 RAMSEY COUNTY

2018

PARKS & RECREATION  
SYSTEM PLAN  
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A vibrant community where all are valued and thrive.

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## INTRO TO PARKS SYSTEM PLAN

Parks systems play a critical role in establishing and maintaining vibrant, healthy communities by improving public health, providing community gathering spaces, and offering connection with nature. Parks systems are also key to environmental stewardship through the conservation of public lands, investments in green infrastructure, and responsible management of land and water resources.

### WHY PLAN FOR PARKS

Parks and recreation services provide many benefits to a community and its citizens, including economic, health, environmental, social, and overall quality of life, and are often cited as important factors in surveys of community livability. Parks provide gathering places for families and social groups, as well as for individuals of all ages and economic status.

## INTRO TO PARKS SYSTEM PLAN

In addition, parks are important environmental (green) infrastructure. Parks and green space cool our cities, clean the air we breathe, help manage stormwater, and offer a place to provide recreation opportunities for people of all ages and abilities. Other important factors for parks planning include:

- Effective and efficient use of resources to provide parks & recreation for all.
- Planning coordinates with cities and neighboring counties to provide a comprehensive array of programs and facilities covering the community's needs and interests.
- Ramsey County is a regional parks and trails implementing agency and needs to plan and coordinate with the other nine agencies.
- Provides direction and a means to say "yes" to what enhances the quality of life and "no" to that which is of limited benefit or fails to fall within the vision and mission.

## WHY DO WE NEED A PARKS & RECREATION SYSTEM PLAN

Much has changed since the 2006 Park and Recreation System Plan was drafted. Per census information as of July 1, 2016, Ramsey County has the second highest county population in the state at 540,649, which is a 6.3% increase since 2010. Conversely Ramsey County is the smallest county in the state by area at 152 square miles, which results in a density of 3,556 people per square mile. In addition, Ramsey County is one of the most demographically diverse counties in the state. This population density and diversity places unique demands on parks, open space and trails. Therefore, it is imperative to periodically review and update the department's short and long-term plans to ensure they meet the needs of a changing community.

The purpose of this System Plan is to document the current state of the Ramsey County parks system and provide guidance for future land and resource utilization. The plan represents the collective thinking of residents, the Ramsey County Parks & Recreation Department staff, the Ramsey County Parks & Recreation Commission, and the Ramsey County Board of Commissioners.

The System Plan includes appropriate information from recreation development plans, natural resource management plans, and applicable approved master plans for individual parks or sites. This System Plan is intended to be a dynamic document, which may be amended over time to reflect changes in environmental factors, demographics, and leisure interests and trends within Ramsey County.

## WHAT DOES THIS SYSTEM PLAN INCLUDE

This System Plan incorporates findings from community engagement efforts, and builds on the information and recommendations of the Ramsey County Comprehensive Plan and the 2040 Regional Parks Plan. In addition, this Plan:

- Reaffirms community priorities and identifies current gaps in the system
- Identifies opportunities for development or redevelopment within the park and recreation system to ensure equitable distribution and access to facilities and services throughout the community
- Validates system enhancements and gaps, along with other emerging connectivity needs
- Identifies specific locations within the community that would best accommodate improved or expanded recreation opportunities and park amenities
- Identifies specific natural areas within the system to be proactively managed
- Identifies specific properties within Ramsey County for future park land acquisition



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## RAMSEY COUNTY TODAY

Ramsey County is located in the heart of the seven-county Twin Cities metropolitan area. With a population of more than 540,000, it is the most fully-developed urban center and densely populated county in the state, with the smallest land area spanning 170 square miles. It is also one of the most diverse.

- Saint Paul is the county seat and capital city of Minnesota. About 56 percent of county residents reside in Saint Paul.
- The suburban area includes communities that range in size from Gem Lake (500 people) to Maplewood (40,000 people).
- The largest minority populations are Asians (13 percent) and African American (11.1 percent). About 7.3 percent of residents have a Hispanic or Latino ethnic background.
- 21.9 percent of residents ages five years and older live in homes where a language other than English is spoken.

Diversity in all aspects of life in Ramsey County — including population, geography, economy, civics and culture — makes it a vital and exciting place to live, work and gather as a community.

## WHERE OUR PARK SYSTEM IS AT TODAY

The Ramsey County Home Rule Charter requires that the county maintain a “system of public open space, parks and playgrounds.” In 2006, the Ramsey County Board of Commissioners adopted a System Plan for the Ramsey County Parks & Recreation Department, which was incorporated into the 2008 Ramsey County Comprehensive Plan. This Comprehensive Plan was prepared in accordance with Minnesota Statute and approved by the Metropolitan Council in 2008. This System Plan updates the Parks & Recreation chapter of the Ramsey County Comprehensive Plan.

Parks & Recreation manages an urban natural resource-based system encompassing nearly 8,000 acres. The department directs activities for the county’s parkland and recreational facilities, manages natural resources and facilitates recreational programming. The parks system is comprised of:

- 6 regional parks, including a family aquatic center and nature center
- 6 regional trail corridors
- 9 county parks
- 9 protection open space sites,
- 18 special-use facilities
  - 11 indoor ice arenas with 13 sheets of ice
  - 5 golf courses
  - Ramsey County Fairgrounds
  - Marsden Archery Range

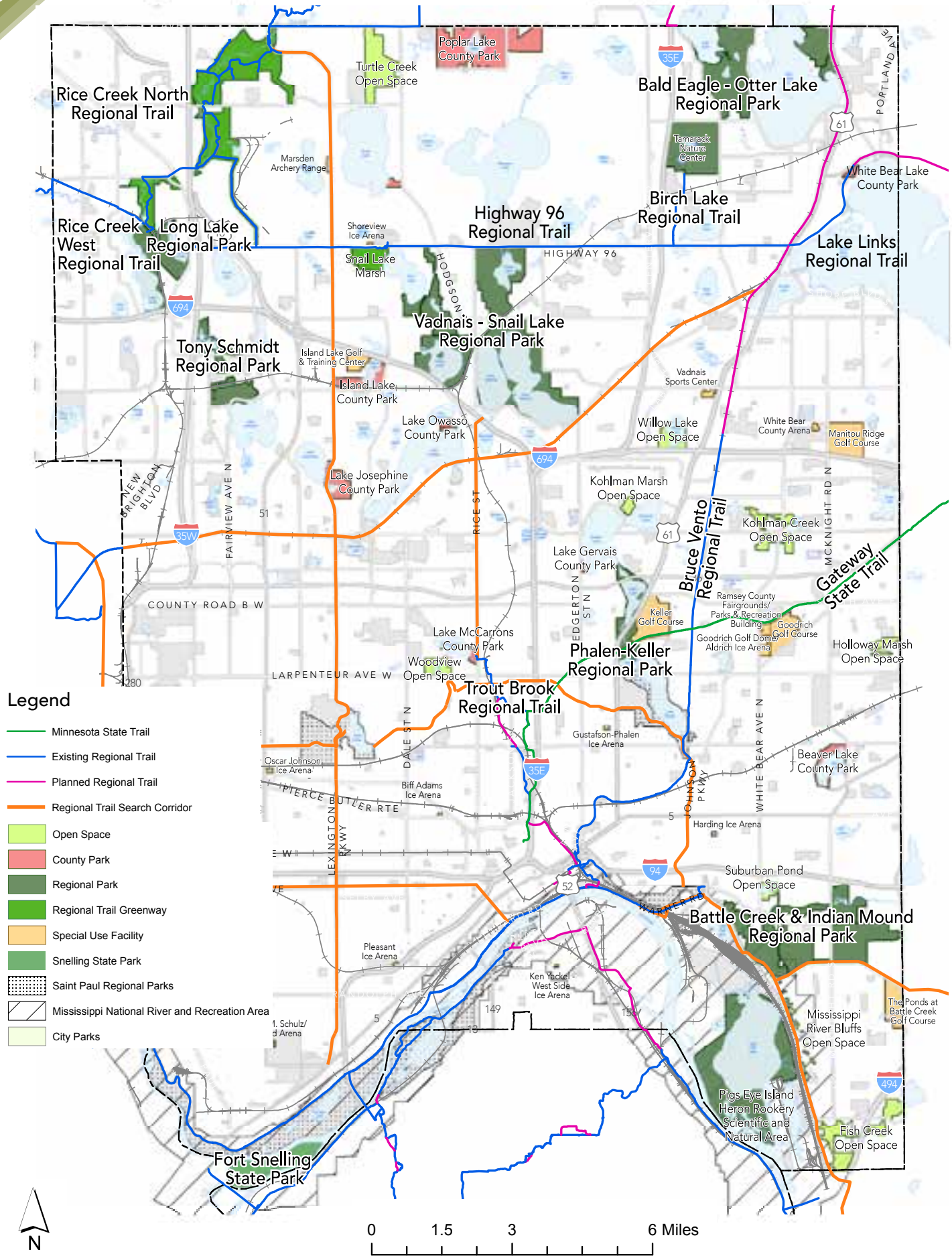
County-provided parks and recreation services complement those provided by municipalities to meet the needs of a fully urbanized population. Most recreation services provided by Ramsey County are passive recreation opportunities such as archery, wildlife viewing, boating, fishing, biking, picnicking, swimming, hiking, off-leash dog areas, sledding, snowshoeing, geocaching, orienteering, and tuj lub. Parks & Recreation also provides opportunities for active recreation such as cross-country skiing, golf, hockey, and mountain biking.

