

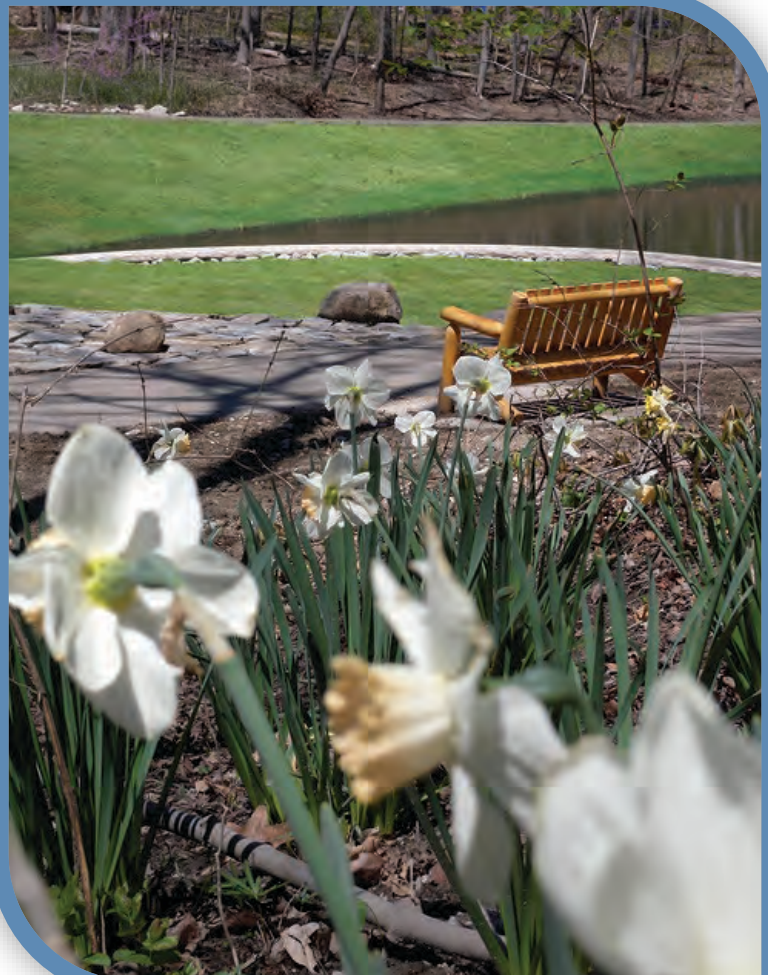
Five Rivers MetroParks



Hills and Dales MetroParks

Master Plan

2018



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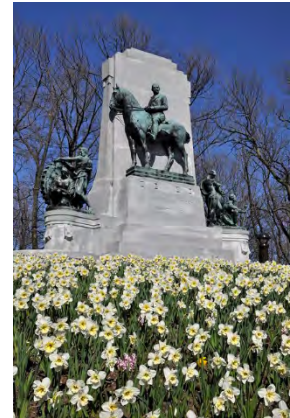
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SECTION 1: EXECUTIVE SUMMARY

1.1 BACKGROUND AND PURPOSE

In 2016, Five Rivers MetroParks (FRMP) completed a [Comprehensive Master Plan](#) (CMP) to guide the agency for the next ten years and beyond. The plan included extensive staff and public feedback from intercept and online surveys, focus groups, public meetings, individual interviews with community leaders and a formal statistically valid survey. Studies were conducted to benchmark FRMP to other outstanding park agencies across the country. The resulting plan included several tools to guide FRMP including new park typology, level of service standards, and a detailed implementation plan. One of the primary recommendations in the implementation plan was to update or develop new master plans for each MetroPark.



In 2017 FRMP began developing site plans for several parks and conservation areas as the first step in developing park master plans for each location. These plans ensure the organization's three pillars, conservation, education and recreation were foregrounded and interconnected. To support the planning process, a comprehensive set of [Planning Guidelines](#) were developed to help ensure the integration of the three pillars. The park master plans consist of several components that will guide planning and implementation of the parks' functions that support the world-class amenities and services provided to the region:

- Conservation, preservation, maintenance, programming, interpretation, public safety, philanthropy and business operations
- Capital investment and phasing
- Operational impacts and budgets



1.2 MASTER PLANNING PROCESS

Development of the Hills & Dales Park Master Plan began with the development of the site plan. A core team of about 20 FRMP employees whose work is key to the success of the park was formed to provide direct input to the process. The planning process was led by FRMP Planning and Projects staff. A full two-day work session gathered input from staff, volunteers, the public and key stakeholders and visited key areas to gain a detailed understanding of the parks and conservation area. Two public meetings were held during the two-day session to gather input and understand the needs and interests of park users.



This park master plan will be reviewed and updated in five years. After ten years, FRMP will determine whether a new master plan is needed or a second update for this plan will be adequate to provide direction for the park's future.

A Special Thank You

FRMP would like to extend a special thank you to three key volunteers who assisted in the project. Area residents Glenn and Carole Harper and Aaron Willhoite researched the history of Hills & Dales MetroPark, shedding light of key features of park and the stories of its evolution. They presented their information to FRMP staff and at the public open houses. Their work was key to understanding the park and ensuring that park master plan recommendations preserves that history and tells those stories.

1.3 MAJOR RECOMMENDATIONS

Several components of the site plan (See [Appendix 4.8](#) for the complete site plan) include projects that respond to some of the highest priorities in the CMP, including taking care of existing assets, providing access to amenities, and increasing trail and play opportunities:

- A central accessible trail that runs the entire length of the park from the White Oak Camp Use Area to Old Barn Camp Use Area
- New restrooms at Twin Oak Camp, Dogwood Pond and Old Barn Camp Use Areas
- ADA Accessible and improved parking and pathways at Twin Oak Camp, Patterson Monument Use Areas and Old Barn Camp Use Areas
- Improvements to the existing nature play area adjacent to the White Oak Camp Use Area
- Improved natural surface hiking trails creating an easy to navigate loop system for a variety of lengths, challenges and experiences

Major Recommendations:

The site plan includes several components of the long-term vision for the park. FRMP should constantly work towards exploring opportunities to evolve toward these concepts as part of the capital projects that are implemented

- Establish the White Oak Camp Use Area as the primary use area that is well connected to other parts of the park using wayfinding and trails to help visitors understand all the features the park has to offer.

- Tell the story of the park including the geologic history and the development of the park from John H. Patterson and the Olmsted Brothers to the current form of the park today

Opportunistic Short-Term Recommendations

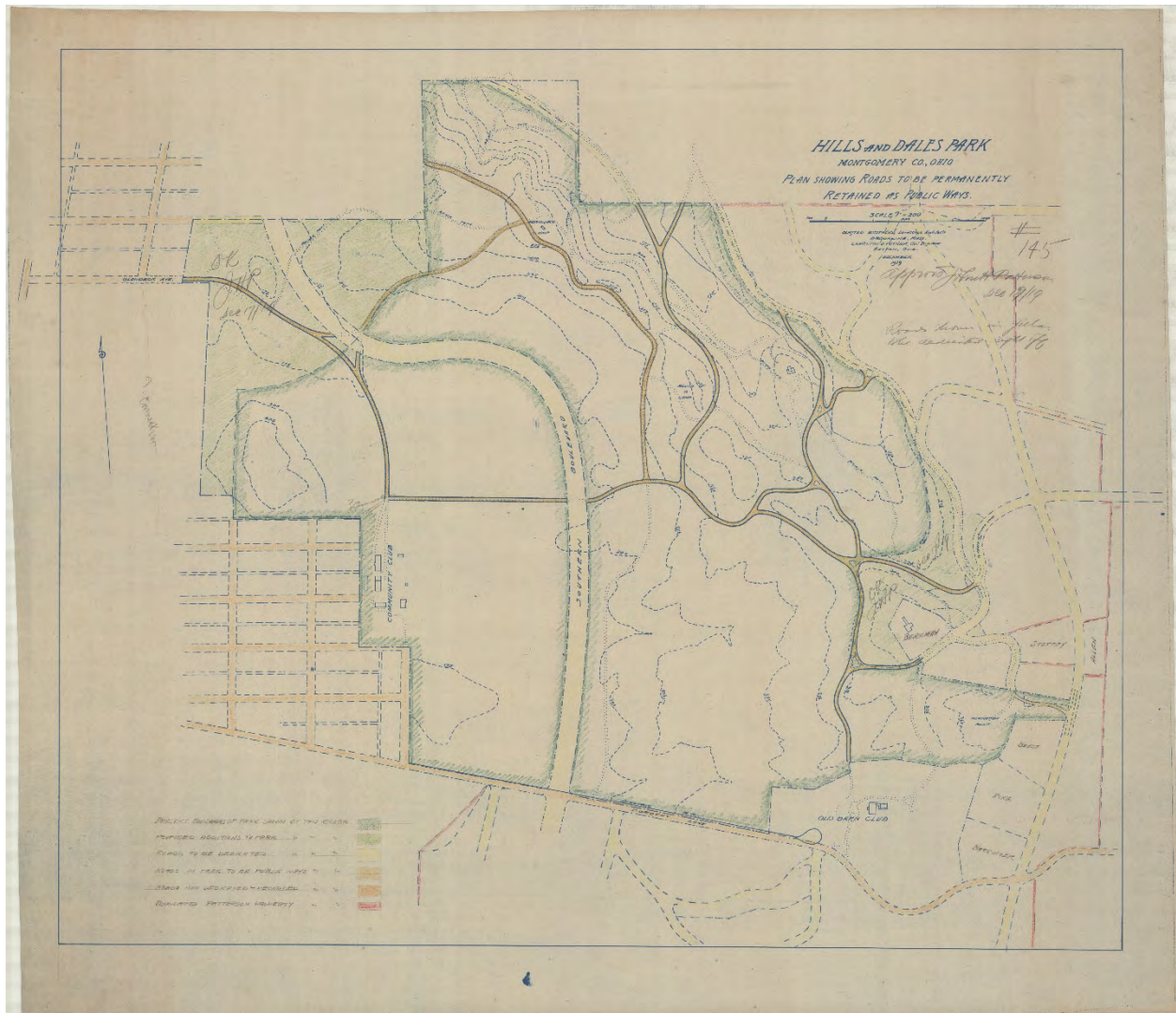
Some recommendations could be achieved at a relatively low-cost using staff resources:

