

Five Rivers MetroParks

Planning Guidelines

5/22/17

Planning Guidelines

Overview

These planning guidelines are intended to provide staff, volunteers, and consultants an overall understanding of the goals and objectives for the planning and design of Five Rivers MetroParks' managed facilities and the role they play within the Miami Valley. The planning guidelines are also supplemented by design guidelines which provide detailed guidance to specific elements that are found or planned on properties managed and maintained by MetroParks.

Five Rivers MetroParks is first and foremost a conservation agency. All parts of the MetroPark system shall strive to provide the highest quality ecosystem services and habitats within the region. This includes the preservation of sensitive and threatened habitats, restoration of native habitats and the control of invasive species. These park ecosystems shall sustainably integrate humans and the impacts they place on the environment. This integration should provide meaningful and sustained connections of MetroParks users to nature. MetroParks must also work to create interconnected environments for both humans and wildlife in order for the overall natural system to thrive. Corridors must be preserved and created to allow all users comfortable access between larger park landscapes.

MetroParks' parks, conservation areas, and corridors are a key quality of life element in the region's economic development. MetroParks should continue to work with its partners to play a strong role in regional planning conversations and efforts related to the vibrancy of the Miami Valley.

The term sustainability has been used extensively in today's society to direct decisions which allow future generations to maintain a lifestyle similar to the current generation. MetroParks defines sustainability as it relates to this document and in all planning processes, in a level beyond maintenance which strives to improve both the environment and the lifestyles of future generations. With this ideal, MetroParks' concept of "thrivability" allows for a future that is constantly improving by creating environments and places that actually improve conditions for future generations.

MetroParks also has a responsibility to counteract the pressures of a "screen focused society", always connected electronically. The Youth and Family Initiative sets a strong focus to engage youth and their families to connect with nature in a lifelong and meaningful manner. MetroParks must strive to create places and opportunities to engage the population, especially youth, to connect and create a lifestyle that includes a love and passion for the natural environment. In order for the future of the region to

thrive, there must be a high level of concern, connection, and value for the ecosystem services which the environment provides. Youth in particular must be exposed to frequent unstructured exposure to nature in order to build a love and appreciation for nature. MetroParks must strive to provide opportunities for this to occur.

Definitions

Basic Amenities: amenities fundamental to human comfort, security, and safety such as rest rooms, informational and directional signage, drinking fountains, shade, and seating.

Ecosystem: A biological community of interacting organisms, including humans, and their physical environment organized through a series of interacting habitats.

Habitat: The natural home or environment of an animal, plant, or other organism.

Natural Areas: A designation whereby the priority for land management is the protection and management of natural habitats including forests, grasslands, controlled succession, wetlands, ponds, lakes, rivers, and streams. Trails may be included in natural areas, but other significant development or construction will consider the area “developed” per the FRMP Land Use Policy.

Resiliency: Planning for the ability of a designed or managed habitat to survive or recover from a natural disaster or changes in climate conditions. While the Focus of FRMP is on natural areas, efforts should also be made to ensure human health and welfare, including spaces to promote social justice and healthy social interactions.

Sustainability: The protection, conservation, and improvement of the natural environment, built landscape, cultural elements, historic objects and the wildlife which inhabit these areas which allows for their enjoyment by current generations in a manner which will ensure that these places will exist and are better for future generations. This includes financial stability to ensure the health of FRMP and its ability to provide services to the region. The Purpose Statement developed for the National Park Service is also relevant for FRMP as it relates to sustainability:

“To conserve the scenery and the natural and historic objects and the wildlife therein and provide for the enjoyment of the same in such a manner and by such means as will leave them unimpaired for the enjoyment of future generations.”

Frederick Law Olmstead Jr. – National Park Service Purpose 1916

Comprehensive Master Plan Reference Locations:

Section 2.2.1, 2.2.2, 2.6.4, 2.6.6, 3.4, 4.2.1

Document References

Policy AP-39 Land Use Policy found [here](#)

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Five Rivers MetroParks Land Use Policy

The *Five Rivers MetroParks Land Use Policy*, ratified by the Board of Park Commissioners in 2010, established that MetroParks will maintain 90% of FRMP managed land in natural area and will develop facilities to minimize impacts on natural systems. The policy, [found here](#), defines natural areas and develops lands and identifies resources and procedures for planning and executing development in the MetroParks.