The parks and open spaces held by the department represent the largest undeveloped land areas in Ramsey County. The provision of recreation services must be evaluated based on the capacity of the resources to support public use. Responsible natural resources management is critical for the long-term health of the parks system. Specific areas within both county and regional parks have been identified as natural areas. Environmental Natural Areas (within regional parks are defined as having significant, sensitive, and unique natural resources that warrant extended preservation. These areas are designated for increased habitat protection, ecological restoration, passive recreation (such as hiking, skiing, limited biking, and nature viewing), and environmental education. Any development expansion within these areas is limited to trails only, with nature interpretation facilities allowed only within the planned development areas of Tamarack Nature Center.

RAMSEY COUNTY PARKS & RECREATION TOTAL FACILITIES ACREAGE			
REGIONAL PARK	ACRES	OPEN SPACE	ACRES
BALD EAGLE - OTTER LAKES	882.73	FISH CREEK	145.32
BATTLE CREEK	1,891.23	HOLLOWAY MARSH	31.76
KELLER	185.14	KOHLMAN CREEK	78.42
LONG LAKE	321.21	KOHLMAN MARSH	18.99
TONY SCHMIDT	219.80	MISSISSIPPI RIVER BLUFFS	19.56
VADNAIS REGIONAL PARK	1,646.43	SUBURBAN POND	34.44
<b>REGIONAL PARKS TOTAL</b>	<b>5,146.54</b>	TURTLE CREEK	197.79
REGIONAL TRAIL	ACRES/LENGTH	WILLOW LAKE	75.79
BIRCH LAKE	2.37 MILES	WOODVIEW	48.50
BRUCE VENTO	8.89 MILES	<b>OPEN SPACE TOTAL</b>	<b>650.56</b>
HIGHWAY 96 SNAIL LAKE MARSH	8.54 MILES 88.65 ACRES	SPECIAL USE FACILITY	ACRES
LAKE LINKS	1.6 MILES	ALDRICH ARENA	16.88
LEXINGTON	N/A	BIFF ADAMS ARENA	2.13
RICE CREEK NORTH	11.27 MILES 791.88 ACRES	GOODRICH GOLF COURSE	102.51
RICE CREEK WEST	1.42 MILES	GUSTAFSON-PHALEN ARENA	2.64
TROUT BROOK	1.55 MILES	HARDING ARENA	2.06
<b>REGIONAL TRAILS TOTAL</b>	<b>27.4</b>	HIGHLAND ARENA	1.39
COUNTY PARK	ACRES	ISLAND LAKE GOLF COURSE	38.17
BEAVER LAKE	50.92	KELLER GOLF COURSE	145.96
ISLAND LAKE	98.63	MANITOU RIDGE GOLF COURSE	140.23
LAKE GERVAIS	5.7	MARSDEN ARCHERY RANGE	7.24
LAKE JOSEPHINE	82.33	OSCAR JOHNSON ARENA	3.39
LAKE MCCARRONS	14.95	PLEASANT ARENA	2.12
LAKE OWASSO	13.79	RAMSEY COUNTY PARKS & RECREATION ADMINISTRATION CAMPUS	17.67
POPLAR LAKE	434.85	SHOREVIEW ARENA	2.10
TURTLE LAKE	13.67	THE PONDS AT BATTLE CREEK GOLF COURSE	89.77
WHITE BEAR LAKE	11.64	VADNAIS SPORTS CENTER	10.46
<b>COUNTY PARKS TOTAL</b>	<b>726.49</b>	WEST SIDE ARENA	1.48
OPEN SPACE	ACRES	WHITE BEAR ARENA	4.90
FISH CREEK	145.32	<b>SPECIAL USE FACILITIES TOTAL</b>	<b>591.12</b>
HOLLOWAY MARSH	31.76	<b>RAMSEY COUNTY PARKS &amp; RECREATION TOTAL</b>	<b>7,995.25 ACRES</b>
KOHLMAN CREEK	78.42		
KOHLMAN MARSH	18.99		
MISSISSIPPI RIVER BLUFFS	19.56		
SUBURBAN POND	34.44		
TURTLE CREEK	197.79		
WILLOW LAKE	75.79		
WOODVIEW	48.50		
<b>OPEN SPACE TOTAL</b>	<b>650.56</b>		

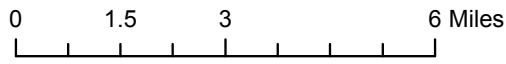


# RAMSEY COUNTY PARKS & RECREATION SYSTEM MAP



### Legend

- Minnesota State Trail
- Existing Regional Trail
- Planned Regional Trail
- Regional Trail Search Corridor
- Open Space
- County Park
- Regional Park
- Regional Trail Greenway
- Special Use Facility
- Snelling State Park
- Saint Paul Regional Parks
- Mississippi National River and Recreation Area
- City Parks





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## ENERGY & RESILIENCY

In the context of urban planning, the concept of resiliency refers to the capacity of communities to survive and thrive no matter what stresses or shocks they encounter. Developing resiliency can be a challenge since it involves significant coordination across communities and agencies.

Parks and recreation systems play a significant role in developing resiliency. Parks and open spaces are important areas for stormwater conveyance during major weather events, particularly in heavily developed areas. Trees and other vegetation provide improved air quality. The department can also play a key role in emergency situations. Arenas serve as emergency shelters, while parks and open spaces can provide collections sites for tree debris.

A vibrant parks and recreation system also contributes to public health and human resilience. Exercise and recreation improves physical health, while access to nature has a

positive impact on mental health. Parks and recreation services also strengthen community bonds, which are important in overcoming any shocks and stressors that a community may face.

This section will address Parks & Recreation's efforts to make resiliency a priority, especially in terms of energy sustainability.

### CURRENT STATE

In 2016, Parks & Recreation began a collaborative project with Xcel Energy through its Partners in Energy program. Through this project, a detailed analysis of the department's energy use was conducted using 2015 data as a baseline. The department has 76 electric locations and 23 natural gas locations. Overall, the parks department spent over \$930,000 on energy in 2015, with over \$780,000 (approximately 85%) going toward energy use in the ice arenas.

For comparison, the department's annual energy use is approximately equivalent to the annual energy used by 775 Minnesota homes, or just over 2.5 times the use of the twenty-one story City Hall and Ramsey County Courthouse building in downtown Saint Paul.

The Department's 11 ice arenas are by far the largest energy users, and as a group comprise nearly 85 percent of the total energy use at parks facilities. Many factors contribute to the energy use of ice arenas, including how many sheets of ice each arena has, how many months of the year there is ice versus dry floor, and the energy efficiency of each ice arena. A rink's refrigeration system comprises the majority of the facility's energy use. Lighting and occupant heating systems also contribute to an arena's energy load.

County and regional park facilities provide lighting in restrooms, beach buildings, and parking lots. Some parks also have pavilions with kitchens that include refrigerators, freezers, and cook tops. Several measures to reduce energy use in the parks have already been completed, including the introduction of solar tubes into restroom facilities, enabling the removal of electric lighting fixtures. Parks facilities are seasonal facilities and typically do not provide heating and cooling, so their energy footprint is small.

Golf courses consume energy through maintenance facilities and pro shops/clubhouses, which may include concessions, small kitchens, or full banquet facilities. At some facilities, such as Manitou Ridge Golf Course, the course operator is responsible for all utility bills; at others, such as Keller Golf Course, utility costs are split between the county and the clubhouse management/catering company. Due to the shared responsibility for energy use, as well as the service-based operating model for course clubhouses (essentially bar/restaurants), energy efficiency at golf course facilities presents a unique challenge to the department.

The department also maintains its administrative campus in Maplewood. This facility's energy use comes from typical office requirements for over 30 administrative employees (heating/cooling, lighting, computing) as well as equipment in its mechanic's and carpenter's shops. In recent years, the department has completed a variety of energy efficiency and conservation projects. Most of these projects have been facility investments, including:

- LED replacement of high-wattage metal halide light fixtures
- Installation of low-emissivity ceilings in ice arenas
- Installation of occupancy sensors in areas of intermittent occupancy (e.g. locker rooms, restrooms, and stairways)
- The 2013 renovation of Keller Golf Course included LED lighting in the parking lots, the clubhouse, and the pro shop

## ENERGY & RESILIENCY

- LED retrofits for exterior lighting and maintenance facility high-bay lights at golf courses
- LED lighting upgrades of exterior flood and building lights, interior storage and mechanic's spaces at Administration Building

Additionally, a re-commissioning study for Vadnais Sports Center was conducted after the department acquired the facility. The foremost recommendation of that study was the installation of a building management system to better control energy use. That system was installed in early 2017.

Staff have also incorporated other resilience-related technologies and best practices, including:

- Irrigation and wash water systems to reduce golf course water use
- Permeable pavements at Keller Regional Park and Tamarack Nature Center, among other locations, to mitigate stormwater runoff impacts
- Rain gardens to capture stormwater
- Native plantings at golf courses and parks
- Elevators in ice arenas to allow spectators of all ages and abilities to access the facility
- Trail extensions to eliminate gaps in the regional trail system

Department staff have made a concerted effort to make energy efficiency improvements as budgets allow. Scheduled capital maintenance projects, i.e. lighting replacements, have incorporated energy efficiency measures when feasible. Grants have provided means to accomplish additional energy projects, but this is not a consistent source of funding. Design standards have been updated to incorporate energy efficiency, including the department's adaptation of SB2030 standards and net-zero design goals for future park redevelopments. However, funding remains a significant challenge in incorporating major energy efficiency improvements. The Xcel Partners in Energy project resulted in a department energy plan, which formalizes some longer-term goals and will guide the department, as well as external decision makers, in future efforts to reduce the department's energy footprint and increase its energy sustainability and resilience.

