Centennial Trail, along the Des Plaines River, and the Southern DuPage County Regional Trail, which connects at Lemont Road on the western edge of Waterfall Glen. These trails make Waterfall Glen a piece of a larger network and allow users to travel to other areas of the county.

Rocky Glen Waterfall Overlooks

The preserve also has multiple overlooks with very different views. The first, along Sawmill Creek, provides views of the creek and in the winter, views of the waterfall beyond. The second, along the Main Trail near the southern edge of the site, provides a view south over the canal and the Des Plaines River.

Youth Campground

The youth campground provides an opportunity for groups in the area to enjoy the preserve and learn about the wildlife and vegetation that exist within it.

Waterfall Glen's youth campground has two sites that can each accommodate up to 24 campers. While open year-round, the campground can only be used by youth groups. These groups are "recognized, nonprofit organizations whose members are 17 or younger".

Orienteering Course

The orienteering course is a permanently marked course near the trailhead. The preserve has resources on its website for users of the course to be able to navigate on a beginner, intermediate and advanced level.

Fishing

Fishing is available in the old quarries throughout the preserve. Visitors wishing to fish must be 16 and older and carry a valid fishing license. The preserve provides resources on its website about types of fish present, requirements for fishing, and other pertinent information.



Railroad in Use on Southern Edge of Site



Bridge Near the Southern Edge of the Preserve



Fenced-in Substation



PHYSICAL RESOURCES

DISCOVERY

FACILITIES

Waterfall Glen has a few utility easements on the property; the most prominent is the rail line corridor that runs along the south side of the preserve and separates the two sides completely. Additionally, it runs alongside a high tension power line, making the right-of-ways quite large and visually substantial.

Buildings

There are also a few buildings in the preserve, indicated on the map to the right. Some of these include the Natural Resource Management Program Support Facility and the buildings associated with the former fishery. The areas could potentially be re-purposed for other uses or restored to a natural state.

Buildings that exist in Waterfall Glen are:

- 1** Latrines
- 2** Picnic shelter
- 3** Field research station
- 4** Natural Resource Management Program Support Facility
- 5** Former fishery buildings

Latrines

There are several locations of existing latrines throughout the preserve. They are located in the following locations:

- Main Parking Lot and Trailhead
- Lemont Road Parking Lot
- Parking Lot off Bluff Road

Many stakeholders expressed a desire to add restrooms in high-traffic areas and to convert the latrines to flush toilet facilities.













Picnic Shelters

There is only one large group covered picnic shelter in the preserve and it is located closest to the parking lot off of Bluff Road near the Youth Group Campground. The shelter is in great shape but it is in a higher quality woodland area that is a candidate for restoration.

Field Research Station

The field research station is used in the summer months as student housing.

LEGEND

-  Preserve Boundary
-  Argonne Laboratory Boundary
-  Water Bodies
-  Utility Easement
-  Rail Corridor and Power Line
-  Internal Roads and Parking
-  Well
-  Parking
-  Buildings
-  Latrines
-  Substation
-  Focus Area

PHYSICAL RESOURCES

DISCOVERY

Natural Resource Program Support Buildings

The existing Natural Resource Management Program Support Buildings are located on the northeast side of the preserve and is accessible from 91st Street. The District has been evaluating the possibility of relocating the facilities to Greene Valley, which opens up the area to an alternative use.

Former Fisheries Buildings

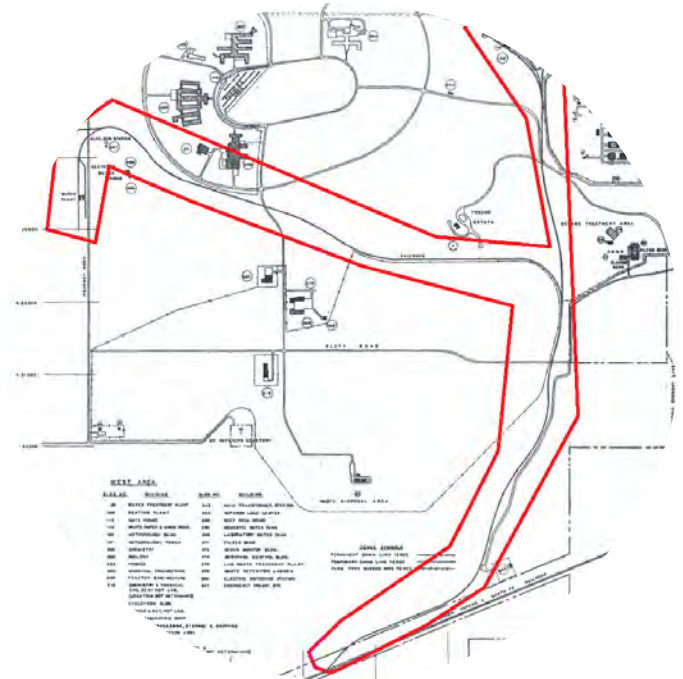
The Forest Preserve district has a partnership with University of South Dakota to perform research on this site.