Park Typology

The Five Rivers MetroParks' park typology model was developed as a part of the *Comprehensive Master Plan* (CMP) which was adopted by the Board of Park Commissioners in April 2016 (see CMP Section 2.11). Park typology establishes a broad structure of park classification based on a set of characteristics to guide planning and development. The typology includes three broad groups and six park types within the MetroParks system:

- **Urban MetroParks**
 1. Urban Resource Parks
 2. Urban Community Parks
- **Community and Nature MetroParks**
 3. Community Parks
 4. Nature Parks
- **Conservation MetroParks**
 5. Conservation Community Parks
 6. Conservation Areas

Four dichotomies of park characteristics provide the basis for classification, two based on setting and two based on level of service:

1. Setting: urban versus natural
2. Setting: human versus ecosystem
3. Level of service: amenities per acre
4. Level of service: human activity per acre

The CMP provides model site diagrams, or graphic representations of the park typology, for each of the six park types (p. 83-88). Following is the typology categorization for each park.

1. **Urban MetroParks**
 - a. Urban Resource Parks: Highly urban and human setting; highest level of amenities and activity per acre.
 - RiverScape MetroPark
 - Second Street Market

- b. Urban Community Parks: Highly urban and human setting; high level of amenities and activity per acre.
 - Deeds MetroPark
 - Eastwood MetroPark
 - Island MetroPark
 - Sunrise MetroPark
 - Wegerzyn MetroPark
 - Wesleyan MetroPark
- 2. Community and Nature MetroParks**
- a. Community Parks: Balance of urban/human and natural/ecosystem setting; high level of amenities and activity per acre.
 - Aullwood Gardens MetroPark
 - Carriage Hill MetroPark
 - Cox Arboretum MetroPark
 - Hills and Dales MetroPark
 - Possum Creek MetroPark
 - b. Nature Parks: Balance of urban/human and natural/ecosystem setting; medium level of amenities and activity.
 - Englewood MetroParks (Includes Pigeeye Conservation Area)
 - Germantown MetroPark (Includes Upper Twin Conservation Area)
 - Huffman MetroPark
 - Larchtree (Name TBD) MetroPark
 - Medlar (Name TBD) MetroPark
 - Sugarcreek MetroPark
 - Taylorsville MetroPark
 - Twin Creek MetroPark
- 3. Conservation MetroParks**
- a. Conservation Community Parks: Highly natural and ecosystem-based setting; low level of amenities and activity per acre.
 - Dull Woods MetroPark
 - Needmore MetroPark
 - Woodman Fen MetroPark
 - b. Conservation Areas: Highly natural and ecosystem-based setting; lowest level of amenities and activity per acre.
 - River Ridge Conservation Area
 - Sand Ridge Conservation Area
 - Shiloh Woods Conservation Area
 - Shoup Mill Conservation Area

Appropriate activities will be sited in parks depending on the park's typology classification. The *Park Activity by Typology Matrix and Summary*, [found here](#), defines how park activities should be

integrated into various MetroParks based on park typology. The activities included in the matrix, are taken from the *CMP Statistically Valid Survey*, and represent the range of activities provided by FRMP at the time the CMP was completed. In addition to identifying suitable and unsuitable typologies for each activity, the matrix also identifies needed support facilities, the appropriate pervasiveness of the activity in the system, and site selection and location criteria. The matrix strives to locate activities where they will provide the participant the best possible experience.

Balance and Integration of Natural and Built Areas

Adaptive management is a systematic approach for improving resource management by learning from management outcomes. MetroParks will apply the concepts of adaptive management in park planning. Park master plans and the *Planning and Design Guidelines* shall be reviewed and updated every five years to respond to actual data collected in the field. The science of ecology and the associated management of a natural environment is currently an imprecise science and require planners and managers to adapt plans to accommodate the response of the natural environment to the implemented plan.

- Plans should be monitored at the overall ecosystem or region wide level to ensure connections and habitats are working as a whole.
- Plans should be monitored at the local habitat level to ensure plans are supporting healthy soils, water resources and local flora and fauna found in a particular habitat.
- Plans should be monitored at the local built area level to ensure best management practices are being utilized to ensure a minimal impact on the overall natural environment.