### OPPORTUNITIES

In alignment with both the department's energy plan, and the broader County Strategic Energy Plan, Parks & Recreation should prioritize energy reduction and incorporation of renewable energy, stormwater management, water use reduction, maintenance reduction, and other resilient strategies. This effort will require a combination of refining current practices and longer-term planning and budgeting.

Energy studies should be conducted on facilities with high Energy Use Intensity (EUI) relative to similar facilities in order to identify opportunities to reduce energy consumption. These studies would especially benefit older ice arenas (i.e. Aldrich Arena), large energy consumers (Vadnais Sports Center), energy-intensive special use facilities (Battle Creek WaterWorks aquatics facility), and administrative facilities (Administration Building).

A renewable energy implementation plan should be developed in accordance with county-wide efforts. County and regional park redevelopments, and other facility construction as appropriate, shall be designed to "net-zero" standards. Capital purchases of solar energy systems should be considered where the anticipated payback period is 15 years or less, although environmental and societal benefits of renewable energy must also be weighed alongside financial considerations. For larger, older facilities where this may not be feasible, alternative solar financing structures, such as community solar, lease-to-own, or power purchasing agreements (PPAs), should be considered. Capital projects, such as roofing or arena "Green Ice Initiative" projects, provide logical opportunities to review renewable energy options.

Since Parks & Recreation manages several parking lots and trails, stormwater management is critical to the services it provides. Rain gardens, permeable pavements, stormwater filtration systems, and other stormwater management best practices should be implemented wherever feasible. The department has a strong relationship with the Ramsey Washington Metro Watershed District, and should leverage this relationship, and those with partner communities, to facilitate innovative, collaborative, economically viable stormwater management practices. Additionally, changing weather patterns may increase the frequency of major rainfall events (recent flooding at Vadnais-Snail Regional Park serves as an example). Park redevelopment and other capital projects need to account for such events.

Improved maintenance practices can also foster resiliency within the Parks & Recreation system, such as the use of native plantings and low-maintenance landscaping and turf grasses. Irrigation practices and technologies, water recycling systems, and low-water plantings can all reduce department water use. Golf course turfs should be designed for weather and condition resilience and sand bunkers should be constructed to minimize washouts and efficiently drain. Nature play areas, instead of artificial playground structures, could ease maintenance and inspection requirements.

Future projects should incorporate universal design practices to ensure that Parks & Recreation facilities and amenities are able to be used by all residents, irrespective of race, age, gender, language, and physical ability.

Cooperative community agriculture projects, such as community gardens and urban farms, provide access to fresh, healthy food for residents of multi-family housing or who otherwise may not have access to such resources. As the steward of thousands of acres of parkland and open space in a largely developed county, Parks & Recreation is in a unique position to facilitate these types of projects.

Master planning efforts, in concert with the Ramsey County Bike & Pedestrian Plan, should include a continuous focus on connecting trails with other trails in the region to create a robust trail network, which will be important as technological and societal changes will make communities less reliant on vehicular transportation. Electric charging stations should also be explored where appropriate.

Finally, the department should prioritize collaboration with other county departments, cities, counties, other governmental agencies, schools, private companies or interest groups, and other similar organizations in order to take a more holistic approach to resiliency planning.



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## NATURAL RESOURCES

### GENERAL OVERVIEW

Parks & Recreation’s mission in managing plant, animal and water resources is to provide an adequate sustainable habitat to support populations of native wildlife species within the county’s park system as defined by the Minnesota Department of Natural Resources (MN DNR), [Minnesota’s Wildlife Action Plan 2015-25](#). To sustain these native wildlife populations will require the maintenance and restoration of large areas of habitat containing a vast number and variety of natural resources. The Ramsey County Parks & Recreation Department will work to manage the diversity and quantity of our natural resources to provide the largest possible tracts of land that contain key wildlife habitats within the Ramsey County park system.

Priority habitat restoration will be targeted first for implementation, with a goal of ongoing and progressive natural resource management for the entire park system. Time is a critical

## NATURAL RESOURCES

factor in the implementation of natural resource management within the county, as conserving and improving our natural resources will become increasingly difficult and more costly as time progresses.

### NATURAL RESOURCE MANAGEMENT GOALS

Ramsey County's goals for natural resources management are to:

- Protect high-quality environmental sensitive areas
- Restore degraded natural resources
- Maintain critical natural processes
- Incorporate natural resource management into park maintenance
- Increase environmental education, awareness and appreciation of natural resources
- Promote a positive environmental ethic
- Manage for healthy wildlife populations
- Incorporate long term maintenance plans for restored habitat
- Secure funding for ongoing maintenance

Surveys and reviews will be conducted to determine if certain goals are being achieved, including:

- Biennial surveys of flora and fauna to determine health of environmentally sensitive or restored habitat at a minimum of two sites
- Annual peer review of a natural resource project sample
- Biennial online public survey of natural resource projects and inventory
- Ongoing annual deer surveys and other species as needed

## HABITAT & LAND COVER MANAGEMENT

### INTRODUCTION

Effective management of native habitats requires that degraded or disturbed habitats be restored to function as quality habitats for a diverse native wildlife community and to protect water resources. Where feasible, Parks & Recreation actively manages its properties to achieve well-functioning native habitats. Management of native habitats varies by habitat type, size and quality. Some management practices are difficult to conduct in the urban environment of Ramsey County, including herbicide use, tree removal and one of the best tools, prescribed burning. The proximity of structures, in addition to weather and wind, can limit the use of prescribed burns significantly leaving other restoration techniques as the only options.

Upland sites will be managed toward priority habitats that include prairies, savannas, oak woods, and mesic forest. Wetlands will be managed toward wet meadows, shrub swamp, tamarack, and quality cattail stands. The decision of what type of habitat a site will be managed toward will depend on the site size, location, existing site land cover and land cover adjacent to the site, the existing park master plan and specific wildlife needs.

Site size is a critical factor for determining habitat outcomes because some habitat types, such as oak woods and mesic forests, cannot be effectively managed on small areas. Site location may guide or limit management tools that can be employed. For example, areas adjacent to highways, schools or houses may not be suitable for habitats where prescribed fire is used as a management tool.

## NATURAL RESOURCES

The existing land cover may also help guide the future land cover. Large forested areas will continue to be forests. Old fields, which were previously disturbed areas dominated by non-native and weedy species, can be managed for a variety of upland habitats depending on surrounding land cover and historic records. For example, a small old field surrounded by woods would suggest it be managed toward woods, while a site adjacent to other open habitats may be managed toward prairies.

Park master plans will include natural resource management which will guide the level and type of land cover management. The park system is a natural resource based park system and large tracts of land set aside for habitat should take priority over future development. Select areas designated for future recreational development will not be actively managed or managed toward a habitat suitable for the future development project. Habitats adjacent to active use areas will be managed toward a native habitat that enhances the active use and could incorporate environmental education.

Areas with rare and/or unique wildlife species will be managed to enhance the habitat needed to support those species.

### SPECIFIC HABITAT MANAGEMENT

#### Woodlands

Parks & Recreation manages approximately 2,500 acres of woodland. The three woodland types most actively managed are oak woods, mesic forest, and floodplain forest. There are many acres of mixed woods as well, with most proposed to be converted to a pre-settlement state of oak woods, mesic forest or floodplain forest. Woodland conversion or restoration includes invasive woody species control, consisting of mainly buckthorn removal, but can include other tree/shrub species, such as box elder, cottonwood, or eastern red cedar, depending on the type of woodland management being targeted. Most conifers found in Ramsey County have been introduced and can be removed as part of the restoration process. Woody invasive species and buckthorn removal is usually completed by hand cutting material and stump treatment with herbicide. Depending on the diameter of material being removed and terrain, other treatment methods could include foliar spraying, forestry mowing with a foliar spray follow up, or grazing using goats. Steps following initial woody invasive removal include prescribed burns and supplemental seeding of herbaceous layer or planting of tree species that will increase the acreage of oak woods and mesic woods. Long term management following initial restoration will include buckthorn control, oak wilt control, and control of emerging invasive woodland plants, diseases and insect species that could significantly impact the woodlands.

#### Prairies & Savannas

Parks & Recreation manages approximately 270 acres of managed prairie and 8 acres of oak savanna located in 10 separate park units. Most of the prairies and savannas have been planted, with three locations of remnant prairie consisting of only 2.86 acres. The first prairies were planted in 1989 with most established since 2001. Since 2013 there have been an additional 20 acres of prairie installed, with planned prairie expansion of an estimated 269 acres (mostly old field to prairie conversion). Locations and sizes can be found in park land cover and habitat specific management plans. The department manages prairies and savannas with prescribed burns, mowing and selective herbicide treatment. Prescribed burns are mainly conducted in the spring, with a goal to prescribe burn each location every 3 to 5 years. This translates to prescribed burns of approximately one-third of the prairies each year.