- Nature Play Area
 - Develop a new detailed plan for existing the play area
 - Enhance and improve the nature play experience by adding additional play elements
- Work with RTA to add directional signage to bus stops on South Dixie at Stockton and Dorothy Lane at Hilton. Ensure the existing sidewalk routes to the park are well signed and maintained by the City to maintain safe and comfortable routes to and from the park
- Work with the City of Kettering to enforce the 25MPH speed limit in the park
- Add signage to improve bike routes around the park and make the connection along Park Road between Deep Hollow and South Patterson Road
- Add signage/ banners to connect users to and from Houk Stream
- Work with Dayton History to promote both Carillon Park and Hills & Dales MetroPark
- Add wayfinding for park users at the intersection of Oak Knoll and Deep Hollow
- World War 1 Memorial
 - Collaborate with the City of Dayton to collect acorns and propagate new Oaks from the memorial trees to be used to repopulate in the MetroPark and to provide to the City of Dayton to begin to replant the golf course to replace the dead Ash trees

Other Notable Projects

The plan also makes recommendations to explore additional improvements for the park including:

- Evaluate the feasibility of opening the historic observation tower to allow visitors to climb to the top and enjoy the view
- Expand the natural surface trail system to connect to the historic camp areas on the Community Golf Course side of the park



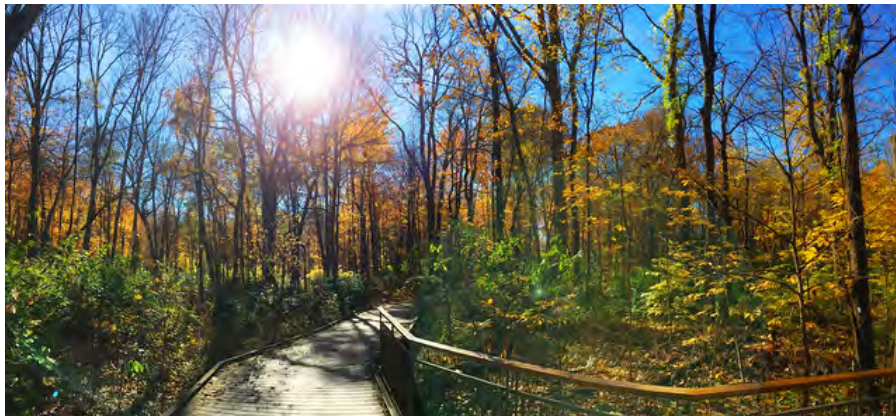
SECTION 2: THE PLAN

2.1 PARK POSITION DESCRIPTION

Hills & Dales MetroPark

Hills & Dales MetroPark is a long, narrow 85-acre park nestled in a wooded area between the suburbs of Kettering and Oakwood. The 85 acres is just a part of the original 300 acres of the land that John Patterson developed for his employee park. It contains hills and ravines covered in mature and young hardwood forest. Spring seeps also feed several small wetlands in the park. The park straddles two golf courses, City of Dayton's Community Golf Course and the Dayton Country Club. It's bisected by Patterson Road but otherwise is tucked among neighborhood streets, giving it a neighborhood park feel. There are three major use areas in the park. White Oak to the northwest that includes a rest room, picnic shelters, a children's play area that includes both manufactured equipment and a nature play area, and open lawn. Dogwood Pond is in the center of the park and includes a picturesque pond landscaped with natives and a gazebo. Paw Paw, toward the south end of the park, features a large shelter, the only shelter in the highest tier of rental prices in the FRMP system, and a rest room. A natural surface trail runs the length of the park through each of these use areas, as well as three other use areas: Twin Oak, Adirondack, and Old Barn Camp.

Hills & Dales MetroPark has great historic relevance in the Miami Valley, and that history has been retained as key park amenities for users to enjoy. A statue of John Patterson, founder of the park, stands at the top of the hill along Patterson Road. When the park was renovated in the mid-2000s, the architecture of the original structures was mimicked in the shelters and rest rooms. The historic stone tower remains closed, but the area around it was stabilized recently to ensure the adjacent hillside wouldn't erode the foundation. The 1979 landscape sculpture, Staged Gates by Mary Miss still stands in the wooded hillside south of Paw Paw Shelter.



Based on the 2016 FRMP Comprehensive Master Plan, Hills & Dales' park typology is classified as a community park. This is based on the moderate number of amenities and degree of human activity in the park, as well as the balance of ecosystem services versus human services the park provides. The park is surrounded by densely populated inner-ring suburbs whose residents frequent the park. Trail use and picnicking are the primary uses in the park. Though the number of visitors to Hills & Dales MetroPark ranks among the lower third of MetroParks, the park has a healthy attendance relative to its size. Visitation has been trending upward in the last five years, with 2018 showing a nearly 20% increase over the two previous years. Paw Paw shelter, a large shelter with a fireplace, is the most popular as compared to other MetroParks, ranking first in weekend fill rates and overall fill rates despite being in the top pricing tier. The park is not connected to the regional trail system. That connection is proposed via bike lanes and routes through residential and collector streets and some off-street trail. Many surrounding residents access the park on foot, including children who come to the play area.

Hills & Dales MetroPark offers an intimate park experience, a wooded retreat from the surrounding dense inner suburbs of Dayton that it serves. The presence of surrounding homes and golf courses are relieved by the depth of the rich woods. The park's history, the quality of the architecture, and the maturity of the woodlands is unique within MetroParks. The predominant uses in the park, hiking and picnicking, are passive and social. It's common to see hikers carrying on a lively conversation as they walk. Given these assets, Hills & Dales' identity in the FRMP system is as a park that provides a venerable marriage of culture and nature.





2.2 PARK HISTORY

John H. Patterson, founder of National Cash Register Company, believed that education and outdoor exercise were the pillars of good health for not only himself, but also his employees. In the early 1900s, Patterson owned hundreds of acres south of Dayton. He knew the community could benefit from planned green space for leisure activities. Patterson hired John Charles Olmsted and Frederick Law Olmsted Jr., the sons of world-famous landscape architect, Frederick Law Olmsted who was responsible for the design of Central Park in New York City, to work their magic on the natural terrain. Patterson began a relationship with the Olmsted Brothers in 1894 after developing a strong appreciation for their Natural School of Landscape Design.

The results of their work at Hills & Dales Park were picturesque creeks, trails for riding horses and walking, polo field, sugar maples, wildflowers and the fragrance of honeysuckle. Hills & Dales Park must have been a novel experience for most Daytonians when it opened in 1907. With its carefully designed meadows, water and woods, it was meant to recreate the perfection found in nature. It was intended to provide a place for city dwellers to conveniently enjoy beautiful natural scenery and obtain relief from the strain and stress of urban life.

In its early days, park goers could take a short ride from the city and be immersed in nature. Visitors strolled walking paths on foot or horse. They picked blackberries, wild strawberries, may apples, walnuts and hickory nuts and ate them on the grounds. They lingered near wading pools and picnicked or spent the night in Adirondack camps.

In 1918, confident that the City of Dayton could care for it, Patterson deeded the park to the city, even though the property was outside the city limits.



Families continued to be attracted to Hills & Dales Park in the 1920s as a welcome change from city living. The Old Barn Club, located along Patterson Boulevard just north of West Dorothy Lane, was the hub of the social and cultural life of the people of the Miami Valley. It became a desirable place to use for wedding receptions, organization meetings and family gatherings. It had brown, stained clapboard siding and resembled a Swiss chalet with porches on several sides. A series of steps led from the road bringing visitors into a large sitting room two stories in height around which ran a balcony. Wicker furniture, rockers and high-backed chairs faced an alcove with a large fireplace and a player piano. There was a natural amphitheater for Sunday afternoon concerts by local artists, and Sunday meals were open to the public.

After Patterson's death in 1922, a memorial was erected in 1928 and stands in the heart of Hills & Dales to honor his leadership. The bronze and granite monument by Italian sculptor Giovanni Morretti places Patterson and his favorite horse, Spinner, at the top of the hill where he often rode on the bridle paths. Allegorical figures representing prosperity, progress, industry, and education also are included to represent Patterson's influence on the community.



The Old Barn Club was destroyed by fire in the late 1920s. By the early 1930s, the park lands started to be chipped away. The series of open meadows, polo fields and open-air theatre were converted to a golf course; eastern sections were subdivided for housing development. The remaining land left only a small sliver of natural park along the ridgeline directly east of the golf course.



The iconic observation tower at the park known by several names, including Frankenstein's Castle, Patterson's Castle, and the Witch's Tower, was constructed from stone salvaged from condemned buildings by the National Youth Administration (NYA) as a project during the Great Depression and was finished and opened to the public in 1941. It was eventually closed due to safety and maintenance concerns.

By the 1990's, the original open character of what was left of the site had been transformed by years of vegetation growth. Almost 90 percent of the natural areas were overgrown with bush honeysuckle. In 1993, the City of Dayton completed a study of the historic property in conjunction with Ball State University and published a document entitled ["Hills & Dales Park Historic Landscape Preservation Master Plan."](#)

A group of concerned citizens named “Friends of Hills & Dales Park” started a cleanup effort in the late 1980’s, centered around cleanup days where volunteers cleared huge amounts of honeysuckle, painted shelters, planted bulbs and performed general clean up. The group, led by Dayton Garden Club member and then Dayton-Montgomery County Park District (FRMP) commissioner Jean Woodhull, continued with cleanups and bulb planting well into the 1990’s. Woodhull’s passion for Hills & Dales had a significant impact on FRMP’s decision to assume operations and maintenance in 1999.