Ecosystem services are the benefits provided to the region by a healthy cycle of natural processes in which pollutants or wastes are decomposed or removed, resulting in clean air and water and the ability to produce food for the overall system to support itself. These services include water quality, aquifer recharge, heat island reduction, decomposition, air purification, pollination, species diversity, carbon capture and sequestration, climate regulation and flood control. Park master plans shall work together to ensure ecosystem services are protected and provided at the highest quality possible for the region. Key principles of ecosystem services include the following:

- Riparian corridors are protected.
- Habitat fragmentation is minimized at the regional level.
- Natural and developed areas within a park are planned as unified, integrated ecosystems.
 - Developed or activity areas will be planned and located in order to protect sensitive natural habitats; sustainable access will be provided where possible to encourage sustainable personal connections to nature.
 - Natural habitat elements such as native plantings will be incorporated into developed areas to minimize the impact of the built amenities on the natural environment.

- Site plans shall ensure the edges between natural and developed areas are blurred resulting in a seamless environment. Plans shall strive to integrate the built elements into the natural habitats in a manner that allows park visitors to transition easily between the developed landscape and the natural landscape.
- Urban MetroParks, while highly developed, shall also strive to include native habitats and connections to nature. Plans shall seek out opportunities to expose those visitors unfamiliar with the natural environment with these elements and constantly remind everyone that the natural environment is always present.
- The design of both developed and natural environments shall integrate sustainable solutions to enhance the ecosystem services provided by the park and strive to reduce the overall lifecycle costs of the facility. Design solutions shall evaluate lifecycle costs, including initial installation and operational costs, along with the impact to the natural environment, to determine the best solution. Consideration shall also be given to minimizing the operational demands required to maintain each location.
- Developed areas shall provide meaningful and sustainable access to natural areas. The impact of human use on the natural landscape shall be guided to ensure that habitats thrive over time.
- MetroParks recognizes that users have varying levels of comfort with nature. Developed areas will be planned and designed for all users to develop a lifelong connection to nature by providing basic amenities, informational and educational materials, and transitions to natural settings that allow for the comfortable use of the diverse public.
- Nature-based recreational facilities such as water access points, various trails, and other amenities shall provide access and experiences to users of various skill levels.

Developing Parks as Ecosystems

The MetroParks system provides critical natural processes within the Miami Valley region that make the area a fantastic place to live, work, and play. These natural processes include providing plentiful clean drinking water, clean air, and the ability to grow and provide food locally. Through its planning efforts, MetroParks will strive to increase the positive impact of these natural processes throughout the region.

- MetroParks will explore opportunities to acquire properties or easements that connect wildlife corridors to other regional open spaces.
- MetroParks will plan developed areas, natural areas, and land acquisition to ensure a strengthening of the natural ecology:
 - Provide diverse and healthy habitats in FRMP owned or managed lands.
 - Identify critical local flora and fauna species needed to maintain a healthy ecosystem balance.

- Identify and protect threatened and endangered species to expand their range and population through creating, enhancing and preserving integrated habitats to support these species.
- MetroParks will be a leader and partner to protect and improve the water resources of the region including the Buried Valley Aquifer and surface water. Water is one of this region's most valuable resources and must be protected to ensure long term stability to this region.
 - Acquire parcels or easements in the riparian corridor, focusing on riparian corridors that recharge the Buried Valley Aquifer.
 - Plan trails and habitat corridors within riparian corridors to promote and serve human transportation and recreation and wildlife migration in an integrated manner.
 - Through acquisition and plantings, developing buffer zones along waterway edges to filter runoff.
- MetroParks will reduce habitat islands or habitat fragmentation:
 - Plan parks to ensure the largest possible contiguous habitat areas.
 - Connect parks to surrounding habitat areas and wildlife corridors.
- MetroParks will protect and develop plant and animal habitats to promote the overall health of the ecosystem:
 - Promote native flora and fauna species diversity to resist the impact of introduced non-native or invasive species of plants, animals, insects or diseases.
 - Buffer the region against hardiness zone migration which result from changes in both high and low temperatures or rainfall patterns. This includes the use of diverse native healthy flora population that can support movements of fauna in the region.

MetroParks should serve as a regional model for the delivery of ecosystem services, provide ecosystem services, and improve the region's environmental resiliency. Through planning and design, parks and conservation areas will optimize ecosystem services to support them in the following ways:

- Storm Water Control
 - Designs should strive to protect and improve the natural water cycle of the region.
 - Designs shall incorporate harvesting and reuse of storm water generated on each site.
 - Utilize natural collection areas including ponds, lakes and other water bodies to maximize water quality and infiltration. Flow to these bodies of water shall be filtered using wetlands, vegetated filter strips or similar natural systems to ensure contaminants are removed prior to entering these water bodies.
 - Designs shall limit the use of impervious cover and fully mitigate the effects of the use of impervious surfaces by utilizing practices, such as vegetated roofs, rain gardens, and bioswales or the use of permeable pavements.