### Wetlands

Parks & Recreation has approximately 1900 acres of wetlands scattered across the park system, including open marsh, wet meadows, shrub swamp and tamarack swamp. The composition of wetland types and sizes are not projected to change over time. Two sites, located at Woodview Open Space and Bald Eagle - Otter Lake Regional Park- Tamarack Nature Center, contain wetland banks that are managed by Ramsey County Public Works. All wetlands are protected by the State and Federal Wetland Conservation Act. Wetland vegetation management can be very expensive and difficult, given the nature of the soils, vegetation and terrain, with most control being completed using biological control agents, such as beetles for purple loosestrife. Biological control is completed in conjunction with the Minnesota Department of Natural Resources and the Minnesota Department of Agriculture.

### Active Use Areas

Active use areas are not managed for natural habitats, but management practices may be used to support and protect adjacent native habitats and select plantings within the active use areas, such as rain gardens and other small plots of native grasses and forbs. Management practices will include proper and judicious use of pesticides and herbicides, promotion and care of large canopy trees, and limiting mowing to needed space. Natural resource management projects should complement adjacent active use areas, such as, paved and unpaved trails and picnic areas. Accommodating access to natural resource areas helps strengthen the connection between people and nature. Ramsey County Parks & Recreation Department is a natural resource based park system and impacts on natural resources should be considered and minimized whenever possible in the planning, design, operation and future expansion of active use areas. In addition, regular park maintenance and development activities will incorporate natural resource management principles where feasible to help meet our objectives of establishing and enhancing key habitats. These will include, maintaining unmowed buffers around wetlands and lakes, proper tree care and establishment, use of native species where possible in active use area plantings and proper and responsible use of fertilizers and herbicides.

### Rare Plant Species

Rare species are monitored where they are known, though there are no active surveys conducted to locate rare species. Parks & Recreation currently tracks Besseyia bullii (Kittentails) Desmodium illinoense (Illinois Tick-trefoil), Symplocarpus foetidus (Skunk Cabbage), Cypripedium reginae (Showy Lady's-slipper) and Aristida tuberculosa (Seaside Three-awn). Many plant species can be maintained on small parcels, especially those requiring special environmental conditions. Some of these special conditions are found in rock outcrops, sand prairies, wetland seeps and tamarack swamps. These areas will be managed in the context of the larger surrounding key habitats with consideration for the rare species found at the site.

### Invasive Plant Species

An invasive plant species usually refers to an introduced non-native plant that grows outside its normal range and aggressively spreads, causing significant damage to the surrounding ecosystem. In most cases, non-native invasive plant species are the most abundant and are the greatest threat to natural areas. In some cases, native species can invade a specific habitat type. An example of this would be a scenario where eastern red cedar, a quicker growing juniper native to Minnesota, spreads through a native prairie where fire has been suppressed, shading out native prairie ground cover.

Invasive species management is done at three levels: eradication, containment, and suppression. Eradication is only possible in cases of small isolated infestations. This is rarely used because most infestations are not found until they are well established. Containment can be used for species

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that are slow to spread and have defined boundaries. Suppression is often used in the restoration of most habitats where an initial restoration will set back an invasive plant species and ongoing maintenance will be required for suppression.

Parks & Recreation collaborates with multiple agencies on the surveying monitoring and management of invasive plant species. The department works with the Ramsey County Cooperative Weed Management and volunteers to document, map, and locate emerging invasive species. Parks & Recreation also works with the Minnesota Department of Natural Resources and Minnesota Department of Agriculture on invasive species biological control, monitoring, and removal assistance, and houses a GIS database of emerging invasive species to aid in management.

The emerald ash borer (EAB) is one invasive species of particular concern within Ramsey County. Ramsey County parks currently infested with emerald ash borer include the Rice Creek North Regional Trail Corridor and Battle Creek Regional Park.

Ramsey County Parks & Recreation department is underway in drafting an emerald ash borer plan for county owned lands, specifically recreational park areas and golf courses. Parks & Recreation has 2050 planted ash trees in active use areas, which includes golf courses, picnic areas, parking lots and beaches. There is an undocumented amount of ash trees in natural areas. Future efforts will include the removal and replacement of ash trees in recreational areas and cooperation with other agencies to prevent further spread into natural areas.

A list of current and potential invasive plant species posing a risk to habitat within parkland and surrounding lands within Ramsey County include:

INVASIVE PLANT TABLE	
CURRENT RISKS	POTENTIAL RISKS
WOODY SPECIES	
AMUR MAPLE BLACK LOCUST COMMON BUCKTHORN GLOSSY BUCKTHORN HONEYSUCKLE ORIENTAL BITTERSWEET RUSSIAN OLIVE SIBERIAN ELM	AMUR CORK TREE JAPANESE BARBERRY NORWAY MAPLE WINGED BURNING BUSH (EUONYMUS)
HERBACEOUS SPECIES	
BIRDSFOOT TREFOIL COMMON TANSY CROWN VETCH GARLIC MUSTARD HOARY ALYSSUM JAPANESE HEDGE PARSLEY LEAFY SPURGE NARROW LEAF BITTERCRESS REED CANARY GRASS SPOTTED KNAPWEED THISTLES WILD PARSNIP	AMUR SILVER GRASS CUT-LEAVED TEASAL GRECIAN FOXGLOVE JAPANESE HOPS MULTIFLORA ROSE POISON HEMLOCK

INVASIVE PLANT TABLE	
CURRENT RISKS	POTENTIAL RISKS
AQUATIC SPECIES	
CURLY-LEAF PONDWEED EURASIAN WATERMILFOIL PURPLE LOOSETRIFE	FLOWERING RUSH NON-NATIVE PHRAGMITES (COMMON/GIANT REED) NON-NATIVE WATERLILIES STARRY STONEWORT YELLOW IRIS

**Wildlife Management**

Parks & Recreation strives to provide quality wildlife habitat and manage for healthy wildlife populations. This includes creating increased habitat and structures for species in need of recovery and removal of species that exceed the carrying capacity of the environment or surpass the social tolerance.

There are several species of wildlife that inhabit the park system that require population monitoring and management as needed, specifically white-tailed deer and Canada geese. For geese and deer, specific management plans are developed to determine the population, location and need for removals, predicated on population surveys, resident complaints, and past removal counts. The proposed plans are then approved yearly by the Parks Commission, County Board of Commissioners, and the Minnesota Department of Natural Resources as needed. Other species that may need to be managed include coyotes, raccoons, beavers, and turkeys, all of which will be managed on a needed basis.

**Deer Management**

Park lands are the main tracts of habitat within Ramsey County that can support deer populations. Deer herd populations that exceed the carrying capacity of the land can be detrimental to park vegetation through over browsing, negatively affect the overall health of the herd, impact the public through increased car/deer collisions, are destructive to ornamental plantings, and can increase the spread of deer ticks.

In December of 1999, the Ramsey County Board of Commissioners approved a cooperative deer management plan and program that is implemented in conjunction with associated municipalities and other agencies. Since the approval of the plan, Parks & Recreation implemented an annual deer management program, which includes the use of archery and/or sharp shooting as deer management tools. Aerial surveys are conducted annually during the winter to determine deer herd populations. Deer herd goals and hunt locations are set from survey and hunter statistic data. Management tools are then used to maintain or reduce deer herd populations in overpopulated areas. The deer herd population goal is currently set at 20 or less deer per square mile of deer habitat, pursuant to the Minnesota Department of Natural Resources recommendation for the area.

The goals of the cooperative management program are to:

- Manage for a healthy deer herd on lands large enough to sustain deer habitat.
- Maintain deer herds at levels that will not negatively affect natural succession or the diversity of plants in the parkland.
- Assist the municipalities with deer removals to reduce deer/car collisions and resident complaints in overpopulated areas.
- Manage a deer herd at a level that minimizes damage to landscape plantings on county property.

Current management options for deer management include controlled archery hunts during the State archery hunt season, special permit archery hunts outside the State archery season, and firearm sharpshooting.

Controlled archery hunts during the State archery season does not require permits from the State, but requires approval by the municipalities for which the hunts are held. The controlled archery hunts are completed in cooperation with the Metro Bowhunters Resource Base. Metro Bowhunters Resource Base is a nonprofit organization that provides qualified archers to safely and effectively hunt within controlled park zones. Most residents can join Metro Bowhunters Resource Base to be eligible for an archery hunt. Hunters are allowed to keep the deer they harvest. These hunts consist of two, three day hunt periods and require the closing of the parks to the general public during this time. This type of control is a safe, cost-effective way to maintain the herds throughout the park system.

Special permit archery removal outside of the State archery season requires permits from the Department of Natural Resources as well as approval from the respective cities. This management option is used to reduce a herd within a select location. All deer removed are turned over to the MN DNR or are donated in conjunction with the Department of Natural Resources. To increase efficacy of the hunt the sites are baited and closed off to the general public.

Firearm sharpshooting is completed to remove a larger number of deer from overpopulated areas in a short time frame and is completed in conjunction with affected municipalities and local law enforcement. Removal can be completed on city land, county land or an approved private parcel. Removals completed in 2005 were done by a private company and more recently removals done in 2015 and 2017 have been completed by the United States Department of Agriculture Animal and Plant Health Inspection Service Wildlife Services. A deer management plan and completed permits, specifying number of deer targeted for removal and deer carcass disposition, is required and subject to approval by the MN DNR, prior to removal. The permittee and shooter does not retain the deer and the deer are donated to a charitable organization, needy individuals or are donated to a food shelf. Firearm sharpshooting is completed at night with special equipment over baited sites and is a safe, effective way to remove deer to maintain a healthy herd.