Remnant Structures

The preserve has expanded over time by adding various land parcels. Many of those sites had alternate uses, including farmland, homesteads, nurseries, a cemetery and fisheries. In some cases remnant structures like footings remain, opening up a glimpse into the past. Several features contribute to the unique sense of place within the preserve, however, some stakeholders have suggested that the former foundations could be removed and the areas restored or new facilities put in their place.

Saint Patrick's Catholic Cemetery

There is a cemetery at the end of St. Patrick Road that was established in 1849. When Argonne National Lab choose to locate in Lemont in the 1950's, the planners left the Cemetery in place and did not relocate it. Most people buried there were born in Ireland, came to the U.S. in the 1830's and pioneered the establishment of farms in the area. The ancestry is evident based on the names on the memorial stones.



Argonne Railroad Track
Source: Argonne National Lab

Old Lincoln Park Nursery

A building once stood on the bluff southeast of the present location of the Rocky Glen Waterfall, on the eastern side of Waterfall Glen. This administration building supported a plant nursery located in this area of the preserve. There is documentation that the nursery supplied topsoil and plants for Lincoln Park in Chicago, amongst others. Remnants of the building remain today.

Abandoned Argonne Railroad Tracks

Remnants of railroad tracks once used to bring materials to build the Argonne lab can be observed and accessed from Bluff Rd and Railroad Drive. Since most shipping and receiving into and out of the lab is by truck now, the railroad is no longer needed. Following the railroad north or south will allow you to see evidence of the past embedded in the trail.

Youth Campground

The Youth Campground is located on the Southeast corner of the preserve near the Cass & Bluff parking area. This campground is in an area of high ecological value and is being considered to be relocated to an area of lesser value or impact to conservation initiatives.

Restrooms

Currently, all restroom facilities in the preserve are either latrines or port-a-potties. There are certain locations that would likely be prioritized to be converted first, as they are near the most activity and have the most use. For more information about these options, see the Focus Area enlargements later in this chapter.

Utilities

There are utility easements throughout Waterfall Glen. These are mostly easements that connect utilities to Argonne National Laboratory and across the preserve to other areas surrounding the preserve. Commonwealth Edison has a high voltage electrical line running the length of the southern portion of the preserve.

The easement, rail corridor and the river cause many crossing conflicts and barriers to access on the southern edge of the preserve.



Latrines Near the Existing Campground



Power line Easement on Southern Edge of Preserve



3 CULTURAL RESOURCES

DISCOVERY

ARGONNE NATIONAL LABORATORY

Waterfall Glen is uniquely shaped like a donut due to the location of the Argonne National Laboratory. Argonne has been in existence for over 75 years and is a pioneer in fields ranging from nuclear energy to X-ray science to energy storage.

"On July 1, 1946, the laboratory was formally chartered as Argonne National Laboratory to conduct "cooperative research in nucleonics," making it the country's first national laboratory. At the request of the U.S. Atomic Energy Commission — later known as the U.S. Department of Energy — Argonne began developing nuclear reactors for the nation's peaceful nuclear energy program. In the late 1940s and early 1950s, the laboratory moved to a larger location in Lemont, Illinois, and established a remote location in Idaho, called "Argonne-West," to conduct further nuclear research."

(Source: Argonne National Laboratory website)

Argonne has been conducting classified research since it was chartered. Many of the buildings are classified so the property is fenced and guarded. Access to the property is highly secured with employees and visitors having to acquire badges and passes.

Argonne helped shape Waterfall Glen and physically made it possible to create the looped trail that is so loved by residents and visitors.



Argonne Entrance Off of Northgate Road



Aerial of Argonne | Image from Timeout.com



Illinois Native Americans | Image from the IL State Museum



Drawing of Marquette and Joliet | Image from 64parishes.org

HUMAN HISTORY

"Long before Jacques Marquette and Louis Joliet paddled their way through the Des Plaines River Valley in the mid-1600s, American Indians were living along the surrounding limestone bluffs, including today's Signal Hill, which served as a communications vantage point.

By the late 1800s, though, the Ward Brothers' mill was turning out lumber on Sawmill Creek, and Edwin Walker's three quarries were yielding tons of quality Lemont, or Joliet, limestone for projects like the landmark Chicago Avenue Water Tower and Pumping Station. In 1907, the Lincoln Park Commission, a predecessor of the Chicago Park District, had its own 107 acres with a small nursery and a considerable supply of topsoil, which it used to fill in the shoreline along Lake Michigan to create the Lincoln Park area.

In 1925, the Forest Preserve District purchased its first 75 acres at Waterfall Glen, the Signal Hill and Rocky Glen areas. Rocky Glen soon became the site of the preserve's well-known tiered falls, which the Civilian Conservation Corps built in the 1930s. In 1973, the preserve got its single largest addition — more than 2,200 acres of surplus land from the U.S. Bureau of Outdoor Recreation. That same year, the District named the site Waterfall Glen Forest Preserve, not after the familiar falls but in honor of Seymour "Bud" Waterfall, an early president of the District's Board of Commissioners."