Hills & Dales became a MetroPark in 1999. As part of its 2000 levy commitment, FRMP promised the community that it would take on and restore the neglected but historic park back to its former glory.



After years of master planning and construction, \$4 million in improvements were unveiled to park goers in 2009, including new shelters in the Adirondack style of the original park, new restrooms, a restored Patterson monument, boardwalk, restored Dogwood Pond, extensive honeysuckle removal, playgrounds and increased monitoring and law enforcement. The park now feels like a ramble through a thickly wooded upstate New York forest, a visit to a bygone era when Adirondack architecture was all the rage, a place and mind-set where visitors became part of the landscape and weren’t there as intruders. It’s ideally suited for casual strolls and photography. The reservable shelters are among the most popular in the district.

2.3 SITE PLANNING PROCESS



FRMP has established a [site planning process](#) that was used to develop the site plan for Hills & Dales MetroPark (the “park”). FRMP utilized Planning and Project Staff to develop the site plan. A core team of key, cross-agency staff was established to guide the plan throughout the process. The core team participated in a two day kick off process to provide orientation and input and continued to be closely engaged throughout the development of the plan, providing feedback at each key decision point and engaging individually as various issues

and opportunities arose that pertained to their work responsibilities. Core team members also gathered feedback from other staff, and additional staff members directly associated with the park had an opportunity to provide their ideas, insight and issues.

The public also had several opportunities to provide input into the development of the site plan. Two public open houses were conducted during the two-day kickoff session where attendees were able to talk to staff. Intercept surveys were provided to meeting attendees and were online for those who were not able to attend. An additional public meeting was held to present the pre-final concept plan and gather feedback. Stakeholders and attendees from the first open house were sent direct invitations to attend or to comment about the plans online.

FRMP also engaged key stakeholders in the project to collect input and feedback. Stakeholders included the neighboring jurisdictions of Oakwood, Kettering, City of Dayton Golf Division, and Dayton History. These meetings provided insight to the context around the park, identified opportunities and issues, and explored future partnerships.



Data and Analysis Summary

The most recent master plan for Hills & Dales MetroPark, completed by Human Nature of Cincinnati in 2007, was also consulted. Most of the recommendations were completed in 2008 and included new restrooms, shelters, trail kiosks, renovation of the Dogwood Pond and the nature play area at the White Oak use area. The primary recommendation which was not implemented was an adventure play area at the Paw Paw use area, which was cut due to project budget reasons.

Input Summary

During the two day kick off process, several key high-level issues and ideas were raised that were considered throughout the planning process:

- Tell the story of the park's history, including John Patterson and the Olmsted Brothers involvement and the transformation of the park
- Because of already completed work in 2008, do not plan for significant improvements; they are not required nor desired
- Create a better experience for cyclists through the park area
- Explore opportunities with the golf course for shared operations and visitor experiences
- Explore opportunities to connect with the local schools around the park
- Explore re-opening the observation tower
- Explore improvements at the Old Barn Camp (the approximate location of The Old Barn Club) including wayfinding and basic amenities
- Explore opportunities to open trails to bikes

Site Plan Program

The site plan program was developed from all the input gathered from the public, stakeholders and staff along with the physical data and analysis. The program provides a guiding framework and a set of overarching goals which should be met in the final site plan and ultimately the park master plan. The following highlights provide an overview of the park program that guided the development of the site plan.

Program Statement

Hills & Dales MetroPark has a 100-year history. In addition, many cultural resources exist in the park and should be maintained, improved and utilized to enhance the park visitor's experience. By telling the story in innovative and creative ways and improving the trail network throughout the park, the already quality user experience will be enhanced. Physical connections to nearby regional assets and improved partnerships could also improve the visitor experience. Day use amenities should be maintained and enhanced at each use area. The natural experience should be well-maintained through sound conservation and restoration efforts.

Program Elements

- Tell the story of the Park
 - Patterson History
 - Patterson Monument
 - Philosophy related to the importance of the restorative effects of nature- importance of time in nature for individuals, workers and community
 - Olmsted Firm
 - Include the link to the larger vision for the Dayton Park districts and river connections- comparison with past vision and present parks
 - Civil Works Administration (CWA) History
 - World War 1 memorial on the Golf Course
 - Cultural resources
 - Chimneys
 - Shelters
 - Foundations
 - Patterson Monument
 - The Tower
 - Views
 - Natural geology
 - Ensure local schools' needs are supported with park interpretation
 - Tell the story using elements beyond signage
 - Walking the park provides a timeline of its history

- Connect the park to the region
 - Connect the park to the regional bike trail network
 - Connect the park to the Oakwood trail network
 - Explore opportunities to connect to Houk Stream Park (City of Oakwood natural park area; 3.1-acre parcel)
 - Consider constructing a path around the golf course
- Improve the Natural Trail System
 - Create trail loops as a more user-friendly system where possible
 - Explore ways to improve the park to promote healthy lifestyles such as heart healthy trails
 - Explore opportunities to make the park more dog friendly
 - Connect to the historical and cultural resources of the park
 - Explore historical trail and roadway network to inform trail layout
 - Create a sustainable trail system throughout the park
- Modify Patterson Boulevard to make more bike/ pedestrian friendly
- Park Views
 - Explore opening and interpreting historical views
 - Explore ways to interpret historical views that have been blocked by tree growth (I.e. Inspiration Point)
- Improve Conservation and Nature
 - Keep the park natural
 - Promote bird watching
 - Remove invasive species
 - Increase tree plantings
 - Protect and enhance the groundwater-fed wetlands throughout the park



- Improve Use Areas
 - Sign and enforce one-way traffic at the Paw Paw use area
 - Provide parking at Patterson Monument and Adirondack Shelter
 - Explore adding play feature options (i.e. games) at Adirondack and Twin Oak shelters
 - Improve parking at Twin Oak
 - Add restroom for Adirondack/ Twin Oak
 - Add parking & amenities at Old Barn Camp; better define the use of Old Barn Camp
 - Explore adding a non-reservable shelter to support park users, including lunch and reading uses and possible program space
- Nature Play
 - Add a wash station at White Oak
 - Improve and define nature play at the existing site
 - Explore other opportunities in the park
- Make the Park More Bicycle Friendly
 - Explore opportunities to improve Patterson Boulevard
 - Add bike racks and repair stations at use areas
 - Replace existing bike racks to meet FRMP standards
 - Ensure safe bike routes through the park along park roadways
 - Explore mountain biking opportunities in the park
- Explore Opening the Tower
- Integrate Art in the Park
 - Explore options to remove or renovate Staged Gates
 - Explore opportunities to create interpretive elements as public art
- Establish a Front Door for the Park
 - Develop better signage at collector roads including wayfinding/ directional signage/ awareness of park along South Dixie, Dorothy Lane and State Route 48.
 - Consider White Oak as the park's front door as designated on Google Maps

- Develop stronger partnerships with cities of Dayton, Kettering, and Oakwood and Dayton History
 - Work with surrounding landowners for the management of invasive species to reduce the external pressure on the park
 - Tree plantings and reforestation
 - Propagation of Oaks from WWI Memorial and planted into the park/ golf course
 - Explore opportunities to relax the boundary between the park and golf course for park and golf course users
 - Connect to local bikeways and public art
 - Explore opportunities for shared grant applications
 - Bring back Make a Difference Days with Cities to create more volunteer opportunities and complete additional work tasks beyond staff band width
 - Connect visitors of Hills & Dales to Carillon Park and other Dayton History Sites
- Recreation Elements
 - Hiking
 - Running
 - Bird Watching
 - Parties/Gatherings
 - Access to Sledding at the Golf Course/Winter Activities
 - Cycling/Mountain Biking
 - Weddings
- Operations Issues
 - Explore partnering with the golf course for shared operational facilities
 - Add additional staff office space, storage for bulk materials and equipment
 - Explore alternative materials to the wood currently used for site furnishings in the park to extend the lifespan and reduce operational impact
 - Establish a defined dumping location for both the golf course and FRMP and clean up the current dumping locations

2.4 CONSERVATION PLAN

Based on the [Natural Areas Management Guide](#), a series of park-specific goals have been developed as a part of the site planning process. These goals should be used as a guide during the implementation of the plan to minimize impacts to sensitive habitats and the wildlife that depend on these special places.

This park contains rolling hills and ravines along with mature and young hardwood forests. Other unique features include spring seeps and associated small wetlands. The narrow nature of this park and significant edge intensifies the need to minimize disturbances.

Hills & Dales is considered a local birding hotspot and is a consistent stopover or breeding site for neotropical migrants. The golden-winged warbler, a bird with extremely high vulnerability due to small population and range, high threats, and range-wide declines ([Partners in Flight, 2016](#)), is a regular migrant at Hills & Dales MetroPark. With 193 observations on [eBird](#), the wood thrush is a more common visitor to Hills & Dales but nonetheless is another species of significant concern. Wood thrushes have experienced a 59% loss in overall population numbers since 1970 and it is estimated that another 50% of this species' global population will be lost by 2047 ([Partners in Flight, 2016](#)). Major threats to these birds in our region include changing forest conditions, urbanization, and invasive species.

The activation of spaces within natural areas will require thorough assessment and a thoughtful approach to minimize impacts on the natural areas that surround them, particularly in forested areas.