#### Canada Geese Management

Canada geese are large, majestic birds that are enjoyable to watch and contribute to Ramsey County's wildlife heritage, since they were eliminated from the metro area in the early 1900's. The reintroduction of Canada geese is a wildlife success story, and in recent years the population has increased dramatically both in the metro and in the Midwest. State wildlife agencies have increased bag limits and season lengths in hopes of keeping the population in check. The population increase has become apparent in the park system, especially within golf courses, beaches and grassy areas adjacent to water bodies where geese like to congregate. Overpopulation of geese in these areas increases the amount of droppings, causing an unpleasant experience for park users and elevated E. coli levels within surface waters which can be a health hazard to beach users. Populations do require

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management and removal in select areas to keep the population in check and at an acceptable social tolerance level. A geese management plan and permits are required by the Department of Natural Resources for any removal of geese. Management objectives and options include the following:

### Geese management objectives:

- To maintain the geese flocks at levels that will not adversely affect the water quality at beaches or reduce the quality of turf or picnic areas for users within the park system.
- To keep geese from damaging the turf on the golf courses.

### Geese management options:

- Feeding bans: Ramsey County bans feeding wildlife, including geese, in parks. Signs have been posted in problem areas.
- Harassment: The department uses harassment to discourage geese from using the golf courses and beaches. Harassment includes the use of streamers, dogs, vehicles, decoys and bird bangers to move geese to areas outside of the golf courses and swimming beaches.
- Goose egg manipulation: Where feasible Canada Goose eggs are oiled or addled to prevent hatching and left in the nest so that the females will not produce more. This technique is only used on golf courses, because it is not as effective on larger lakes. This activity is done under special permit from the Minnesota Department of Natural Resources.
- Roundups: Under special permit and approved plan by the MN DNR, Parks & Recreation completes geese removal through roundups completed by hired contractors. Roundups are an expensive option, but are a reliable method that is necessary for geese control at park beaches and high use turf areas.
- Firearms hunting: Ramsey County does not allow hunting on county property. All municipalities in Ramsey County have ordinances that ban the discharge of firearms.

### Constructed Wildlife Structures

Ramsey County Parks & Recreation will continue to make efforts to build and place wildlife structures to replace or supplement missing or altered wildlife habitat. Structures in place include bird houses, nesting platforms and bat houses. The lack of natural tree cavities because of forest clearing is the main reason for the use of bird houses. Osprey poles provide habitat when large dead trees may not be available. Other structures such as bat houses and heron platforms replace habitat that is missing larger trees. Specialized structures may be used to increase basking sites for turtles, nesting sites for terns and even den sites for fox. The use of wildlife structures, especially bird houses, has been instrumental in the increase of desirable wildlife species and two successful examples are Eastern Bluebirds and Wood Ducks.

The use of structures requires annual maintenance. Some organizations, such as the Bluebird Recovery Program, local sportsman clubs, and local volunteers, have adopted areas and maintain nest boxes. Without maintenance the boxes become ineffective and nest sites for undesirable species such as European Starlings and English Sparrows. In some cases, habitat management alone will not support the needs of some wildlife species, for these species, such as Bluebirds and Wood Ducks, selected use of wildlife structures provides nesting locations otherwise not available.

The objective of wildlife structures is:

- To install appropriate structures in areas where quality habitat and restoration is lacking or ongoing
- To use standardized styles and promote partnerships in the installation and maintenance of the structures.

**Current Preferred Standards**

- Bluebird houses built on the [Peterson Box Design](#). Must be installed in pairs of two in bluebird related habitat and attention should be given to box orientation when installed. Other styles may be considered by natural resources staff if an individual or organization provides information on the maintenance, cost, and effectiveness of the box.
- Wood Duck boxes built out of cedar to the ["The Duckman" box style](#) specifications are allowed in appropriate settings. Other styles may be considered by natural resources staff if an individual or organization provides information on the maintenance, cost, and effectiveness of the box
- Osprey poles approved by staff are placed in appropriate habitat near open water. Osprey pole success is monitored by Ramsey County Parks & Recreation staff and reported to the Three Rivers Park District - Osprey Program.
- Other wildlife structures are subject to approval by staff. Tamarack Nature Center can place other structures on their site for educational and demonstration purposes with consultation with Ramsey County Parks & Recreation Natural Resources staff.

**Rare Species**

Rare species are monitored where they are known. Ramsey County Parks & Recreation department currently monitors bald eagles, ospreys, red shouldered hawks, and Blanding’s turtles. No active surveys are conducted to locate rare species. Ramsey County Parks & Recreation works with the Minnesota Department of Natural Resources on rare animal locations.

**Invasive Wildlife Species**

A major issue affecting native habitats in Ramsey County parks are invasive species. These animal species are not native to the ecosystem and damage the native habitat by displacing or directly killing native species. Invasive species control is an expensive and often long-term financial commitment. Restoration projects should include estimated long-term management costs in the initial plan. Ramsey County Parks & Recreation will work with the MN DNR, MN Department of Agriculture and Minnesota Invasive Species Advisory Council to monitor, survey, detect new species, and implement management practices for the control or eradication of invasive animal species.

INVASIVE ANIMAL TABLE	
CURRENT RISKS	POTENTIAL RISKS
TERRESTRIAL SPECIES	
EMERALD ASH BORER EUROPEAN EARTHWORM EUROPEAN STARLING GYPSY MOTH HOUSE SPARROWS MUTE SWAN	ASIAN LONG-HORNED BEETLE BROWN MARMORATED STINK BUG EURASIAN SWINE JAPANESE BEETLE
AQUATIC SPECIES	
COMMON CARP ZEBRA MUSSELS	BIGHEAD & SILVER CARP GRASS CARP SPINY WATERFLEA RUSTY CRAYFISH

## Geology & Soils

The surficial geology of Ramsey County consists of till, sandy lake, clayey lake, surface waters and organic materials. The bedrock units include Decorah shale, Platteville and Glenwood formations, Saint Peter sandstone, Prairie du Chien group, Jordan sandstone, Saint Lawrence and Franconia formations, Ironston and Galesville sandstones, Eau Claire formation, Mt. Simone sandstone and Middle Proterozoic rocks, with groundwater aquifers within various depths throughout the confined and unconfined layers of bedrock. The Prairie Du Chien-Jordan aquifer, located below the Decorah Shale, is the primary public drinking water aquifer in Ramsey County. A more comprehensive description and maps of the geological and hydrogeological features of Ramsey County can be found within the [Ramsey County Geological Atlas](#) and the [Ramsey County Groundwater Protection Plan 2010](#). . Some unique geological features within the park include the exposed limestone bluffs located within Battle Creek Regional park.

The general soils found within Ramsey County include Zimmerman, Chetek-Mahtomedi, Waukegan-Chetek, Hayden, Kingsley, Copaston-- Urban Complexes, Barronett-Grays, Kingsley Mahtomedi and Udorthents, wet substratum-Algansee. As listed, many of the soils within the urban environment of Ramsey County have been altered and thus defined as "urban soils." A more comprehensive description of the soils of Ramsey County can be found within the United States Department of Agriculture USDA, Natural Resources Conservation Service (NRCS) soil survey of Washington and Ramsey Counties, Minnesota.

Soils and geological features are taken into consideration in the management of all County natural resources.

## Ramsey County Ecological Land Classification

The Minnesota Department of Natural Resources and the U.S. Forest Service have developed an Ecological Classification System (ECS) for ecological mapping and landscape classification in Minnesota following the National Hierarchical Framework of Ecological Units (ECOMAP 1993). Ecological land classifications are used to identify, describe, and map progressively smaller areas of land with increasingly uniform ecological features. The system uses associations of biotic and environmental factors, including climate, geology, topography, soils, hydrology, and vegetation. ECS mapping enables resource managers to consider ecological patterns for areas as large as North America or as small as a single timber stand and identify areas with similar management opportunities or constraints relative to that scale.

Ramsey County is located mainly within the [Saint Paul Baldwin Plains and Moraines](#), with a small section of northern Ramsey County in the [Anoka Sand Plain subsections](#) of Minnesota Ecological Classification System.

## Surface Water Resources & Management

Ramsey County Parks & Recreation property borders or encompasses numerous wetlands, lakes, creeks and the Mississippi River. County property is only a fraction of the overall connections to the vast surface water resources within Ramsey County. Parks property historically was obtained because of the proximity to these water resources, which provide active and passive water recreational opportunities as well as to protect shoreline from development. In addition, numerous wetland complexes or lowlands, unsuitable for development, were made into parkland. Over time, increased

development of urban environments within watersheds has increased the volume and pollutants in the surface water run off that is channelized or piped into the wetlands and lakes that are typically located within the Ramsey County park system. Ramsey County has led coordinated efforts to turn park land into flood mitigation areas and stormwater treatment facilities. This helps protect flood prone developed structures from flooding and aid in treating stormwater runoff before it enters surface waters. The flood management areas, including necessary infrastructure, has been intertwined with recreational park infrastructure to create unique environments.

The water resources within the county are managed and regulated by several agencies depending on the surface waters classification. Overseeing agencies include the Minnesota Department of Natural Resources, Board of Soil and Water Resources, Ramsey Conservation District, cities, US Army Corps of Engineers, and Watershed Districts and Watershed Management Organizations. Parks & Recreation coordinates with all of these agencies to improve and protect our aquatic resources by following State and local government statutes, rules and permitting requirements when completing restoration and development projects.