(Source: Forest Preserve District website)



CULTURAL RESOURCES

DISCOVERY

HUMAN USE

In addition to the trails, overlooks and model airfield area at Waterfall Glen, there are other programs available as well. Some of these include: orienteering courses, fishing opportunities in the quarries (with valid license), and other events like meditation walks.

Rocky Glen Waterfall

While Rocky Glen waterfall is a natural feature (although man made) it is also a cultural resource.

The waterfall is an attraction to many users of the preserve, and during the pandemic, the use was even higher than normal. The waterfall provides a space for people to enjoy a unique feature of the preserve, but the increase in visits has had an impact; the waterfall shows signs of erosion and over-use, and that should be mitigated to ensure the long-lasting availability and use of a such a beloved destination.

The waterfall area is in somewhat poor condition from this erosion and over-use. It can get a bit muddy and some of the stones have been displaced. Erosion and scour has exposed tree roots that pose tripping hazards for users. Makeshift paths have been created over time causing impacts to vegetation and erosion. Many users interact with the water informally here.

Overlooks

The overlooks allow visitors to enjoy views of the preserve and its unique features as well as areas that surround the preserve. Visitors have access to an overlook at Sawmill Creek and also at the southern edge of the site, overlooking the Des Plaines River.

Airfield

A vestige from use prior to Forest Preserve District control, the model airplane field is a feature of Waterfall Glen that is unique but underutilized. Vehicular access to the airfield is controlled via gate with multiple padlocks from a variety of jurisdictions and organizations. Easier vehicular access and a dedicated parking area would make this area more accessible since it is located deep in the center of the preserve and not near other parking areas.

Places to Gather, Rest and Reflect

While the preserve has a shelter at the youth campground and seating at overlooks and near the 91st Street Marsh, there aren't many formal places to gather. However, users gather together to make use of the natural amenities that Waterfall Glen has to offer. Bird-watching groups, walkers, meditation groups, families and friends are just a few of the groups who utilize the preserve's space as a place to gather. For a preserve of this size there are limited opportunities for seating and many of the seating available is not friendly to seniors or disabled users. Additional shelters may be considered along with pathways for people of all abilities.

Support Amenities

Interpretive signage throughout Waterfall Glen allow the community to learn about its diverse ecology and wildlife, and be informed about programming and events available to them. Additional interpretive signs offering more information about restoration efforts, the history of the preserve, or other interesting facts might make the public feel even more connected to Waterfall Glen.



Sawmill Creek Overlook



Overlook View of the Des Plaines River



Bench Along Main Trail



Visitor Information Sign



4 STRENGTHS, WEAKNESSES OPPORTUNITIES & THREATS ANALYSIS

The purpose of the Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis is to identify areas within the preserve that are optimal for improvements. This exercise also highlights elements and / or programming in Waterfall Glen that are operating well and should remain as they are.

The SWOT analysis brings together elements and programming from the previous sections within this chapter and combines them with observations and possibilities. The map to the right provides an overview list of items in the SWOT analysis, and the following pages show enlargements of the Focus Areas.

STRENGTHS

- 1 Diverse ecosystems
- 2 Looped trail/trail condition is good
- 3 Rocky Glen Waterfall and overlooks
- 4 Airfield is a unique use