Conservation goals for the site plan include the following:

- Preserve the existing high-quality mature woodlands throughout the park. Eliminate and manage honeysuckle and other invasive species in all habitats.
- Reintroduce and plant native mast species in designated areas to augment succession and ensure a diverse future forest.
- Reintroduce a variety of native shrubs in designated areas to promote the re-establishment of these species.
- Manage Dogwood Pond and wetlands to benefit flora and fauna that are dependent on these habitats.
- Design and maintain hiking to maximize the experience of the user and the integrity of the managed habitats.
- Monitor the adjacent conservation easement lands and maintain good relations with these landowners.



2.5 INTERPRETIVE PLAN

Hills & Dales MetroPark consists of approximately 85 acres remaining from the original 300-acre Hills & Dales National Cash Register (NCR) company employee park John Patterson opened in 1907. Hills & Dales MetroPark is a long narrow linear park nestled in a wooded area between the neighborhoods of Kettering and Oakwood. The park offers historical elements as well, such as portions of Inspiration Point and Old Barn Camp which remain from the initial opening of the park. The park is unique in its concept that it was an early example of employee recreation and wellness programs deployed by NCR company. Patterson hired the Olmstead firm to design the initial park roads and landscaping. A statute of Patterson was built at the top of the hill along Patterson Road in the 1920s in honor of his leadership. In the 1940s during the Great Depression, a tower was constructed of salvaged stone from condemned buildings built during the National Youth Administration. The tower has had many names over the years and offers unique viewsheds of the landscape from a higher elevation. In 1979, landscape sculpture Staged Gates by Mary Miss was installed in the wooded hillside south of Paw Paw Shelter through the Dayton Alternative Spaces public art residency program.

The natural assets of the park remain impressive within the small park, topography of hills and ravines covered by mature and young hardwood forests, bird habitat, and spring seeps that feed several wetland areas within the park. The space provides rejuvenating nature within the city. The Comprehensive Master Plan lists this park's typology as a community park.



Audience

After site visit and discussions with FRMP staff and stakeholders, the following by “Falk Visitor Types” identifies current and potential audiences, as well as activity which are defined below:

- Explorers—motivated by personal curiosity and seek to learn more about whatever they might encounter (i.e. life-long learners)
- Facilitators—motivated by sharing experience with other people and focus on their companions needs (i.e. a parent bringing a child)
- Experience-Seekers—motivated by the desire to see a place, often don’t stay long and get satisfaction from just visiting and desires photos of themselves with iconic resource (i.e. been there, done that; seeks a story to tell)
- Professional/Hobbyists—motivated by a high affinity for the site, they are highly knowledgeable about a site’s subject matter (i.e. the visitor that wants in-depth behind the scenes or occasionally a scholar researching a specific topic)
- Rechargers—motivated by a desire for a contemplative or restorative experience (i.e. sit or stroll)
 - *Note: The same person can have different motivation on different visits.*

Hills & Dales Audience

- Rechargers
- Explorers

Hills & Dales Potential Audience

- Experience Seekers
- Hobbyists – (history interests)

Hills & Dales User Groups

- Picnicking/Shelter
- Hikers/Walkers
- Trail running
- Dog walkers
- Families with children
- Play Area
- Bird watchers
- School inquiry-based learning
- Wellness forest bathing
- Connect with a Dayton History walking/ driving trial/ tour
- Cycling along roadway



Intended Visitor Experience

Visitor experience provided for all visitor types and activities listed above:

- Layout, landscaping, and wayfinding provide a sense of comfort and safety while offering solitude in nature when participating in a range of passive recreation activities. In peak use, visitors can choose to socialize or enjoy nature in small groups without feeling crowded.
- Basic needs are met, such as restrooms, water fountains, picnic, shelters, clear orientation/wayfinding and access. Improvements to trails and wayfinding are critical to the visitor experience at Hills & Dales MetroPark.

FRMP System-Wide Themes/Storylines

An interpretive theme is the overarching message. It is more detailed than a broad topic; it is a complete thought in one to two complete sentences. The theme may be used verbatim in signage or verbally in talks, or it may be unspoken, but guide the general feel the project aims to have for the visitor experience on site. A theme will help answer the “so what?” – “the moral of the story.” Themes connect tangibles: those things you can touch, see, feel, smell, and taste with intangibles, and those things that are symbolic or metaphoric.

Theme: A succinct, central message about a topic of interest that a communicator wants to get across to an audience. (Ham, 2013)

Storyline: Part of the thematic hierarchy: theme, sub-theme, and storyline. Storylines are the details of the interpretive content.

Agency mission:

Protect natural areas, parks and river corridors, and promote the conservation and use of these lands and waterways for the ongoing benefit of the people of the region.

Central Themes relevant to park:

Each park within the FRMP system tells a story from the past.
Parks make our lives healthier and happier.

Theme for the Park:

- Built as a scenic oasis on the edge of the city, Hills & Dales MetroPark continues to provide retreat from city life with an urban forest filled with relics, wildlife and nature that soothes the soul.

Tag line possibilities:

- Parks make our lives happier and healthier then and now.
- Happier healthier lives then and now.

Sub-themes:

- Early years of Hills & Dales served as NCR employee park as a retreat on the edge of the city.
 - Supporting stories: Park development with Olmstead firm (old roads/trails, stone culverts, views, barn camp and inspiration point chimneys, cabin foundations, remaining shelters, etc.) and Patterson's vision for recreation and wellness model for businesses employee programs.
- You can explore the trails and see glimpses of history onsite. Imagine Dayton recreation of the early 1900s
 - Supporting stories:
 - You can still see foundations, chimneys, and walk along old horse trails, and the architecture today mimics original structures.
- Hills & Dales served as a location for NCR assistance after 1913 flood.
- Park conservation efforts provide for an urban forest with unique bird habitat in the middle of the suburbs
- Ramble through an urban forest for a retreat and forest bathing to soothe the soul.



Early view from Patterson Memorial

Storylines specific to Hills & Dales MetroParks:

- Patterson History: Olmsted Firm Design of park setting for scenic views (stone culverts, views, barn camp and inspiration point chimneys),
- NCR retreat use for staff (cabins, picnic shelters, horse trails, hiking, etc), transition / deeding the park to City of Dayton.
 - First of its kind for park industry when it was built in 1906
- City of Dayton mgmt.: Patterson Memorial (1920s), CWA and WPA History, World War 1 oak memorial grove on the Golf Course, The Tower (1940s), Mary Miss Staged Gates installation (1979).
 - Mary Miss staged gates built as Alternative Spaces artist in residency program. The placement originally along a trail leading up the hill inviting visitors to pilgrimage through the arrangement. Intent was blending art in nature.
- Cultural resources (remains of Patterson's / Olmstead park design) – Chimneys, Shelters, Foundations

- Bird watching opportunity is unique to urban area –
 - Screech owls dependably seen and called in
 - Great horned owls
 - Warblers migrate through in spring
 - Woodpeckers common (including pileated)
- Natural geology: needs research, but from meetings seems there is a storyline here.
- Urban Forest: conservation efforts result in a mixed young and mature hardwood forests within a neighborhood.

Other opportunities to connect to agency-wide themes:

- Partnerships create healthy and vibrant communities
 - Opportunities with Dayton History at Carillon Historical Park and their managed sites, City of Kettering, City of Oakwood, and City of Dayton (golf course)

Interpretive Media Recommendations

Aspirational personal programs by topic:

Bird watching
Wildflowers
Cultural History of site

Wayside self-guided (Signs, artwork, or Audionetics):

History of park landscaping development (Olmstead Firm), Mary Miss Staged Gates, Old Barn Camp, Nature Play

Non-personal interpretation:

Kiosks- Welcome and orientation assessments/ relocations at White Oak, Dogwood pond, Paw Paw, Twin Oak, Adirondack, and Old Barn (6 locations).

Wayside Exhibit:

Bird watching- viewing scopes or binoculars from locations along main spine,
Exhibit along spine trail to share history of park, Patterson monument
Exhibit series of past views/ Dayton skyline – observation tower

Interpretative Opportunities

- [Kids in Parks](#): a national network of parks, encourages and supports active family engagement, increases trail use, introduces recreational opportunities available in parks, forests and communities, and creates a network that offers an almost unlimited variety of experience. Starting the Kids in Parks trail at White Oak Camp will build on the playground and nature play amenities located there.
- Interpretive Wayside Self-Guided: Improved bird habitat and improved access to cultural amenities allow more visitors and program participants to experience interpretative media at the Staged Gates, Inspiration Point, and Old Barn Camp.
- Interpretive Wayside Exhibits: Improvements to the Observation Tower, Patterson Monument, and the Central Trail allow for exhibits relating to views and historical significance of Hills & Dales MetroParks.
- Kiosks will welcome first time visitors and shelter users at Dogwood Pond, Twin Oaks Camp, Old Barn Camp, and Patterson Monument along with existing kiosks at Paw Paw shelter and the two kiosks at White Oak Camp.



2.6 PROGRAMMING PLAN

Hills & Dales MetroPark provides various opportunities for the community to connect to nature through natural, recreational, and cultural experiences. Hills & Dales MetroPark attracts a strong repeat program participation because of its proximity to the neighborhood and safe access for six local schools. Programs predominately start at Paw Paw Shelter or White Oak Camp. Audiences for those programs are detailed below, and the [2018 Program Chart](#) is available for review in the Appendix.



Hills & Dales MetroPark Programs

Youth & Teens

Hills & Dales MetroPark is a popular location for nature-themed youth tours for students in grades second through fourth because of Hills & Dales' restrooms, shelters, trails and connections to content for school standardized tests. Youth explore ecology and local history for experiential learning that helps meet learning standards. Southdale Elementary and Harmon Elementary schools frequent the park regularly for self-guided experiences. Neighboring preschools and daycares utilize the park amenities and variety of habitats to give young children first time experiences in a natural setting. Tours are volunteer, teacher, or staff led.