The Parks & Recreation department works on water quality by providing buffers along wetlands and surface waters and implementing proper stormwater practices when there is development expansion. Over the years, various wetlands have been created or restored to meet required wetland mitigation needs of the county under the Wetland Conservation Act. Current infrastructure includes the maintenance and installation of stormwater conveyance systems, stormwater ponds, numerous rain gardens, creek cleanouts and porous pavement, within numerous park locations. In addition to meeting regulations, Ramsey County Parks & Recreation will incorporate stormwater treatment and management above and beyond what is required, if applicable to the development project and continue to study and implement the most current and innovative stormwater treatment.

### **Aquatic & Invasive Species Prevention & Plan (AIS)**

Ramsey County Parks & Recreation involvement with aquatic invasive species (AIS) prevention includes coordinating with watershed districts, Ramsey County Public Works Department Environmental Services Division and other local organizations for access to complete aquatic invasive species management tasks, coordination with the MN DNR on biological control of AIS, such as purple loosestrife, AIS population assessments found on Ramsey County Parks & Recreation shorelines and drafting of a Ramsey County AIS prevention plan.

In 2015, Parks & Recreation assumed the role of administering the Local Aquatic Invasives Species Prevention Aid funding and drafting of an AIS prevention plan. This funding was provided by the State through the House File Number 3167 Omnibus Bill which included Sec. 11. [477A.19] AQUATIC INVASIVE SPECIES PREVENTION AID. This Bill provides each county in the State of Minnesota funding for AIS prevention programs. The funding is given to each county predicated on the number of boat launches (50%) and each county's share of watercraft trailer parking spaces at each launch (50%).

In January 2015, the Ramsey County Board of Commissioners approved Ramsey County Parks & Recreation to administer the AIS prevention aid funding program for Ramsey County and develop objectives for the use of the proceeds to be submitted to the MN Department of Natural Resources, whose role is to provide technical support, oversight of county plans and internal workshops. In February 2015, Ramsey County Parks & Recreation held stakeholder meetings to discuss AIS in Ramsey County and determine AIS prevention objectives amongst agencies and organizations. Ramsey County Parks & Recreation drafted and implemented a two-year plan that included boat access site enhancements, educational materials provided by stakeholders and boat access site inspections coordinated by the Ramsey Conservation District. In 2017, Ramsey County Parks &



Recreation partnered with the Ramsey Conservation District to continue the administration of the county AIS program. The Ramsey Conservation District had drafted, and currently implements and oversees the next two-year plan in coordination with county stakeholders, including the MN DNR, watershed districts and water management organizations, lake homeowner associations and general public. Objectives have and will continue to include AIS prevention education and outreach and access site inspections for the goal of AIS prevention. Ramsey County Parks & Recreation will be an ongoing stakeholder in Ramsey County AIS prevention.

### **Natural Resource Management Partnerships**

Most natural resource activities and projects require partnerships, volunteers, and collaborations to be successful. Ramsey County Parks & Recreation works cooperatively with a variety of organizations to help manage, restore, and monitor the natural resources in the parks.

Land Cover and habitat does not follow jurisdictional boundaries, so Ramsey County Parks & Recreation works closely with adjacent land owners, such as the state, federal government and particularly cities to maintain, preserve and restore adjoining natural areas. One good example is the collaboration between the city of Maplewood and Ramsey County Parks & Recreation in the restoration of the Fish Creek Open Space, where the city and county both own abutting parkland. The details of this collaboration are described in the Fish Creek Open Space section within this system plan. Ramsey County Parks & Recreation will continue efforts to work with adjacent land owners when planning restoration projects so that adjoining lands can be cooperatively restored for the benefit of the wildlife habitat across jurisdictional boundaries.

Ramsey County Parks & Recreation works closely with special interest groups that use trails and amenities through natural areas. Coordination with these groups is essential to ensure low impact use through the parks wildlife habitat areas. Examples of these groups include cross country ski groups and off-road cyclist clubs, such as the Minnesota Off-Road Cyclists. Recently an off-road cycling plan was drafted for Battle Creek Regional Park that highlights the protection of natural resources and the requirement to work with the natural resources manager in the construction of new trails and amenities to ensure low impact use. Ramsey County Parks & Recreation will continue to coordinate with special interest groups use of park natural areas.

Since 2013, Ramsey County Parks & Recreation has coordinated with AmeriCorps for the hiring of a four person Conservation Corp crew. The Conservation Corps crew completes natural resource related work and activities within the regional park system and Tamarack Nature Center. This program has been very successful and will be ongoing as needed.

Ramsey County Parks & Recreation also works with a number of agencies and schools to conduct natural resource related research within the park system. Such work has included surveys and monitoring of insects, vegetation, birds and geological structures.

## NATURAL RESOURCES

A list of agencies and organizations Ramsey County Parks & Recreation works with on a regular basis includes:

NATURAL RESOURCE MANAGEMENT PARTNERS	
EDUCATIONAL INSTITUTIONS	<ul style="list-style-type: none"> <li>-MACALESTER COLLEGE</li> <li>-UNIVERSITY OF MINNESOTA</li> <li>-UNIVERSITY OF SAINT THOMAS</li> </ul>
LOCAL, STATE AND FEDERAL GOVERNMENT AGENCIES	<ul style="list-style-type: none"> <li>-CAPITOL REGION WATERSHED DISTRICT</li> <li>-METROPOLITAN COUNCIL</li> <li>-MINNESOTA DEPARTMENT OF AGRICULTURE</li> <li>-MINNESOTA DEPARTMENT OF NATURAL RESOURCES ECOLOGICAL SERVICES</li> <li>-MINNESOTA DEPARTMENT OF NATURAL RESOURCES METRO GREENWAYS PROGRAM</li> <li>-NATIONAL PARK SERVICE: MISSISSIPPI NATIONAL RIVER RECREATIONAL AREA</li> <li>-RAMSEY CONSERVATION DISTRICT</li> <li>-RAMSEY WASHINGTON METRO WATERSHED DISTRICT</li> <li>-RICE CREEK WATERSHED DISTRICT</li> <li>-US DEPARTMENT OF AGRICULTURE, ANIMAL PLANT HEALTH INSPECTION SERVICES</li> <li>-VADNAIS LAKE WATERSHED MANAGEMENT ORGANIZATION</li> </ul>
NON PROFIT ORGANIZATIONS	<ul style="list-style-type: none"> <li>-GREAT RIVER GREENING</li> <li>-SAINT PAUL AUDUBON SOCIETY</li> </ul>
OTHER PARTNERSHIPS	<ul style="list-style-type: none"> <li>-BOY SCOUTS OF AMERICA (EAGLE SCOUT PROJECTS)</li> <li>-GIRL SCOUTS OF THE USA</li> <li>-MASTER NATURALISTS</li> <li>-PARK NEIGHBORS</li> <li>-SHOREVIEW GREEN COMMUNITY</li> </ul>

### Natural Resource Education & Awareness

Ramsey County Parks & Recreation promotes natural resource education and awareness through programming conducted by naturalist staff at Tamarack Nature Center and Environmental Program Specialists within Parks & Recreation. Some training programs at Tamarack Nature Center include Buckthorn Brigade, where participants learn the biology, identification, and removal techniques for common and glossy buckthorn and prairie seed collection which teaches prairie seed identification and seed sowing methods. The Parks Program Specialists teach general natural resource education and environmental exploration.

Ramsey County Parks & Recreation also provides educational information such as guide books for bird watching and prairie viewing in Ramsey County. These guides highlight the quality flora and fauna found in the park system.



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## RAMSEY COUNTY PUBLIC INPUT

Community engagement is a framework to allow Ramsey County residents, community organizations, local partners, and park staff to participate in the planning process. In preparing this System Plan update, Parks & Recreation recognized a need to engage the community in reviewing current recreation trends, park use, and available recreation amenities, since much has changed throughout Ramsey County since the 2006 System Plan was drafted.

## COMPREHENSIVE NEEDS ANALYSIS

To solicit community input, a needs analysis was conducted. Through this process the department hoped to emphasize community priorities and support a need-based allocation of funding for parks and recreation services. The anticipated outcomes for this analysis included:

- Documenting existing park and recreation facilities, how they're used, who uses them and where improvements can be made.
- Helping county officials, park staff and residents determine what steps to take to ensure all communities in Ramsey County have adequate access to our parks and open spaces.
- Determining the size, location and number of future parks in Ramsey County

## PUBLIC ENGAGEMENT METHODS

The System Plan community engagement process was conducted using two methods:

- Electronic Online Survey
- Pop-Up Table Meetings

Electronic media such as social media, website, and email blasts were used to inform residents of upcoming engagement opportunities.

### Online Survey

The online survey was launched in July 2017 and remained active until February 2, 2018. Almost 1,000 responses were received.

### Public Engagement Meetings

A series of nine informal or "pop-up" table meetings were conducted at various libraries, community centers, and ice arenas located across the county.