- Promote and practice proper growing, planting, and maintenance of trees to promote their ability to reduce the effects of added impervious surfaces in the region.
- Air Quality
 - Expand and protect the urban forest to improve local air quality.
 - Continue reforestation efforts throughout the agency to help improve air quality on a regional basis.
 - Promote and practice proper urban tree planting and maintenance techniques to ensure a long term mature tree population, especially in the urban environment.
- Water Quality
 - Develop and enhance wetlands to ensure high quality water filtration and infiltration by utilizing the natural filtration systems found in these landscapes.
 - Utilize natural storm water treatment techniques such as bioswales and rain gardens in developed areas to filter surface runoff from impervious surfaces.
 - Utilize recognized best practices and sustainable farming techniques on all MetroPark properties to ensure the protection of soils and demonstrate proper use of soils for crop production. This includes the promotion and implementation of conservation easements around MetroPark facilities which require these best practices.
 - Utilize recognized best practices and sustainable trail design to minimize the effects of erosion.
- Water Cycle Protection
 - Utilize pervious surfaces to allow the natural water cycle process to continue through infiltration of storm water and not increase runoff which causes damage to riparian systems.
 - Utilize vegetation to take advantage of, and enhance, the natural processes of the absorption and release of water into the atmosphere provided by plants through evapotranspiration.
- Aquifer Protection
 - Select plant species and surfaces which limit the need for chemical applications including fertilizer, herbicides, and salt to eliminate or reduce the opportunity for contamination. This includes proper and sustainable storage solutions to ensure protection of the region's water resources.
 - Ensure infiltration of filtered storm water by utilizing permeable surfaces and healthy living soils which naturally allow water to flow into the aquifer.
 - Plan parks and connections to parks which limit the need for personal vehicles to access park facilities which will reduce spills of oils and gas onto roadway and parking surfaces.
 - Utilize sustainable water conservation efforts throughout MetroParks.
- Heat Island Reduction

- Continue to establish tree cover and reforestation efforts which will contribute to the reduction of overall temperatures in the region.
 - Ensure trees are planted properly and maintained to create a canopy cover over pavements to reduce surface temperatures and extend the life of paving materials. Planting areas should be created to provide sufficient soil volume to provide the ability for trees to mature.
 - Reduce the amount of pavement in parks that absorb sunlight and increase local temperatures.
 - Construct rooftops using solar or heat reflecting surfaces or installed using green roof systems to reduce solar absorption and reduce rooftop surface temperatures.
- Carbon Sequestration
 - Healthy and living soils provide the largest source of carbon sequestration on the planet. When soils are disturbed, damaged or paved over, carbon is released and then soil loses its ability to store carbon.
 - Ensure proper planting and maintenance of trees so that they reach maturity. Once trees reach twenty years of age, they become effective carbon sinks helping reduce the effects of carbon in the atmosphere.
 - Plan and advocate for comfortable and convenient alternative transportation routes and opportunities to parks to reduce emissions from vehicular use.
- Soils
 - Soils shall be protected through planning efforts to locate construction and other soil damaging activities away from native living soils and rebuilt when soils are damaged to ensure healthy and living soils are able to capture and store carbon and promote healthy populations of soil fungi and bacteria.
 - Minimize and focus foot, vehicular, or construction traffic which causes compaction and destruction of healthy soils.
 - Utilize best management practices to ensure soils are not eroded, including storm water control.
 - Ensure the use of sustainable trail design, construction, and maintenance to reduce the damage to healthy soils from cross drainage, widening trails, or rogue trails.
- Species Diversity Protection
 - Plan for and enhance habitats which promote pollinators by ensuring plant species are present for all life cycles of insects and birds. Different and diverse plant species are required for nesting, food sources, and reproduction to ensure a diverse, healthy fauna population.
 - Identify and enhance habitats for threatened/endangered plants and animal species by ensuring as large of a healthy habitat as possible and identifying possible threats to these species. This includes connecting fragmented habitats into large blocks of continuous wood lots or grassland prairies. Corridors,

especially along the region's rivers, should also be preserved with large buffers to enhance the travel of fauna between habitats. Specialty habitats should be preserved and expanded to provide necessary habitats for endangered species, such as hickory woods for the Indiana bat.