Families

Offered year-round, Conservation Kids programming empowers children to become conservationists through a three-step program progression. Get Outside Book Club is a partnership program with Dayton Metro Library that combines early literacy with getting children outdoors. Hills & Dales is one of nine parks featured each year between September 1 and October 31. Hills & Dales MetroPark has earned the Miami Valley Leave No Child Inside's and Dayton Regional Green's "Connect to Nature Site Award". This award recognizes the facility for providing programs and access points to nature that enable the Ohio Children's Outdoor Bill of Rights to be exercised by youth.

Adults

Adults attending the Discovery Strolls learn more about local ecology and ways to protect the biodiversity of the region while meeting other adults who share their interest in nature. Trained volunteers lead these activities and provide the expertise for these walks year-round. Historical and Cultural Resources offers guided experiences for the Osher Learning Lifelong Institute at the University of Dayton. Teacher Trainings and curriculum resources are provided to help local teachers meet Ohio Learning Standards using Hills & Dales MetroPark natural and historical features.

Aspirational Programming

Improved amenities and trails and ADA and safety modifications will provide expanded outdoor educational, historical, cultural, recreational, and interpretive opportunities. Habitat improvements for birds will allow for better wildlife viewing for programs and independent use. The proposed development of a central trail will provide better access for program participants with limited mobility. As programming, interpretive efforts, and resources evolve, activation of the new amenities and creating a recreational and educational use culture in the parks, whether through interpretation, programming, or independent use, will be a primary goal. This goal can be realized in various ways, depending on the audience.



Programming Opportunities

Youth & Teens

- Nature play, additional restrooms, and hiking trail additions and enhancements, as well as safety improvements will allow Hills & Dales MetroPark to be a destination school site for the region, as well as an outdoor classroom for local schools currently not visiting Hills & Dales MetroPark in Kettering, Oakwood, and Dayton to meet learning standards in history, science, and physical education. Program sites: Patterson Monument, Twin Oak Camp, White Oak Camp, and Paw Paw Shelter area.

- The live animals, called Animal Ambassadors, can be offer to local schools a close look at wild animals that live in the parks. Animal Ambassadors include box turtles, a milk snake, a black snake, an owl, an American Kestrel, a red-tailed hawk, and salamanders. Program Sites: Dayton Public, Kettering, and Oakwood schools as well as local preschools and daycares.

Family

- An improved nature play site, the additional restrooms, trail improvements, and safety improvements will provide family programming and family wellness opportunities by creating more mileage of trails. The Central Trail improvements will provide a better experience for families with strollers during family programs. Program Sites: Twin Oak Camp, White Oak Camp, and Paw Paw Shelter area.

Adults

- Expanded bird watching opportunities, improvements to parking, as well as the addition of public restrooms, observation tower access, and stacked loop trail system will allow for theme-based nature and history walks for adults. Teacher trainings and curriculum will help teachers from nearby schools to utilize the natural and historical features to help meet Ohio Learning Standards. Historical and Cultural Resource programmers may provide a tour/open house program twice a year to provide access and awareness to the park and its history. Program Sites: Twin Oak Camp, White Oak Camp, and Paw Paw Shelter area.
- Improved road safety surrounding the park will provide an opportunity for programs on road safety for cyclists. Program Sites: Paw Paw Shelter.

Multiple Audiences

- Improvements to safety, trail system, and Patterson Monument access, as well as additional restrooms, and access to the observation tower will enhance tour experience by providing comforts and destinations during programs. Park Sites: Park Wide
- Partnering with Dayton History to promote Carillon Park and Hills & Dales MetroPark will provide improved content to history tours. Park Sites: Paw Paw Shelter.

2.7 SITE PLAN

Hills & Dales MetroPark received an extensive renovation when FRMP took over the park, so there is currently little need for large scale capital improvements. The top priority which resulted from received input was to tell the story of the park. Better connections between the use areas and some new connections to historic areas of the park are other primary goals of the master plan. A series of use areas will help organize and orient visitors to the array of opportunities available for them to explore. The White Oak Use Area is the front door to Hills & Dales MetroPark where new visitors will experience the park for the first time. As park users become familiar with the park, visits can begin at other use areas where basic amenities and unique and varied features, other amenities and activities are provided. These use areas will be connected by park trails, allowing users to create diverse experiences each time they visit. The use areas for the park have been redefined to include the following:

- White Oak Camp (Primary Use Area)
- Patterson Monument
- Paw Paw
- Twin Oak Camp
- Dogwood Pond
- Old Barn Camp

A second important factor driving the development of this and all MetroParks site plans is the Power of 10+, a concept, developed by Projects for Public Spaces, to evaluate and facilitate place making at multiple scales. Places thrive when users have a range of reasons—ten or more—to be there. These might include a place to sit, playgrounds to enjoy, art to touch, music to hear, food to eat, history to experience, and people to meet. Ideally, some of these activities will be unique to that place, reflecting the culture and history of the surrounding community. The following activities were identified in the planning process as appropriate for this park:



- Picnicking
- Historical and Cultural Interpretation
- Grassy play including Frisbee and ball throwing
- Birding & Wildlife Viewing
- Nature Play
- Begin a bike ride on the regional bikeway system

- Connecting with Nature
- Hiking
- Fitness Walking
- Group Events & Gatherings
- Nature Education
- Scenic Views & Features
- Trail Running
- Enjoy Environmental Art

Key Site Plan Recommendations

With a foundation of the two concepts described above, key site plan recommendations were developed. Many of these recommendations have resulted in specific projects that are prioritized for the capital improvement plan in Section 2.1. The full [site plan](#) provides significant detail not provided here.

Opportunistic Short-Term Recommendations

Some recommendations could be achieved at a relatively low-cost using staff resources:

- Nature Play Area
 - Develop a new detailed plan for the play area
 - Enhance and improve the nature play experience by adding additional play elements
- Work with RTA to add directional signage to bus stops on South Dixie at Stockton and Dorothy Lane at Hilton
- Work with the City of Kettering to enforce the 25MPH speed limit in the park
- Add signage to improve bike routes around the park and make the connection along Park Rd between Deep Hollow and S Patterson
- Add signage/ banners to connect users to/ from Houk Stream
- Work with Dayton History to promote both Carillon Park and Hills & Dales MetroPark
- Add wayfinding at the intersection of Oak Knoll and Deep Hollow

- World War 1 Memorial
 - Collaborate with the City of Dayton to propagate new Oaks from the memorial trees to be used to repopulate in the MetroPark and to provide to the City of Dayton to begin to replant the golf course to replace the dead Ash trees

Park-wide Recommendations

Tell the story of the park

Tell the unique geological and historical story of the park to park users. Connect users to other related locations to expand on the story including Dayton History's Carillon Park and the City of Oakwood's Historical Home Tour.

Continue conservation efforts

Continue to remove and manage invasive species from the park and plant native shrubs, middle story trees and herbaceous wildflowers throughout the park to enhance and promote views and create buffers to create a more dynamic experience for park users.

Expand bird watching opportunities

Expand bird species specific plants to enhance the birding experience throughout the park.

Collaborate with the City of Dayton's Community Golf Course

Work to clean up the current dump locations and establish, where possible, a common dump location for use by both the golf course and FRMP. Accurately define the limits of the park lease and expand into wooded areas as required to accommodate proposed trails. Collect and propagate acorns from the World War 1 Memorial Oaks and plant throughout the golf course and park.

Circulation Recommendations

Central trail spine

Define a central main trail spine which connects from the White Oak Primary Use Area through the park to the Old Barn Camp Use Area. The trail spine should be hardened to allow for comfortable use year-round and connect all the use areas in the park.

Improve roadway crossings

Work with the City of Kettering to ensure safe trail crossings of Patterson Blvd. The trail spine crossing at Twin Oak Camp should be the dominant crossing in the system to ensure a comfortable crossing for users. All crossings should explore traffic calming techniques to ensure safe vehicular and pedestrian interactions. In addition, crossing proposed for Oak Knoll Drive at Deep Hollow Lane and Park Avenue at Deep Hollow Lane are simple crossings but require wayfinding to direct users to other parts of the park and to neighboring points of interest. In addition, the roadway at the Patterson Monument should be re-worked with the City of Kettering to narrow the pavement to allow for a more pleasant and safer pedestrian experience in this part of the park.

Safe routes to schools and bus stops

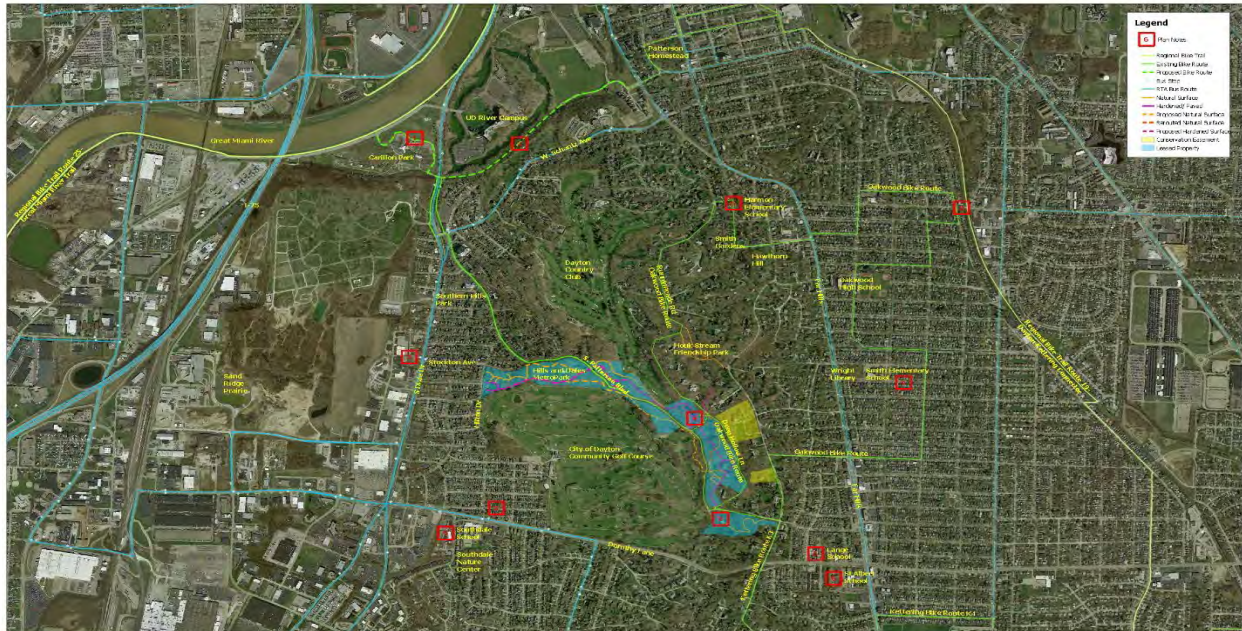
There are currently 6 schools within easy walking distance of the park. Safe routes exist using sidewalks and slow speed residential streets to access the park. Efforts should be made to connect these schools' students to the park through communications about features located in the park which can be used for classroom activities or academic standards.