## Public Engagement Results

The following themes emerged from an analysis of the input received through the community engagement process:

### Existing System

- Accessible
- Free access
- Well maintained facilities
- Wide range of recreation amenities
- Connectivity to natural resource amenities

### Gaps

- Trail connections
- Add facilities with food/concessions
- Add facilities with recreation rentals such as watercraft and bikes
- Extended park hours

The most common suggestions for future improvements included:

#### Parks & Trails

- More mountain bike and cross-country ski trails
- Develop a new nature center
- Trail development for better connections to parks and communities
- Add or improve recreation amenities (playgrounds, nature playground)
- Add rental facilities

#### Golf

- Improve connections and or access to facilities
- Improve golf amenities and opportunities
- Improve cost and discounts
- Multi-use of golf courses
- Partnerships – reduce amount of tax dollars spent

#### Arenas

- Improve connections and access to facilities
- Improve arena amenities and opportunities
- Multi-use of arenas
- Improve use and operating costs

#### Programming

- More programming throughout system
- Nature programming
- Recreation programming



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## PARKS & RECREATION ANALYSIS

### OPPORTUNITIES AND CONSTRAINTS

The Parks & Recreation system has many opportunities for expansion, addition of services, and improvement of current services. Constraints, whether financial, geographical, historical, regulatory, or otherwise, also exist. Each site and facility in the Parks & Recreation system is described in detail. For the broader system, the department has identified the following opportunities:

#### Focus On Acquiring In-Holdings

Acquiring properties within or adjacent to a park or trail corridor would allow the department to expand the services it provides. The county needs to be nimble in order to act when these opportunities arise. In-holdings can be identified in park, trail, or open space master plans.

## PARKS & RECREATION ANALYSIS

### Focus On Redevelopment

Responsible asset management will allow the department to maximize the life cycle of its facilities. This opportunity involves redevelopment that meets the current and projected needs and interests rather than simply replacing what exists.

### Racial Diversity

Community engagement, a racially representative staff, and racially equitable policies will ensure that Parks & Recreation will better serve the needs of a more diverse population.

### Focus on Large Development

Rice Creek Commons will be an example of a large redevelopment that can provide opportunities for parks and trails. The Arden Hills Army Training Site is a large tract of land in a mostly natural condition. The area is owned by the Minnesota National Guard and adjoins Rice Creek Regional Trail on the west and the future Lexington Regional Trail corridor on the east.

### Partnerships with other Governmental Agencies, Stakeholders, and the Private Sector

Collaboration with residents, stakeholders, governmental agencies, and private partners will foster successful project outcomes and lead to new or unique opportunities. Most large-scale projects require partners that join forces to make a project a reality.

### Master Plan Amendments or Updates

Due to changing recreation trends, demographics, and use patterns, many of the Parks & Recreation facilities are outdated. Master plan amendments provide an opportunity to reevaluate park and trail facilities for improvements to existing infrastructure, new recreation or community-centered opportunities, and more equitable recreation amenities for residents of all ages and abilities.

### Healthy Food Options

Many Ramsey County residents do not have access to healthy food options. Parks & Recreation facilities can help overcome this problem by providing healthy food options in vending machines or concession stands, supporting farmer's markets (such as at Aldrich Arena), and providing opportunities for urban agriculture (such as community gardens or urban farms).

### Multi-Use Facilities

The department should explore opportunities for utilizing its facilities in new or innovative ways. Most Parks & Recreation facilities are seasonal, so finding uses in the off-seasons could fill identified service gaps in the system. In addition, designs for new facilities and park spaces should keep in mind flexibility and adaptability.

### Programming

Community engagement will identify programming gaps that the department can work to fill. Parks & Recreation is moving towards the provision of more recreation programming that brings people outdoors to connect with nature.

### Natural Resources

In developed urban areas like Ramsey County, maintaining natural open spaces contributes to resident quality of life and promotes environmental stewardship.

## PARKS & RECREATION ANALYSIS

Several constraints may make the above opportunities more challenging to achieve, including:

### Almost Fully Developed County

Opportunities to create something new or large in scope are rare in a county that is almost completely developed. Redevelopment offers the ability to periodically update sites and facilities to suit current trends, but this can be a time-consuming approach.

### Accessibility by Residents and Visitors

The Ramsey County park system was originally designed for vehicular access. Ramsey County is still vehicle oriented, but public transportation options have expanded and bicycling has grown in popularity. The All Abilities Transportation Program will lead to a more accessible transportation network. Since parks and recreation facilities and services contribute to public health, economic accessibility will remain an important consideration. Parks and trails are generally free of charge, while other department recreation options, such as golf and ice hockey, are fee-based.

### Funding to Maintain and Operate the System is Limiting Opportunities

Parks & Recreation relies on several funding sources to operate and maintain the parks system. Some of these funding sources are more stable than others. The department must continue to work with residents, funding partners, the Board of Commissioners, county leaders, and legislators to ensure that the department has sufficient funding to carry out its responsibilities in achieving the county's vision, mission, and goals.

### Philosophies Hold Us to Proven Technologies and Security Concerns That Raise the Cost of Operation

Ramsey County has made a conscious decision to move forward with proven technology. The risk tolerance constrains opportunities to utilize technology that is farther along, friendlier for the public to access, and less attractive to new or atypical users.

### Age of Infrastructure

Many Parks & Recreation facilities are relatively old. Most arenas, for example, were constructed in the early 1970s. Keller Golf Course dates to the 1920s. Maintaining aging infrastructure can be costly, and siphon resources that may otherwise be directed to new or innovative projects. The department must continue to make strategic, forward-looking decisions around maintenance and asset management.

### Pedestrian Connections

The department has recognized an increased demand for pedestrian access and trail connections to the parks system from adjacent neighborhoods. This presents challenges such as increased project costs due to added infrastructure and land acquisition or easement requirements.

## POLICY PLANS

Parks & Recreation, like all Ramsey County departments, is tasked with carrying out the county's vision, mission, and goals. Policy plans are enacted to guide operations and decision-making within and across departments. Policy planning occurs at both the county and the departmental level.

### **Parks & Recreation Policy Plans**

Parks & Recreation policies help county officials and Parks & Recreation staff ensure all Ramsey County residents have access to its parks system, promote parks facilities as an important contribution to overall quality of life for all residents, emphasize community priorities, guide decision-



## PARKS & RECREATION ANALYSIS

making processes, and inform funding strategies. Current Parks & Recreation policies and plans include the following:

### ADA Transition Plan

The department is implementing a plan to bring its sites and facilities into compliance with the requirements of Title II of the American with Disabilities Act of 1990.

### Energy Action Plan

An energy action plan was developed to guide the department's efforts to reduce energy consumption, increase energy efficiency, introduce renewable energy technologies, and educate residents and staff on energy-related issues.

### Ramsey County Pedestrian & Bicycle Plan

The Ramsey County Pedestrian & Bicycle Plan, developed through collaboration between Active Living Ramsey Communities, Parks & Recreation and other county departments, municipalities, state agencies, residents, and other organizations, establishes a vision and strategy for providing safe and comfortable facilities for pedestrians and bicyclists throughout the county.

### [Ramsey County Pedestrian & Bicycle Plan](#)

### All Abilities Transportation Network

The All Abilities Transportation Network unifies regional transportation efforts under a shared vision and implementation strategy to realize an integrated and fully interconnected multi-modal transportation system providing safety, health, mobility and connectivity for residents of all abilities.

### [All Abilities Transportation Network](#)

### Aquatic Invasive Species Plan (AIS)

This plan guides the department's work to prevent the introduction and limit the spread of aquatic invasive species at all access sites within the county. The State of Minnesota allocates funding for these efforts.

### Arena Task Force Plan

In 2015, a task force was formed to study the current state of the indoor ice arena system and make recommendations for the future. The task force's final report will guide the department's arena-related decision-making in the near- and long-term.

### Golf Course Plan

In 2018, Parks & Recreation will conduct an in-depth study of its golf course operations, facilities, market position, financial management practices, and other related topics. The results of this study will inform future practices and decision-making for staff.

## PARK SYSTEM METRICS

As a component of the System Plan update, Parks & Recreation initiated a process to develop park metrics per National Park and Recreation standards. This will provide helpful information on how the Ramsey County park system compares to similar local and national park systems to assist park and recreation professionals in the effective management and planning of their operating resources and capital facilities.

### Why Complete Park Metrics

Through the process of the system plan update, Parks & Recreation evaluated park metrics per National Park and Recreation Association standards. These metrics assist park and recreation professionals in the effective management and planning of staffing, services, and capital resources by comparing the Ramsey County park system to local and national park systems of similar population, development patterns, and demographics. Since each agency collects, maintains, and reports data differently, comparisons between individual agencies may have variations or gaps. As a result, the goal of this analysis was to provide a broad overview of where Ramsey County stands, rather than insight at the individual park or facility level.

### How Does Ramsey County Compare

The parks metrics analysis benchmarked Ramsey County against similar parks agencies in three areas: budget/expenditures, parks/trails, and programs.

#### Budget/Expenditures

Various factors were considered in determining budget/expenditures for the level of service: operating and capital budgets, operating expenditures, revenue from picnic reservations, programs offered, golf and arenas, and volunteer efforts to offset expenditures.

#### Parks & Trails

This area quantifies both park areas as well as non-park sites such as ice arenas, golf courses, open space areas, special use-facilities (i.e. fairgrounds and Marsden Archery Range), and regional trails.

#### Programs

Both fee-based programs and non-fee programs were analyzed in this section. Ramsey County offers non-fee programs in regional parks through the Parks and Trails Legacy Amendment such as canoeing, fishing, and gardening. The department partners with the Ramsey County Library system to provide a free Story Trail Program. Numerous fee-based programs are offered at Tamarack Nature Center, arenas, and golf courses.

The parks metrics evaluation showed that Ramsey County generally falls within the middle quartile when compared to similar county park agencies across the United States.