- Plan, enhance, and maintain a variety of healthy and diverse habitats to ensure the best opportunity for a healthy ecosystem.
- Utilize harvest timing and techniques for both agricultural and grasslands to enhance and protect the needs of migration, feeding, nesting and mating of native species.
- Plan for and enhance the resiliency of healthy and diverse plant and animal populations with regard to invasive species and diseases.

Developing Parks as Active Places

Connecting People to Nature

Five Rivers MetroParks' mission is to protect the regional's natural heritage and provide outdoor experiences that inspire a personal connection to nature. MetroParks will plan and design parks, facilities, and amenities to provide opportunities for people to interact with nature through trails, "inside-out" nature centers which encourage participants to be outside, as well as the previously discussed integration of developed and natural areas. Visitors will have the opportunity to interact sustainably with water, diverse habitats, and fauna in a manner that offers wonder and comfort for the first time user and wonder and challenge to the advanced user. These experiences will create lifelong memories and develop a yearning to return.

Park Master Plans shall consider integrating the following visitor opportunities or experiences to provide connections to nature into the appropriate facilities:

- **Trails:** trails were rated the most important amenity by the public in the statistically valid survey conducted as a part of the 2016 CMP. MetroParks offers a wide breadth of trail types: paved multi-use, natural surface hiking, mountain bike, equestrian, and water trails. Trails should provide a variety of choices for varied user skill levels and needs, including fitness, recreation, transportation, bird and wildlife observation, and personal rejuvenation. Various elements should be considered in trail planning (also see Trails in Design Guidelines)([Insert Link](#)):
 - Environmental impact: all trails should be designed to meet the agency's [Sustainable Trails Initiatives](#) (STI) standards
 - Access and challenge:
 - Provide short (1/2 to 1 mile) loop trails, particularly in Urban and Community & Nature Parks, with easily traversed tread and topography experiences and opportunities for all users, abilities, and levels of comfort with nature. These loops shall meet all ADA standards for accessibility.
 - Provide clear and effective wayfinding.
 - Fitness

- Develop 5K loops where appropriate, particularly in Community & Nature Parks to encourage the use of trails for fitness.
 - Develop longer loop trails with increasing topographical challenge in the larger parks to serve those seeking a higher level of fitness.
- Difficulty, including trail surface, slope and obstacles should reflect the intended user in all trails.
- Interest
 - Trails should incorporate teaching or interpretive opportunities whenever possible.
 - Trails should provide access to park features.

Park designs shall enhance and support directed and self-directed programs and include the following amenities when possible:

- Various gathering spaces or event areas in order to provide unique visitor experiences on a variety of scales.
 - A range of creative, flexible, and unique outdoor learning environments for staff, volunteers, and the individual user to utilize to learn throughout the park.
 - Basic amenities shall be ADA accessible and support large groups, including school groups:
 - Multi-stall restrooms.
 - Gathering spaces with water, shelter, and shade.
 - Effective and safe bus drop-off to designed staging areas.
 - Direct pedestrian access from schools to parks.
 - Direct pedestrian access from bus stops
 - Provide electricity and Wi-Fi connectivity where appropriate.
- **Festivals/Large Community Special Events, Music and Performances:** The CMP reflected a strong public desire (top two in program importance and need) for festivals and large community special events, and music and performances in parks. MetroParks should thoughtfully:
 - Identify which MetroParks and which sites within those MetroParks are appropriate to host these various types and sizes of events so that resources can be focused toward providing attractive and functional venues that are financially and operationally efficient.
 - Similarly, identify parks and sites that allow minimal impact on the park so that surrounding natural environments and park usage beyond event days aren't negatively impacted.
 - Plan facilities and infrastructure to host events so that event production is economical. As a potential source of revenue for MetroParks, event production by outside parties will be maximized when appropriate event space, facilities, and infrastructure are provided.