WEAKNESSES

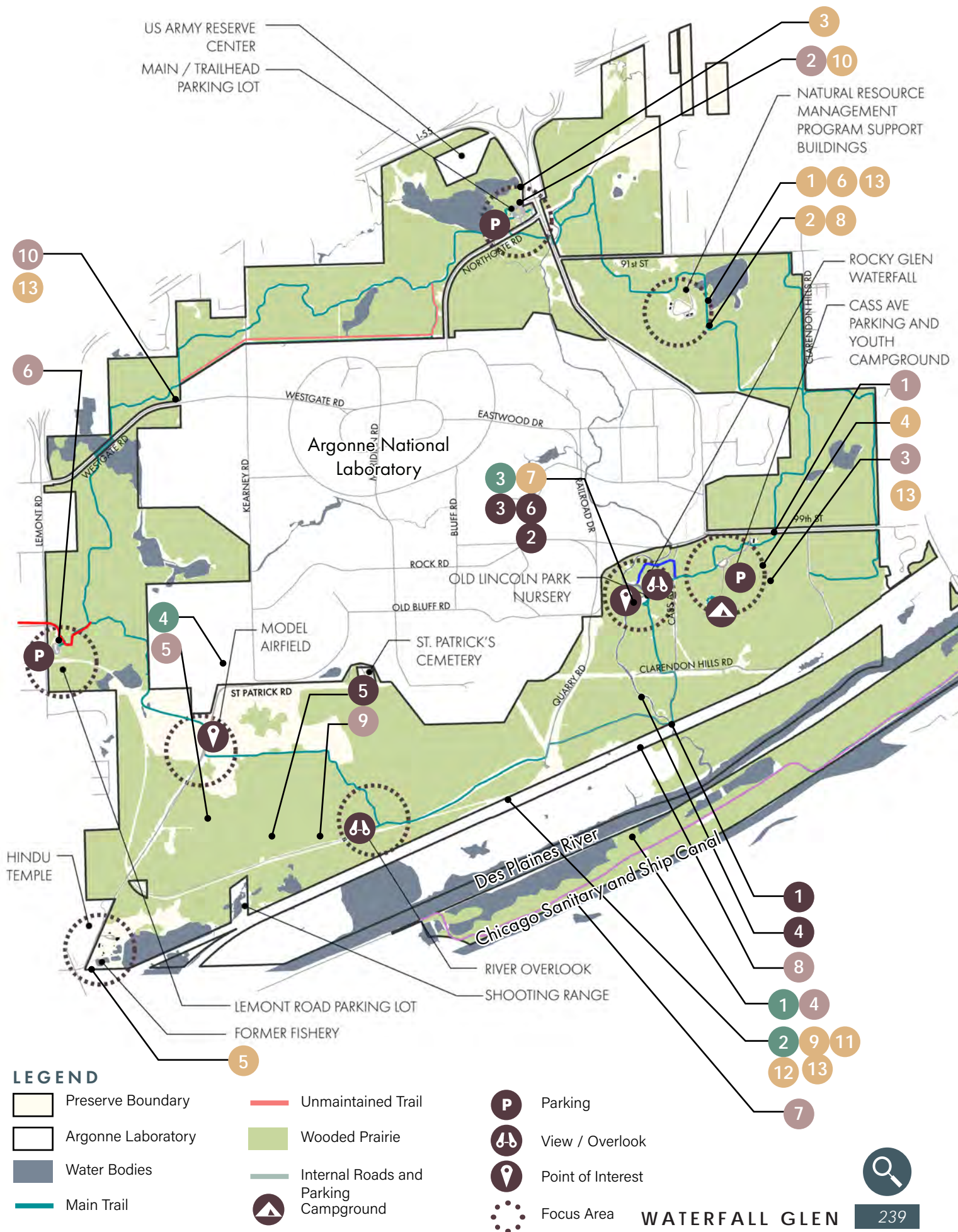
- 1 Vehicular and trail conflicts
- 2 Parking lots are inefficient and geared toward equestrian use, which is minimal
- 3 Bluff Road parking lot could use more spaces and intersection could be improved
- 4 No service access to this area
- 5 Disjointed vehicular access, spoils from canal and fish barrier make improvement a challenge
- 6 Lots of noise at Lemont Rd parking lot
- 7 The area within the Des Plaines River is hard to access and not comfortable to visit
- 8 Rail line is bisecting the site
- 9 High voltage wires run through the site
- 10 Internal roads are gated and confusing to visitors

OPPORTUNITIES

- 1 Relocating the natural resource program support facility allows for the campground to be moved there and for further restoration of the high class woodland where the campground currently resides
- 2 Connect campground to other amenities
- 3 Replace latrines with flush toilets
- 4 Additional parking (200 car lot planned)
- 5 Maintenance site near old fishery could have more formal use (research, education, etc.)
- 6 Bluffs near campground relocation could be restored
- 7 Restore Rocky Glen waterfall and create more resilient access and surfacing
- 8 More interaction/crossing/observation opportunities at water bodies
- 9 Additional seating along trails and at points of interest
- 10 Expand main parking lot and frontage road parking lot (if needed and possible)
- 11 Wider areas of trail for bike/ped passing/pull off
- 12 Additional loops where possible
- 13 Wayfinding and directional/educational signage (throughout preserve)

THREATS

- 1 Sawmill Creek vehicular and pedestrian bridge crossing
- 2 Old foundations adjacent to trail down to waterfall
- 3 Erosion and overuse at waterfall (root exposure, stones, worn paths)
- 4 Flooding of Sawmill Creek
- 5 Erosion along ravines
- 6 Waterfall overlook bank/trail needs stabilization



STRENGTHS WEAKNESSES OPPORTUNITIES & THREATS ANALYSIS

FOCUS AREA



Rocky Glen Waterfall

Heavy erosion and scour around the base of the falls, and tree roots are exposed. Stones have shifted and users have created makeshift trails / cowpaths

Trail Maintenance

Use of informal trails to waterfall are steep and unsafe

Steps

Old steps need to be removed and the path restored

Overlook

Slope below overlook is steep and overlook has minimal seating

Wayfinding

Consider additional wayfinding along main trail as you approach the waterfall and overlook

LEGEND



Possible Improvements



Possible New Amenities



Existing Trail



Water Body

Rocky Glen Waterfall

The Rocky Glen Waterfall is one of the biggest attractions to the forest preserve. The waterfall area is in somewhat poor condition from erosion and over-use. It can get muddy from heavy foot traffic and ice damming has forced some of the outcropping stones in the waterfall and adjacent pavement areas out of place. In addition, heavy erosion has exposed tree roots creating tripping hazards. Cow paths have been created by people accessing the falls attempting to avoid muddy areas and/or due to overcrowding and inadequate paved areas around the falls.