Expand and improve the pedestrian natural surface trail system to create a network of nested loops that provide easy access to park assets

The proposed plan utilizes historical carriage trails from the original Olmsted Brother's plan and connects to historic camp locations in the park to create a loop trail network providing park users a variety of routes and experiences. New connections include access to the historic Round Camp and other overlook sites over the golf course. Some routes such as the upper trail between the Paw Paw and Dogwood Pond Use Areas will be re-routed to eliminate perennial wet or unfavorable trail conditions. In addition, some trail will be eliminated, primarily short connectors, which create a difficult to understand trail system.

Hills & Dales MetroParks 2018 Master Plan



Hills and Dales MetroPark- Context & Connectivity

Date Exported: 10/2/2019 1:08 PM



Hills and Dales MetroPark - Final Site Plan

Date Updated: 6/26/2020 3:45 PM



Use Area Recommendations

White Oak Camp Use Area

This location will become the primary use area and will be the front door to the park. Recommended efforts including creating wayfinding from Dixie, Schantz and Patterson to direct new visitors to the front door of the park. The addition of a wash station to support the nature play area will enhance the existing amenities already found in this use area.

Twin Oak Camp Use Area

This use area includes two stone shelters, Twin Oak and Adirondack which will continue to serve as reservable areas. The existing gravel lot next to the Twin Oak Shelter should be improved including paving and proper drainage with ADA accessibility to the shelter. Existing roadway space between the Patterson Monument and the Adirondack Shelter should be modified to provide parking and the addition of ADA accessible pathway to the shelter. A proposed restroom is proposed to serve both shelters.

Patterson Monument Use Area

FRMP should continue to maintain the Patterson Monument including repairing the plaza area and making improvements to the fountain system. A new overlook area is proposed on the south side of Patterson Blvd which is accessible via steps from Patterson Blvd and by a new natural surface trail. The existing roadway and informal parking area east of the monument should be formally defined as a parking area for the use area and include an ADA accessible pathway to the monument plaza. Landscape plants should be renovated to ensure clear vehicular sight lines along Patterson Blvd and enhance the area. Encroaching tree and vegetation growth on the golf course side of Patterson Blvd should be removed and controlled to ensure the view over the golf course and beyond is maintained.

Dogwood Pond Use Area

The existing shelter should be maintained along with the paved pathway system in this area. The paved pathway through this area will be a part of the central trail spine through the park. Ground water seepage crossing the pavement should be addressed in this area to ensure safe walking and pavement life. A small restroom is proposed near the parking lot to support rentals and activities in this use area.



Paw Paw Use Area

The existing shelter and restroom should continue to be maintained for park users and large gatherings at the shelter. The trail connections to this area, primarily towards the observation tower and Old Barn Camp, need to be formalized and consolidated to eliminate several user-created access points.

Old Barn Camp Use Area

The parking area should be formalized by paving and proper amenities as a use area. This area is primarily a drop-in style use, so the addition of small scale individual covered shelters to accommodate individual or small groups should be developed. Formal trail heads should be developed to direct park users both to Inspiration Point and towards the main park. A small restroom should also be developed in this use area.

Specific Significant Recommendations

Staged Gates

The Staged Gates environmental art piece should be repaired and relocated to a more sustainable and more prominent location in the park. Work with Mary Miss to determine a new location in the park.

Observation Tower

The observation tower should be evaluated to see if it's feasible to re-open it to the public. Initial discussions with City of Kettering building officials indicate that the historic structure does not need to be made ADA accessible, but basic safety measures need to occur. A new railing at the top of the structure and the hole in the floor at the top of the structure needs to be repaired. Further evaluation needs to be performed on the structure to ensure structural integrity prior to opening the tower to the public. A lockable gate will also need to be installed to allow the tower to be closed at night.



Chimneys and fire rings

The two chimneys located in and near the Old Barn Camp Use Area should be stabilized and interpreted. The chimney located next to the parking area could be re-activated to allow for small fires to be made in the chimney. The Inspiration Point chimney was part of a larger shelter which afforded park users a sweeping view of the surrounding area. Over time, trees have grown and matured and have blocked these views. There is at least one small fire ring still in existence on the golf course side of the park opposite Dogwood Pond. These should be maintained and ultimately connected by trails and interpreted.

Level of Service Amenities

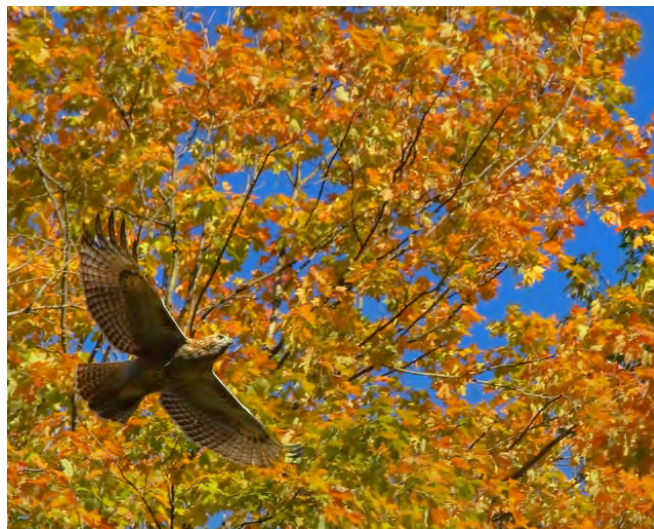
- The following amenities outlined in the CMP are included in the site plan:
 - (3) Reservable Picnic Shelters (Small 1-25)
 - (1.35) Soft/ Non-Paved Trails (Miles) (Convert the existing central spine to gravel hardened)
 - (0.85) Nature/ Hiking/ Backpacking Trails (Miles)

2.8 LAND PROTECTION PLAN

FRMP's [Land Protection Plan](#) identifies priorities for land protection based on criteria addressing conservation, the park, and the user. Hills & Dales MetroPark has little opportunity or need for expansion. Land protection strategies are as follows:

- Continued restoration and protection of the tree canopy and related understory species in and around the park. This is the highest conservation-based land protection priority. Recent losses of ash trees both in the park and across the Community Golf Course have had a major impact on the character of the area and have impacted the tree canopy as well as the spread of invasive species
- Continue to work with the City of Dayton to eliminate golf course dumping in the wooded areas between the park and the golf course. Explore opportunities to clean up the existing dump locations and create a shared organic dump location between the two organizations

- Explore opportunities to better define the limits of the FRMP lease with the City of Dayton to expand the lease to include the woods on the south side of Patterson which is currently part of the golf course
- Maintain dialog with the operators of both golf courses to monitor the courses future status. Currently both neighboring golf courses are profitable, however golf courses across the country are closing due to decreased use and increased costs. The historical and open space value of these properties should be protected for future generations.
- Explore long term opportunities to complete the natural boundaries of the park which include residential properties which are on the same side of the roadways as the park. Based on the current value and quality of the properties around the MetroPark, these acquisitions are unlikely in the near term



SECTION 3: IMPLEMENTATION

3.1 INTRODUCTION

The [Hills & Dales MetroParks Master Plan](#) identifies a comprehensive proposal and [cost estimates](#) for the improvement of this MetroPark. From those recommendations, it was necessary to prioritize the various proposed projects. Applying priorities established in the Comprehensive Master Plan, FRMP established [Capital Project Criteria](#) to identify projects that will be incorporated with other projects throughout the district into FRMP'S Capital Improvement Plan (CIP). To reflect total project costs of the prioritized projects, operational cost estimates were developed for conservation, maintenance, programming, interpretation, law enforcement and businesses operations. Also included are estimates for revenue generation through earned income, such as program fees and rentals, and alternative revenue, such as donations, sponsorships and endowments. These operational costs and revenue will be evaluated alongside the capital costs to identify the projects' placement in the CIP to identify year-by year investment.

3.2 CAPITAL IMPROVEMENT PLAN (CIP)

The proposed site plan represents the long-term vision for the park. The plan proposes a number of capital projects that will move the park toward that long-term vision. In this park master plan, specific improvement projects, as well as repair and replacement projects identified in the comprehensive master planning process have been identified as priority projects for the upcoming ten-year period. When applicable, the improvement projects include the furniture, fixtures, and equipment investments necessary to provide a complete project. These priority projects are listed below. Capital improvement projects and priorities will be evaluated on an annual basis to determine status of planned projects, funding availability and potential changes to the park master plan and CIP schedule.