- **Healthy, Active Outdoor Lifestyle:** Provide ADA accessible amenities to connect to nature and promote healthy, active outdoor lifestyles for all ages:
 - Fitness: e.g., trails for a variety of uses, fitness stations, and open areas for fitness classes in addition to the health benefits offered by hiking, paddling and cycling.
 - Play: e.g., nature play and outdoor recreation amenities/facilities.
 - Respite: e.g., less frequently used trails through a variety of habitats, seating areas that are secluded or offer vistas.
 - **Nature Play:** through its nature play sites, MetroParks strives to provide the opportunity for children to engage in unstructured, self-directed play in a natural setting (also see Nature Play in Design Guidelines) [\(Insert Link\)](#). Key planning aspects of nature play include the following:
 - Siting nature play areas within clear and preferably natural boundaries.
 - Siting nature play areas adjacent to heavy family-use areas or amenities, with the exception of destination-level nature playgrounds, so that parents' discomfort or boredom doesn't foreshorten nature play time for the child.
 - Siting nature play areas near appropriate basic amenities.
 - Incorporating fabricated play elements as a transition to nature play areas as opposed to a stand-alone playground.
 - **Outdoor Recreation:** Examples of key areas include cycling and mountain biking, paddling, rowing, hiking, camping, fishing, disc golf, and backpacking.
 - Provide outdoor recreation facilities for independent use and directed programming which allow users to progress in skill development and fitness.
 - Programming for novices is sometimes held in a safe and comfortable setting not specific to the activity, allowing programmers/instructors to take the activity to potential new users.
 - Create destination facilities which provide access and challenge to a variety of levels of experience and allow users to hone their skills.
 - Enhance locations within MetroParks where natural features provide the best user experience in a sustainable setting.
- **Education and Interpretation:** See the following documents for detailed information related to education and interpretation:
 - FRMP Agency Wide Interpretive Plan [\(Insert Link\)](#)
 - Individual Park Interpretive Plans. [\(Insert Link\)](#)
 - Cultural and Historical Plans [\(Insert Link\)](#)
 - **Self-directed Learning in Nature:** Parks shall be planned and enhanced based on the agency-wide interpretive plan and the individual park interpretive plans. [\(Insert Links\)](#) Park designs shall provide access to existing park features to allow interpretation of the park's stories, such as:

- Elements or settings that convey the overall ecosystem of the region.
 - Native environments or habitats, especially those which are unique or unusual.
 - Geological elements which tell the story of the effects of glaciations and their effect on the region's soils and aquifer.
 - Cultural and historical elements found throughout the parks from pre-European settlement to recent history of transportation, flood control and the development of the region.
- **Sustainable Horticulture:** (Gardening and landscaping, as referred to in the CMP) programs ranked among the top five programs in public survey results (see pgs. 39 and 40 of the CMP). FRMP should provide facilities that apply, demonstrate, and support programming for sustainable gardening and horticultural techniques. Facilities should support the following topic areas:
 - Community gardening
 - Sustainable homestead gardening
 - Historical gardening
 - Sustainable ornamental horticulture

FRMP should also demonstrate sustainable horticultural techniques in our parks;

- Demonstrate horticultural practices which reflect FRMP's conservation values.
- Demonstrate the importance of resiliency related to plant selection and horticultural practices, including preservation of local ecotypes, heirloom varieties and historically significant species.
- Demonstrate best research and science based horticultural practices.
- Demonstrate the value and importance of reforestation, trees and the urban forest.
- Demonstrate the use of native plantings and their importance to wildlife and insects, particularly pollinators and water quality.
- Educate about invasive species and the damage they cause to the local ecosystem.
- Demonstrate the use of storm water management techniques such as rain gardens and bioswales.
- Demonstrate techniques to reduce the use of insecticides and fertilizers including the use of nitrogen fixing plants such as white clover to ensure healthier turf and landscapes.
- Minimize turf grass areas to active use zones needed for recreation and to provide for a maintained appearance at entrances and along entry drives and walkways.
- Demonstrate the beauty of native and adaptive species in planting areas to drive public perception of a beautiful landscape.

Connecting People to Parks

Finding, entering and navigating a MetroPark should be intuitive and understandable, even to the first time user. Park entry points and use areas will be planned to provide a comfortable and welcoming user experience as they navigate and orient to the park.

- Park entry points provide primary, secondary and tertiary entrances that are consistent with MetroParks' image and identity (see design guidelines) [\(Insert Link\)](#).
 - Create a single primary park entrance:
 - Serves as the park's main address in the park brochure, website and online maps.
 - Provides direct access to the park's primary use area.
 - Is accessible to mass transit where possible.
 - Secondary and tertiary entrances will be provided as needed. Limit the number of vehicular access points to reduce visitor confusion as well as pavement and vehicular impact on the ecosystem. Provide non-vehicular access to surrounding neighborhoods where possible.