The waterfall is accessible via existing parking and an off-shoot of the Main Trail, but users have also found opportunities to create their own paths using steeper, more direct routes creating cow paths and areas that are now subject to additional erosion. Measures to deter access to these sensitive areas should be considered.

Sawmill Creek Overlook

The creek overlook is a great opportunity for visitors to take in the view of the creek, and recent slope stabilization efforts along the bank make this spot safe and enjoyable.

That being said, it would be beneficial to add additional stabilization and seating to ensure the longevity of the space in the coming years.

Additionally, there was feedback during the public engagement sessions that additional wayfinding and educational signage would be helpful in this area.



Overlook View of Sawmill Creek



Exposed Roots and Erosion



Rocky Glen Waterfall



Rocky Glen Waterfall



STRENGTHS WEAKNESSES OPPORTUNITIES & THREATS ANALYSIS

FOCUS AREA

NATURAL RESOURCE MANAGEMENT PROGRAM SUPPORT FACILITY AND 91 ST MARSH



91st Street Marsh

Opportunity for additional amenities and visitors to enjoy the pond.

Trail Management

This a popular pinch point and has been known to cause conflicts between pedestrians and cyclists

New Trail Loop

Opportunity to create trail connection from new active use to Main Trail and pond

Programming Change

Existing natural resource management program support area has potential to house a more active use (campground or other)

Restore Area

Potential to restore area around the existing natural resource management program support area

LEGEND



Possible Improvements



Existing Trail



Potential Connection



Water Body



Existing Building



Possible New Amenities



Access Improvement



Natural Resource Management Program Support Facility

Natural Resource Management Program Support Facility

The Natural Resource Management Program Support Facility is used only a few months during the year. Staff mentioned that it is a prime location for a different use, possibly something more active. Its proximity to 91st Street and the marsh would make it ideal for a use that allowed users of the space to also use the Main Trail and access the marsh.

To accomplish this, the buildings need to either be removed or refurbished for other uses, and infrastructure improvements and updates such as new road, trails, parking, utilities will likely be required.



91st Street Pond

91st Street Marsh

The marsh is a beloved feature of this area, and is enjoyed by bird-watchers and trail users. The pond has some adjacent seating, but the public indicated that more seating in this area would be better. The public also indicated that this area would benefit from additional signage about the unique habitat at the marsh, so users could learn and understand the importance of ecosystems like this one.



STRENGTHS WEAKNESSES OPPORTUNITIES & THREATS ANALYSIS

FOCUS AREA MAIN/TRAILHEAD PARKING LOT



Existing parking reconfiguration

Configuration could be changed to be more efficient (see concept on next page)

Existing parking expansion

Opportunity to expand parking as topography allows

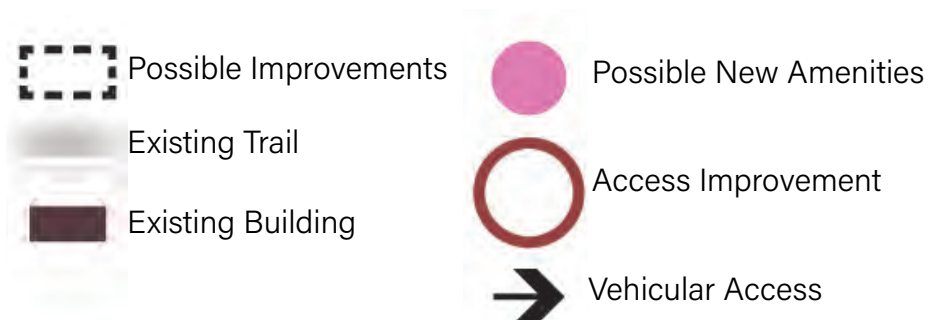
Latrines

Latrines could be upgraded to flush toilets

Trail Crossing

Trail crosses road here; vehicular/ Bike/Ped conflict

LEGEND





Main/Trailhead Parking and Latrines



2016 Conceptual Reconfiguration

Main/Trailhead Parking Lot

The Main/Trailhead parking lot is pretty heavily used, and was originally designed to accommodate both vehicles and trucks and equestrian trailers. The decrease in equestrian use means it could be redesigned to accommodate more passenger vehicles. The Main/Trailhead parking lot is used most frequently on weekends and during peak hours.

By only having spaces along the inner edge of the circle, the paved parking area is not being used efficiently. Reconfiguring the parking lot layout and re-striping could allow for increased parking spaces and better traffic flow.

A parking analysis was completed in 2016. A concept for a reconfigured parking lot increases the number of car spaces from 50 to 79 and decreases the number of equestrian trailer spaces from 10 to 3.