- Re-align Natural Surface Trails between Dogwood and Paw Paw Use Areas

- Anticipated Budget: \$8,350

Re-align trail sections of natural surface trails between the Paw Paw Use area and the Dogwood Pond Use Area to create a more logical stacked loop system and eliminate consistently wet trail conditions. Includes approximately 593 linear feet (LF) of new 3' wide trail and 411 LF of removed trail

- Add a small restroom at the Twin Oak Camp Use Area

- Anticipated Budget \$114,500

- Add a small flush restroom at Twin Oak Camp use area
- Define parking area east of the Patterson Memorial
 - Anticipated Budget \$35,000
 - Define the parking area east of the Patterson Memorial using striping, signage and curb modifications to create about 6-8 nose-in parking spaces, including ADA space(s), and to promote slower speeds and ensure a safer and higher quality visitor experience- 220 x 5' of concrete walk
- Roadway Diet around the Patterson Memorial
 - Anticipated Budget \$11,000
 - Work with the City of Kettering to develop a roadway diet, or reduction of pavement area around the Patterson Memorial and potential pavement change to slow traffic and make the area more pedestrian friendly
- Adirondack Shelter Parking
 - Anticipated Budget \$45,000
 - Add parking to support the Adirondack Shelter using nose-in parking between the shelter and the Patterson Memorial - 420 x 5' of concrete walk
- Add a small restroom at the Dogwood Shelter Area
 - Anticipated Budget \$55,000
 - Add a small vault restroom
- Create a formal parking area at Old Barn Camp
 - Anticipated Budget \$100,000
 - Create a defined 20 car fully accessible parking area at Old Barn Camp by paving the entry drive and parking area
- Formalize parking at the Twin Oak Shelter by paving the parking lot and entry drive

- Create a defined 10 car fully accessible parking at Twin Oak Shelter by paving the entry drive and parking area
- Create a central hardened surface trail spine through the park
 - Anticipated Budget \$125,000
 - Define, surface-harden and create the central trail spine through the entire MetroPark- Approximate 5623 LF 8' wide.
- Conduct a Feasibility Study to Re-Open the Observation Tower
 - Anticipated Budget \$15,000
 - Conduct a study to evaluate Re-Opening the Observation Tower, Includes opening the doorway, tuck pointing masonry, filling the hole in the top deck and adding railings at the top of the tower and a lockable gate

In addition, all pavement maintenance and repair work required in the parks will be addressed by the district wide pavement management program plan. This 10-year plan covers all pavement work district wide and may be funded through annual capital funding and grants.



3.3 PARKS AND CONSERVATION

The Parks and Conservation Department staff is responsible for the care and maintenance of facilities and natural areas within Hills & Dales MetroPark. This work includes tasks such as daily cleaning and inspection of areas, completion of general repairs, and completion of conservation tasks that protect the biodiversity of natural areas and are recorded and tracked in the Annual Habitat Action Plan. The completion of the routine tasks outlined below ensure that all areas are maintained to FRMP standards for safety, cleanliness, and appearance and that FRMP visitors have high quality experiences.

Current Primary Routine Tasks:

- Park Clean-up
 - Litter pick up
 - Bathroom cleaning
 - Shelter cleaning /checks
 - Drinking fountain cleaning/checks
- Nature Play inspections-daily
- Roadway/parking lot/paved trail blowing
- Mowing (excluding trails)
- String trimming
- Natural surface trail trimming/mowing/tree removal
- Park Inspections
- Equipment/Vehicle repairs and service
- Routine garden maintenance
 - Weeding
 - Fertilizing

- Mulching
- Raking
- Planting

Current primary special tasks:

Parks and Conservation staff also complete work tasks that may be completed annually or monthly and require more time and attention than some of the routine tasks. These tasks may be tied to weather events or special projects. In some cases, special tasks involve timing in relation to the weather or events within the facilities. Other considerations for this work could include scheduling to reduce negative impacts on plant communities or animal populations.

- Snow removal-hand and truck
- Pressure washing shelters and bathrooms
- Park inspections
- Annual Inspections
- Fixture maintenance
 - Plumbing repairs
 - Picnic table repairs
 - Trash/ Recycle can maintenance
 - Grill maintenance
 - Gate maintenance
- Chemical application
- Tree and shrub planting/watering/mulching
- Facility maintenance
- Winterizing and opening water systems and bathrooms.

- Roadway/paved trail maintenance including trimming, mowing, berming, drain clearing and tree removal.
- Tree tube maintenance and monitoring
- Deer management
- Invasive plant management
- Plant surveys
- Tree protection

Expected Increases to Primary Routine Tasks:

Upon review of the priority projects in the proposed site plan staff projects an increased need of 708.72 hours annually to complete primary routine tasks. A breakdown of projected increases is outlined by project below and equates to .34 full time equivalent staff (FTE). The detail of these projections can be viewed in the [costing spreadsheet](#) that was produced as a part of the park master plan process.

Project	Projected Hours	FTE Equivalent
Re-align Natural Trail Surface between Dogwood and Paw Paw	1.4	.001
Re-Open the Observation Tower	193.6	.093
New parking area for Patterson Monument and Sidewalk	49.19	.024
Adirondack Shelter Parking and Sidewalk	76.75	.037
Restroom for Dogwood	181.5	.087
Formal Parking area for Old Barn Camp	6.63	.003
Twin Oak Restroom	199.65	.095
Natural Play Improvements	0	0
Park wide Signs	0	0
Additional Stage Gates Improvements	0	0
TOTAL	708.72	.34

Expected Increases to Primary Special Tasks:

Upon review of the priority projects in the proposed site plan staff projects an increased need of 114.23 hours annually to complete primary special tasks. A breakdown of projected increases is outlined by project below and equates to .054 full time equivalent staff (FTE). The detail of these projections can be viewed in the [costing spreadsheet](#) that was produced as a part of the park master plan process.

Project	Projected Hours	FTE Equivalent
Realign Natural Trail Surface between Dogwood and Paw Paw	4	.002
Re-Open the Observation Tower	36.67	.018
New parking area for Patterson Monument and Sidewalk	2.91	.001
Adirondack Shelter Parking and Sidewalk	2.35	.001
Restroom for Dogwood	16	.007
Formal Parking area for Old Barn Camp	2.8	.001
Twin Oak Restroom	17	.008
Natural Play Improvements	4	.001
Park wide Signs	12.5	.006
Additional Stage Gates Maintenance	16	.007
TOTAL	114.23	.054

One Time Tasks:

Staff also identified plant surveys as a one-time task needed to support the implementation of the proposed site plan. This task would likely be required of Parks and Conservation staff as part of the construction of new amenities. These numbers are not included in the staffing projection that is included in the summary section below.

- Plant surveys for natural area trails – 7.05 total hours

Current Staffing Levels at Hills & Dales MetroPark:

- Park Manager- Hills & Dales
- (1) Full-time Technician-Hills & Dales
- (2) Part-time Technicians- Hills & Dales

- (1) Seasonal Technician- Hills & Dales
- Conservation support provided by the south parks and conservation team.

Summary of Operational Impacts:

Based on the costing spreadsheet that breaks down identified tasks for each project in the park master plan, staff identified an estimated 822.9 hours of additional annual labor needs that would be created for Parks and Conservation staff. These operational impacts total .396 FTE Technicians.

3.4 PROGRAMMING AND INTERPRETATION

Programming and Interpretation Projection

The FRMP currently engages visitors at Hills & Dales MetroParks in a variety of ways. The programs and interpretive elements mandated by the site plan are described below:



Programming Projection

Based on the site plan, no new facilitated programming is required for Outdoor Recreation, Outdoor Education, or Historical and Cultural Resources at Hills & Dales.

Resources for Self-Directed Programs

- **Natural Adventures Box:** A Natural Adventures Box will be installed at White Oak Camp to provide youth groups access to a variety of naturalists' tools and historical resources to explore the park during spring through fall. Supplies include insect nets, pond nets, field guides, magnifying glasses, children's history books, artifacts and replicas of inventions from Dayton area, and more.

Interpretive Projection

The site plan proposes additions to interpretive elements. The improvements outlined below focus on areas of the park prioritized for improvements for Hills & Dales MetroPark.

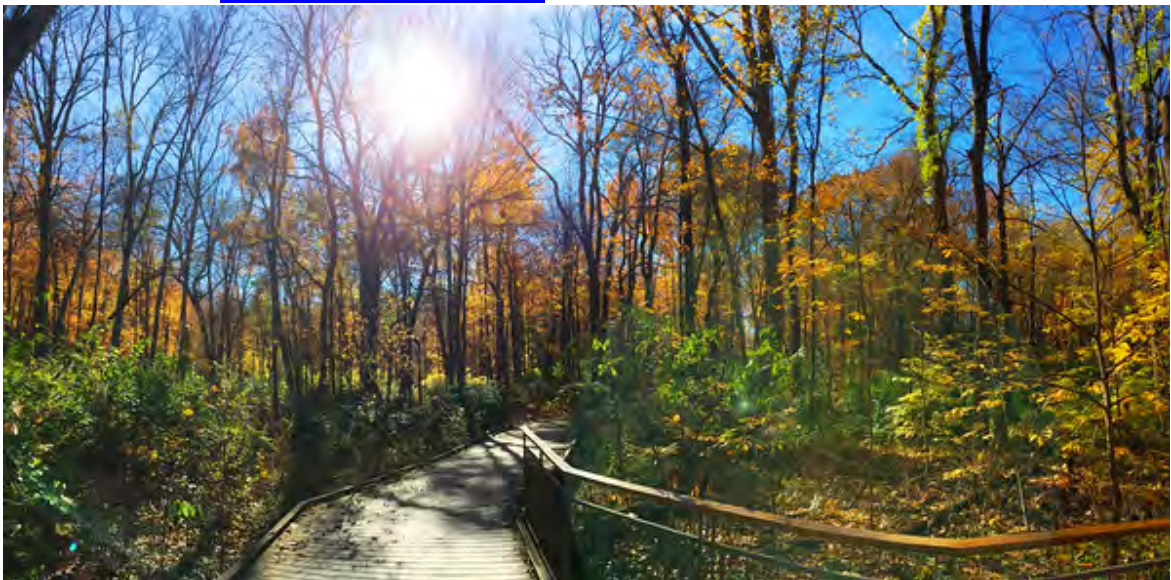
- **Wayside Self-guided** include single-style interpretive media, such as an interpretive panel or other interpretation method that connects visitors to a park feature. Priority projects that include wayside self-guided sites are Nature Play and Old Barn Camp.
- **Kiosks** are the first decision point for visitors in the park and are designed to welcome and orient visitors with trail and feature descriptions. New kiosks are identified for Dogwood Pond, Adirondack shelter, Old Barn Camp, and Twin Oak Camp.
- **Wayside Exhibit** is an interactive experience that includes a variety of interpretive media and may include interpretive panels and interactive displays that are designed to provoke curiosity in visitors. The priority projects that includes a wayside exhibit are the Central Trail improvement, Observation Tower, and Patterson Monument.