- Use areas are the primary visitor connection points within parks that orient and introduce visitors to the options and activities found in the park. Use areas will be comfortable, attractive, and convey a strong sense of place. The areas will be developed based on the park master plans and land use policy and will concentrate activities to provide a variety of choices and efficient use of resources. Use areas will provide basic amenities and, based on the park program, will provide activities based on the Power of 10+ Concept described below.
 - Activating Parks using The Power of 10+ Concept

The Power of 10+ is a concept developed by the Project for Public Spaces (PPS) to evaluate and facilitate placemaking at multiple scales: regional, destination, and place. (See the link: <http://www.pps.org/reference/the-power-of-10/>) When regions contain at least 10 destinations or districts, their public perception begins to shift among both locals and tourists, and regions can become better equipped for generating resilience and innovation. These regions also become economic development generators creating vibrant places to live, work, and play. Five Rivers MetroParks contributes to placemaking at the regional scale, providing 18 parks as destinations in the greater Dayton area.

The parks must be planned to support the Power of 10+ at the other two scales: destination and place. Addressing the destination scale, each park should strive to offer 10+ activities such as hiking, camping, paddling, rowing, fishing, nature play, wildlife watching, cycling, disc golf, geocaching and picnicking. In addition, regions and parks succeed or fail at the human scale – the *place* scale – which is often overlooked. The idea behind this concept is that places, or park use areas, thrive when users have a range of reasons (10+) to be there. These use areas become places people want to use and return to because they are active spaces and the choices they offer. For example, a picnicking spot might include a hiking trail, corn hole, horseshoes, a nature playground, a picnic table, shelter, bar-b-que grill, and historical elements, bird-watching, tree-climbing, and people-watching. Ideally, some aspect

of these activities will be unique to that particular place, creating a unique experience which may reflect the natural history, culture, and history of the area.

MetroParks will be activated in a sustainable manner using the Power of 10+ Concept, where each park is considered a destination and use areas within the parks are considered places.

- Provide 10+ reasons to visit the park (destination).
- Provide 10+ activities at each use area within the park (place).

Developing Parks as a Connected Regional System

Regional Trail Network: MetroParks shall strive to work as a complete, interconnected environmental and recreational system which links people and nature throughout the Miami Valley. Connections throughout the system are provided by the region's significant greenway and blueway network, and planning efforts should continue to expand and strengthen that network. Greenways and blueways should be enhanced with natural habitat to act as wildlife corridors. Trails should utilize riparian corridors where possible to offer desirable environments for both humans and wildlife while enhancing the protection of waterways. Priorities in development of the trail network include the following:

- Complete trail connections between all MetroParks.
- Integrated communication and planning with our community partners to ensure a cohesive and highly functional trail system.
- Working with partners and other organizations to complete the arterial trail network in Montgomery County as outlined in the 2015 Miami Valley Bike Plan Update.
- Provide connections to neighboring counties' trail systems.
- Develop connections for the largest possible percentage of the population to the trail system.
- Advocate and plan for regional trail connections to other amenities including: schools, parks, attractions, neighborhoods, and job centers.

Safe Routes to Parks MetroParks will strive to provide safe and comfortable access to parks for users of all ages via alternative transportation such as cycling, walking, transit and other modes. Frequent use of alternate transportation promotes a healthy outdoor lifestyle and a connection with nature. Routes should allow for easy, frequent access to parks and the trail network without the use of a personal vehicle during all open park hours each day of the week. Accessible routes should be planned for 8-year-olds and 80-year-olds to ensure ease of use for the broad population. Where possible, activate links to parks with public art, fitness elements, and opportunities for social interaction so that the journey is a part of the overall experience.

Key aspects of successful alternative transportation options include the following:

- Bike Miami Valley and other community organizations to advocate for connections to the parks and trails outside of areas controlled by MetroParks

- Advocate and plan for missing links within communities to provide the needed links to regional trails.
- Advocate and plan for low level of stress connections along routes to parks per Miami Valley Regional Planning Commission's level of stress designation, including facilities separated from vehicular traffic and neighborhood streets.
- Advocate and plan for safe and comfortable crossings at grade and above streets to make higher level of stress locations feel safe and welcoming.
- Regional Transit System
 - Work with the Greater Dayton Regional Transit Authority to make connections to parks and trails via the regional transit system where trail corridors do not exist.
 - Strive to provide transit access to the main park entrance and, where possible, into the park.