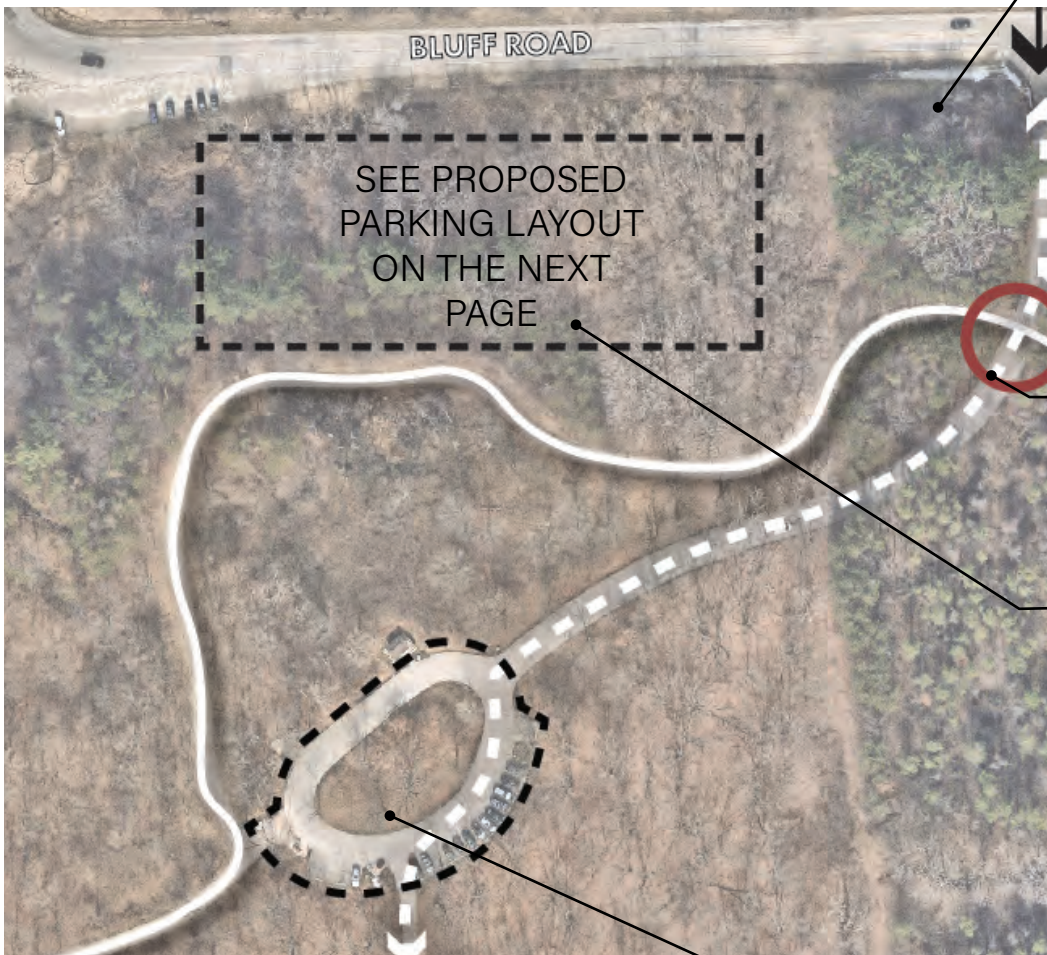
Latrines are located near the trailhead. Since this lot is used heavily by trail users, these could be prioritized to be replaced with flush toilets in the future.



STRENGTHS WEAKNESSES OPPORTUNITIES & THREATS ANALYSIS

FOCUS AREA

CASS AVENUE AND BLUFF ROAD PARKING



Parking

This intersection should not be used for parking; providing other areas for parking would improve traffic flow and safety

Trail Crossing

Trail crosses entry drive here and can be a point of conflict

Proposed Parking Lot (200 spaces)

FPDDC is evaluating the installation of a parking lot in this area to serve users of the waterfall and nearby trails

LEGEND



Possible Improvements



Existing Trail



Potential Connection



Possible New Amenities



Access Improvement



Vehicular Access

Possible Restoration

FPDDC staff have expressed interested in removing existing parking lot and relocating the campground to restore this to high quality woodlands. The FPDDC could consider keeping this open until resurfacing is required and/or eliminate vehicular circulation and turn it into trail.



Proposed Parking Lot

Outdoor Education Lot

The Cass Avenue parking lot serves the Main Trail and the Rocky Glen Waterfall. It is the area of the preserve that has the most demand for parking, and because it fills so quickly, visitors use any space they can find to park. This means that many cars park out on the shoulders of Bluff Road if they can't find space in the parking lot. The intersection needs to be addressed for safety. Measures to deter parking on street should be evaluated. The FFPDC is improving signage and discussed the possibility of increased enforcement could alleviate some of the problem short term.

The FPDDC has planned to add 200 more parking spaces in this area in an effort to alleviate some of the demands on parking for the waterfall and this area of the Main Trail. Some preserve users have expressed concern that the addition of the parking lot will only increase the crowding at the preserve.