The park master plan identifies capital costs for interpretive elements in priority project areas. Corresponding one-time personnel costs to develop these interpretive elements have been established below. Ongoing operational expense for the interpretive elements focus on periodic repair and replacement costs and the associated personnel costs. The capital and operational costs for these interpretive elements, matrixed by the individual project, is summarized in the table below.

Interpretation Priority Project Costs

Project	Capital Development Costs		Maintenance Costs	
	Materials	Personnel	Materials	Personnel
Paw Paw – Dogwood Pond Trail Improvements	NA	NA	NA	NA
Observation Tower Improvements: Wayside Exhibit	*	\$18,000	*	\$1,500
Twin Oak Camp Use Area Restroom	NA	NA	NA	NA
Patterson Memorial Parking Improvement: Kiosk and Wayside Exhibit	*	\$19,700	*	\$1,650
Patterson Memorial Safety Improvements	NA	NA	NA	NA
Adirondack Shelter Parking: Kiosk	*	\$1,700	NA	\$150
Dogwood Shelter Restroom	*	\$1,700	*	\$150
Old Barn Camp Parking: Kiosk, Wayside Self-Guided	*	\$5,213	*	\$400
Twin Oak Shelter Parking	*	\$1,700	*	\$150
Park Trail System Improvement	*	\$18,000	*	\$1,500

*Included in the [Capital Cost Spreadsheet](#) as a line item.



3.5 BUSINESS OPERATIONS

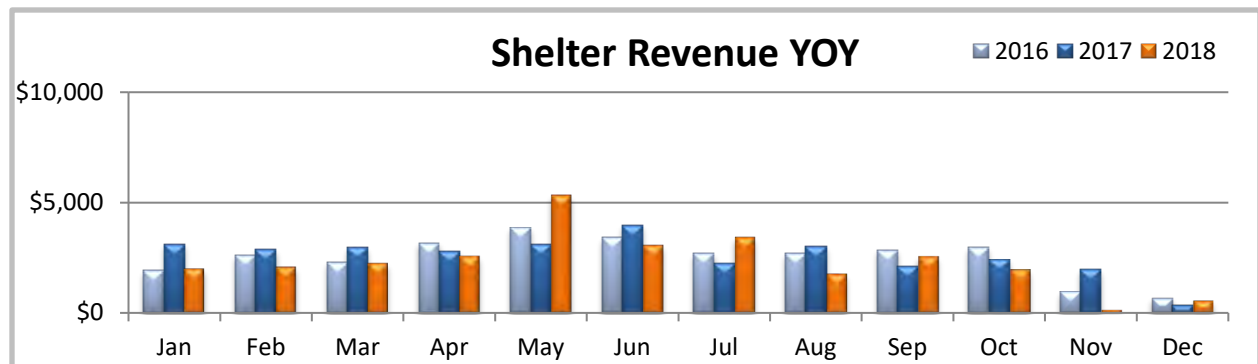
In reviewing the Hills & Dales MetroParks Park Master Plan as proposed, the Business Operations staff concurred that focus should remain on maintaining and enhancing the revenue-producing resources currently in place.

Shelters

Enhance existing shelters with accessible parking options and improved restrooms. Highlight primary use areas to increase exposure to shelter resources.

Current revenue sources

Hills & Dales MetroPark is the agency's leader in usage and revenue for reservable shelters, garnering roughly a third of total annual shelter revenue. With its six shelters, Hills & Dales MetroPark boasts an average fill rate of 42% over the past three years, with the Paw Paw shelter achieving an average a fill rate of over 90% during the weekend peak season. The resulting revenue has averaged approximately \$29,600 during the same period.



Proposed revenue sources

Paw Paw Shelter: Dedicating the resources to keep the Paw Paw Shelter in good, clean condition will be required to maintain a consistent and reliable source of activation and revenue.

Twin Oak Camp Shelters: Upgrades to the Twin Oak Camp area, including paved, accessible parking and restrooms, along with focused improvements drawing attention to the Patterson Monument, should have a positive impact on usage and revenue for the two shelters in this location.

White Oak Shelters: Identifying this location as the “front door” to the MetroPark will drive more attention toward the two reservable shelters. Likewise, the inclusion of a wash station for the nature play area will bring more families. The modifications should result in increased shelter usage and revenue.

Programming

Based on the site plan, no new facilitated programming is required for Outdoor Recreation, Outdoor Education, or Historical and Cultural Resources at Hills & Dales and therefore no additional revenue is expected.



3.6 PUBLIC SAFETY

Implementation of the Hills & Dales Park Master Plan will have some impact on the Ranger Division, but the impact will be minimal overall. Below are the considerations:

Current Patrol

- **Patrol Area** - Rangers are normally assigned a patrol area, or “beat.” The beats are North, South, East, and Central. Hills & Dales is part of the Central Beat, along with RiverScape, Deeds Point, Sunrise, the 2nd Street Market, Island, Wegerzyn, Adventure Central, and Wesleyan.
- **Patrol Strategies** - Typically, the ranger assigned to a beat will patrol the parks in his or her assigned beat several times during a shift at various intervals, being careful not to have a predictable routine in patrol times and methods. Rangers frequently make informal contact with park visitors and are encouraged to contact people who have reserved a shelter. Rangers look for anything suspicious and to make contact with people who may be involved in criminal activity. The Ranger Division’s primary focus is preventing criminal activity, but rangers are encouraged to take enforcement action, including making physical arrests or issuing citations, when appropriate.
- **Patrol Time Estimates** - Rangers recently estimated the amount of patrol time spent actively patrolling in each park during a regular 10-hour shift while assigned to that area, not counting any drive-time from park to park or other non-patrol time.
- In a typical 10-hour work day, the estimated average time the ranger spends on active patrol in Hills & Dales is approximately 60 minutes.

Anticipated Changes to Patrol

- **Vehicular traffic and parking** – Most patrol conducted by rangers is done by driving through the park areas in a marked cruiser. Given the minor changes proposed in the traffic pattern and parking areas for Hills & Dales MetroPark, it is not anticipated that there would be any significant change to patrol strategies or patrol time. Initially, rangers will likely need to be more visible and/or increase speed enforcement on Patterson Blvd. to encourage drivers to obey the speed limit, especially in the area of the Patterson Monument where increased pedestrian traffic is expected.

- Impact of changes to or additional paved and natural surface trails – While rangers sometimes walk trails or use bikes to patrol the paved and hiking trails, the proposed changes for Hills & Dales MetroPark are minor and require no significant change to existing patrol strategies or patrol times.
- Impact of additional structures/features – If the observation tower is opened to the public, it will require additional law enforcement attention. It will require additional regular patrol throughout the day and will need to be locked by a ranger each night. Rangers will need to leave their cruisers and walk to the tower, requiring additional time.

Impact of additional activities or visitation. It is expected that some increased usage of the park overall will occur due to the proposed improvements. This increased usage should not have a significant impact on the amount of patrol time rangers spend in the park. However, whenever there is an increase in the number of people in a given location, generally there is the potential for increased criminal activity. In this case, it is possible that there may be additional occasional thefts or vandalism, but it is not expected that there would be a significant increase in crime as a result of the proposed changes. There may also be some increase in routine calls for service due to the increased number of visitors.

Impact/Cost to Public Safety

- Based on the changes and additions proposed in the Hills & Dales Master Plan, it is estimated that an additional 15 minutes of patrol time per ranger, per shift, will be needed after the improvements are completed. This is based on the assumption that the improvements, especially opening the observation tower, will require additional ranger time to patrol it consistently throughout the day and lock it up each night. A nominal amount of additional time (included in this 15-minute estimate) will be required due to anticipated increased visitors and the time needed for rangers to check the parking lots, shelters and other areas, as well as interacting with visitors.
- An additional 15 minutes of patrol per shift x 3 shifts = 45 minutes of additional patrol per day x 365 days = 273.75 additional patrol hours per year.



3.7 ALTERNATIVE REVENUE

The addition of new trails, features and amenities proposed in the Hills & Dales MetroPark Park Master Plan provides excellent naming, sponsorship and tribute opportunities. Based on item descriptions and notes from the park master plan the following elements could generate alternative revenue:

• Shelters	Sponsor or naming
• Nature Play	Sponsor or naming
• Trails	Sponsor or naming
• Natural Adventures Box at White Oak Camp	Sponsor
• Wayside Exhibit	Sponsor
• Benches	Naming
• Observation Tower	Sponsor or naming

All donation amounts will include an endowment for a pre-determined specific period of time (3 years to 10 years) with the opportunity for the donor or sponsor to renew.