Additional wayfinding in this area could also help to make parking options more clear for visitors, and provide clarity at the points where the trail crosses a roadway.



STRENGTHS WEAKNESSES OPPORTUNITIES & THREATS ANALYSIS

FOCUS AREA LEMONT ROAD PARKING LOT



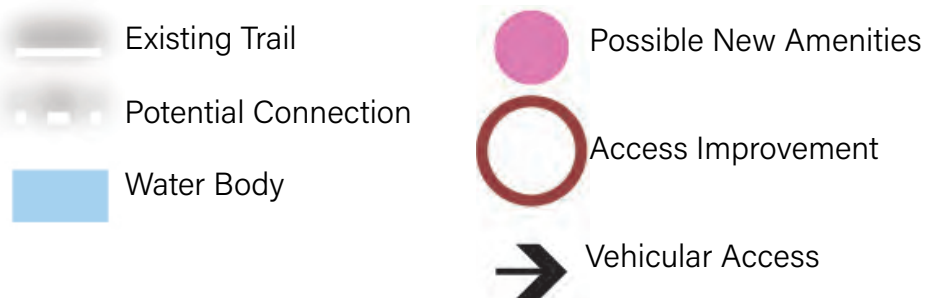
Drinking Fountain / Latrines

Users expressed a desire for drinking fountains and flush toilets instead of port-o potty

Seating / Spur Trail

Opportunity for additional seating along the main trail

LEGEND





Existing Small Spur Near Pond

Parking Lot

As a part of the 2016 Parking Analysis, it was determined that the Lemont Road lot provides sufficient parking, and does not need to be reconfigured to accommodate more cars. Instead, this lot could benefit from amenity upgrades as opportunities for improvement become available. There are currently no drinking fountains in this area, and the port-o-potty nearby could be a good candidate for an upgrade to a flush facility. These upgrades are especially fitting for this area, as it provides a connection to the Southern DuPage County Regional Trail.



Lemont Rd Parking Lot

Seating / Spur Trail

The marsh habitat in this area is used for bird watching and would benefit from additional seating along the Main Trail or along a spur trail. During the public engagement sessions, it was noted that users would like to have more areas to walk or rest off of the Main Trail. Since the Main Trail can get crowded during peak times, having spur trails would benefit visitors of Waterfall Glen, especially senior visitors.



STRENGTHS WEAKNESSES OPPORTUNITIES & THREATS ANALYSIS

FOCUS AREA FISHERIES AND DES PLAINES RIVER



Trails

Gaps in trail/ access from former fishery to the existing trail system and to the Centennial Trail

Fishery

Existing water bodies and building have potential for re-use

Water

Activation

The Des Plaines River currently is inaccessible; consider providing a launch or overlook

Access

Accessing the island between the river and the canal is difficult for new visitors

LEGEND



Possible Improvements



Existing Trail



Potential Connection



Water Body



Existing Building



Possible New Amenities



Access Improvement



Vehicular Access

Fishery

The former fishery has potential to serve users of the preserve in a unique way.

The existing building does not have formal use. The Forest Preserve District could explore mission-aligned uses and partnerships in this area to fill gaps that might exist in programming needs.

The existing water bodies could be utilized for recreational purposes and/or educational purposes.

Additionally, the FPDDC is already restoring habitat for the Hine's Emerald Dragonfly in this area which could be a great education opportunity for the public.

If the former fishery was more active and adapted for public use, it would benefit from the addition of a trail connection to the Main Trail, as it currently is not accessible via the existing trail system. However, this connection would require crossing the railroad which poses jurisdictional challenges and potential safety issues.

Des Plaines River and Chicago Ship Canal

The land between the Des Plaines River and the Ship Canal is currently accessible to visitors of Waterfall Glen, but access is unclear and tricky for first time visitors. Additional wayfinding or improved access points could alleviate some of the confusion and improve the experience for visitors who wish to spend time along the river. The river is only accessible from the island side of the preserve, as the railroad runs parallel to the river on the other side, and users are not meant to cross the railway. Activation of the river along the trail on the island could provide an amenity that does not currently exist within the preserve.

During the public engagement sessions, users mentioned that a kayak launch or overlook in this area would provide a unique opportunity for them to experience the Des Plaines River.



STRENGTHS WEAKNESSES OPPORTUNITIES & THREATS ANALYSIS

FOCUS AREA

POVERTY SAVANNA AND BLUFF SAVANNA



Overlook

Opportunity for additional interpretive signage and seating

Trails

Power line easement could be a location for additional trails

Footpaths

Connections through Bluff Savanna could give visitors an opportunity to experience unique habitats up close

LEGEND



Possible Improvements



Existing Trail



Potential Connection



Water Body



Railroad Adjacent to Powerline Easement



Existing Overlook

Overlook

The river overlook currently has a picnic table and a small shelter. During public engagement, users indicated that the view of the Des Plaines River presents an opportunity for users to learn about the river from this viewpoint. It also might benefit from additional seating.

Bluff Savanna

During the public engagement sessions, users provided feedback about the trail system in Waterfall Glen. Some users commented that additional, smaller trail loops that allow them

to see different ecosystems up close would be enjoyable. In this area in particular, that would mean allowing users to see some other areas of the Bluff Savanna. Creating a smaller loop trail was also a recommendation for Waterfall Glen from the 1992 Master Plan.



STRENGTHS WEAKNESSES OPPORTUNITIES & THREATS ANALYSIS

FOCUS AREA

MODEL AIRFIELD AND POVERTY PRAIRIE



Model Airfield

Consider additional programming opportunities for the airfield

Trail Management

Consider signage and other measures to slow cyclists around this corner or realign trail to improve safety.

Trails

Possible trail connection to fishery

LEGEND



Possible Improvements



Access Improvement



Existing Trail



Potential Connection



Model Airfield and Trail Nearby

Model Airfield

During the public engagement sessions, users indicated that the use of the model airfield seems to be in decline in the past few years. It was also suggested that this space be re-activated with other programming opportunities.



Main Trail Entrance

Trail Management

The Main Trail in this area has a few sharp turns that pose safety hazards for both cycles and pedestrians especially during peak use times. The sharp turn is not an ideal alignment for a mix of users. Additional trail use signage about etiquette and sharp turns might make these points of conflict safer.



KEY TAKEAWAYS

NATURAL ECOSYSTEMS

Continue to Restore

The FPDDC staff have been restoring pieces of the preserve since its inception, and this remains a major element of its mission. This restoration is critical and a clear outline and prioritization of what should be restored when would help staff have a clear vision.

Continue to Maintain

Continuing to maintain the areas of the preserve that have been identified as heavily-used will keep spaces safe and usable throughout the preserve.

PHYSICAL CONNECTIVITY

Trails

What preserve users love most about Waterfall Glen is the trails and what people want less of is conflicts along them due to overcrowding and conflicts in uses. Where appropriate, the FPDDC could consider additional trail spurs and/or loops and separated trails by use to alleviate some of the congestion.

Gaps

There are certain areas along the trail system that lack a connection that might make sense for the overall trail network. The public also mentioned that more spur trails would help alleviate some of the traffic on the Main Trail, especially during peak hours.

New Trails

New trails that create smaller loops within the preserve would also alleviate some of the traffic on the Main Trail. It also would provide users with a chance to experience new areas of the preserve, like the Bluff Savanna.

EXISTING RESOURCES

Fishery

The fishery has the potential to be used for a new use or revitalized as a fishery. The existing structure and water bodies, plus the site's proximity to Lemont Road and the river make it easily accessible.

Natural Resource Management Program Support Facility

The Natural Resource Management Program Support Facility area could be moved elsewhere to allow an alternative use to take its place. The site's proximity to the 91st Street marsh would mean lots of connected activities between the marsh and the former Natural Resource Management Program Support Facility area.

FUTURE RESOURCES

Ideal locations for future recreational resources are areas that have suitable soils, slopes and are not within wetlands or floodplains. They should also be located in areas that are accessible from either existing parking lots or roadways, or have the potential to have new and easily accessed parking.

POINTS OF INTEREST

Overlooks

The topography and physical relief within the preserve provides many opportunities for scenic views on and off the preserve. Additional overlooks could be considered and the existing overlooks could benefit from additional seating and continued maintenance.

Rocky Glen Waterfall

The waterfall could benefit from additional stabilization and erosion control measures. The area needs to be cleaned up as there are stones and roots exposed due to the erosion and heavy use. A durable surface should be considered to avoid muddy conditions and paths should be designated to reduce the need for users to create cow paths.

Model Airfield

The model airfield has seen a decline in use over the past few years, but is in a great location in the preserve. Introducing new programming options would reactivate this space when it is not being used for aircraft. Access to the lock gate/general access improvements should be evaluated.

SIGNAGE

Wayfinding

While there is wayfinding throughout the preserve, additional signage about points of interest, secondary trails, additional mile markers for training and other amenities within the preserve would help users navigate areas more easily.

Educational

Additional signage about the history of the preserve, natural resources and ecosystems within it would be beneficial to visitors interested in learning as they move through Waterfall Glen.

Trail Use

Many attendees of the public engagement sessions mentioned that there are points of conflict along the trails throughout Waterfall Glen. By introducing some signage about trail etiquette and pointing out sharp turns, these conflicts could be alleviated.

AMENITIES

Flush Facilities

Waterfall Glen currently only has latrine facilities and port-a-potties, but prioritizing which latrines should be upgraded to flush facilities would help the preserve to allocate investment to those facilities that get the most use.

Additional Seating

Another common comment from users of the preserve was that additional seating along the trail and at points of interest would be appreciated. Some areas of the loop trail have long stretches without any seating, and users, especially senior users, would benefit from having more places to rest.

CULTURAL HISTORY

Embrace the rich history of the preserve as an opportunity to educate the public about Waterfall Glen.