Areas where Ramsey County was below average in level of service included:

#### Budget/Expenditures

- Total tax expenditures per capita
- Operating expenditures per acres of parks and non-park sites
- Capital budget for fiscal year
- Number of volunteers

#### Parks & Trails

- Total number of parks
- Total number of trail miles managed or maintained by the agency

#### Programs

- Number of participants per program
- Number of non-fee programs

## PARKS & RECREATION ANALYSIS

Areas where Ramsey County was above average in level of service included:

### Budget/Expenditures

- Revenue per capita
- Total revenue to total operating expenditures

### Parks & Trails

- Total number of non-park sites
- Total acreage of park and non-park sites
- Number of residents per park
- Number of acres per park

### Programs

- Total number of programs offered
- Number of fee based programs
- Ratio of fee programs to all programs
- Ratio of building attendance to park attendance

SUMMARY - RAMSEY COUNTY EFFECTIVENESS RATIO (2017 DATA)				
ITEM	RAMSEY COUNTY PARKS & RECREATION	LOWER QUARTILE	MEDIAN	UPPER QUARTILE
<b>BUDGET &amp; EXPENDITURES</b>				
AGENCY'S TOTAL ANNUAL OPERATING EXPENDITURES	\$11,731,392	\$8,500,000	\$11,731,392	\$20,820,100
CAPITOL BUDGET FOR THE FISCAL YEAR	\$5,290,545	\$5,290,545	\$8,879,578	\$12,248,757
OPERATING EXPENDITURES PER CAPITA	\$22	\$13	\$22	\$42
REVENUE PER CAPITA	\$14	\$2	\$8	\$14
TOTAL REVENUE TO TOTAL OPERATING EXPENDITURES	66.8%	21.5%	30.4%	45.2%
TOTAL TAX EXPENDITURES PER CAPITA	\$7	\$5	\$12	\$24
OPERATING EXPENDITURES PER ACRE OF PARKLAND	\$1,671	\$618	\$1,676	\$2,679
OPERATING EXPENDITURES PER ACRES OF PARKS AND NON-PARK SITES	\$1,381	\$1,381	\$2,391	\$3,436
OPERATING EXPENDITURES PER FTE	\$100,148	\$85,090	\$105,790	\$155,446
FTE'S PER 10,000 POPULATION	2.17	1.1	1.9	4
NUMBER OF VOLUNTEERS	17,239	2,890.7	17,239	50,916

SUMMARY - RAMSEY COUNTY EFFECTIVENESS RATIO (2017 DATA)				
ITEM	RAMSEY COUNTY PARKS & RECREATION	LOWER QUARTILE	MEDIAN	UPPER QUARTILE
<b>PARKS &amp; TRAILS</b>				
TOTAL NUMBER OF PARKS	15	13	39	104
TOTAL NUMBER OF NON-PARK SITES	33	11.8	12	17.3
TOTAL ACRES OF PARK AND NON-PARK SITES	7,020	3,388.4	6,139	10,794
ACRES OF PARKS PER 1,000 RESIDENTS	12.98	5.4	12.8	22.4
NUMBER OF RESIDENTS PER PARK	36,043.3	5,989.7	12,708.3	42,318.2
NUMBER OF ACRES PER PARK	468	46.8	217.7	298.3
TOTAL NUMBER OF TRAIL MILES MANAGED BY THE AGENCY	27.4	42.9	70	94
<b>PROGRAMS</b>				
TOTAL NUMBER OF PROGRAMS OFFERED	1,660	245	355	715
NUMBER OF FEE BASED PROGRAMS	1,450	188.8	325	662.5
TOTAL PROGRAM CONTACTS	64,224	44,612	64,224	106,313
NUMBER OF PARTICIPANTS PER PROGRAM	38.69	50.6	62.5	270.6
RATIO OF FEE PROGRAMS TO ALL PROGRAMS	87.3%	63.0%	84.0%	90.5%
RATIO OF BUILDING ATTENDANCE TO PARK ATTENDANCE	26.6%	26.1%	26.3%	26.4%

This analysis was helpful in identifying strengths and areas for improvement for the Parks & Recreation system.

## MAINTENANCE

The system requires extensive maintenance to keep parks, trails and amenities functioning properly. Safe use of the parks is also a result of maintenance efforts. Appearance is important to park visitors and the maintenance staff are responsible for cleanliness. Extending the life of buildings, roads, trails, and amenities is another result of regular maintenance.

As the park system grows and changes, maintenance efforts will need to adjust to different uses and new amenities. With growth will come the need to expand the maintenance resources required to sustain the system. Maintenance standards help to quantify the resources required. These standards are based upon some of the practices listed below.

## PARKS & RECREATION ANALYSIS

General park and trail maintenance guidelines for Ramsey County Parks & Recreation are as follows.

### **Picnic Shelters or Pavilions:**

- Reserved units cleaned and litter removed prior to and after each reservation.
- Check lights, receptacles, and appliances weekly. Minor repairs are made immediately.
- Non- reserved units are cleaned weekly or as needed.
- Remove graffiti immediately.
- Wash exterior and interior of shelters annually.

### **Bathroom Facilities:**

- Seasonally conduct opening and shutdown/blow out procedures.
- Open and clean daily, resupply usable goods.
- Check interior and exterior daily for damage and graffiti remove immediately.
- Check for properly functioning sinks, toilets, drinking fountains, and wash towers. Repairs should be initiated immediately and completed within 24 hours.

### **Turf Maintenance:**

- Mowing turf will occur once weekly at a minimum.
- Mowing height 2.5 inches.
- Irrigation System:
  - Inspect irrigation system at least seasonally.
  - Shut water supply off immediately if leaks are found, initiate repairs within 24 hours.
  - Inspect backflow preventers seasonally.

### **Tree and Shrub Maintenance:**

- Prune/trim trees and shrubs as dictated by species annually.
- Remove sucker growth as needed.
- Inspect regularly for insects and diseases.
- Remove hazardous limbs and plants immediately.
- Remove dead trees seasonally.
- Remove or treat invasive plants yearly.

### **Litter Control:**

- Pick up litter and empty containers at least every other day, or as needed.
- Clean trash and recycling barrels as needed, place them in designated areas.
- Keep dumpsters clean and free of trash and debris around enclosure.

### **Playground Maintenance:**

- Groom surfaces deeply each year, fill low spots and high traffic areas as needed.
- Complete weekly inspections.
- Complete safety related repairs immediately and initiate other repairs within 48 hours of discovery.
- Audit playgrounds to insure compliance with the current version of ASTM Performance Standards F1487 and the Consumer Product Safety Commission "Handbook for Public Playground Safety."

**Aquatics Maintenance:**Beaches:

- Check lifeguard stands yearly and make repairs as required immediately.
- Prior to beaches opening till entire beach area and remove debris.
- Groom beaches weekly.
- Remove vegetation daily.
- Check shower and drinking fountain tower operation weekly.

Boat Launch:

- Maintained year-round.
- Empty trash and clean around launch twice a week.
- Ensure AIS and rules signage are clean, straight, and readable weekly.

Fishing Piers:

- Inspect yearly.
- Replace warped and broken boards immediately.
- Replace leaky floats yearly.

Off Leash Dog Area Maintenance:

- Inspect signage on how to use the park properly.
- Maintain perimeter fence and gates.
- Brush cut vegetation yearly.
- Maintain paths leading to the off leash dog area.
- Remove hazardous trees and limbs as needed.
- Add wood mulch as needed.

Hard Surface Maintenance:

- Remove debris and glass immediately.
- Remove sand, dirt and organic debris from walks, lots and hard surfaces every 30 days.
- Remove or repair trip hazards from pedestrian areas immediately upon discovery. Mark hazards appropriately if they cannot be repaired immediately.
- Paint fading or indistinct instructional/ directional markings as needed.
- Remove grass from cracks each season and as needed.
- Replace warped boards seasonally.

**Trail Maintenance:**

- Inspect hard and soft surfaces trails at least once a month.
- Remove dirt, sand, and organic debris from hard surfaces at least once a month.
- Remove organic debris from soft surfaces and needed.
- Mechanically or chemically control growth 36" on each side of the trail.
- Remove overhanging branches within 84" of the trail surface annually.
- Inspect signs, benches, trash/recycling containers and other site amenities weekly.
- Inspect boardwalks and bridges weekly, replace broken boards immediately.
- Replace warped boards seasonally.

**Site Amenity Maintenance:**

- Inspect benches, trash/recycling containers, picnic tables, grills, bicycle racks, drinking fountains, and other site amenities weekly. Complete repairs within 5 days.
- Clean annually and remove graffiti immediately.

**Sign Maintenance:**

- Inspect sign lettering, surfaces, and posts monthly. Repair as needed.
- Repair/replace signs to maintained design and safety standards within 5 days of discovery.

## PARKS & RECREATION ANALYSIS

### **Vandalism and Graffiti Removal:**

- Initiate repairs immediately upon discovery. Document and photograph damage and graffiti.
- Report to supervisor and/or authorities.

### **Storm Cleanup and Infiltration Basins Maintenance:**

- Inspect storm water structures yearly.
- Inspect drain inlets immediately after flooding occurs.
- Remove debris and organic materials from drain inlets and outlets as needed.
- Remove invasive plants yearly.
- Clean infiltration basins twice a year in the spring and fall.

### **Fence and Gate Maintenance:**

- Inspect fences, gates, and bollards annually. Complete safety-related repairs immediately.
- Clear fences of debris annually.
- Paint and replace reflective tape as needed.

## RAMSEY COUNTY PARKS & RECREATION PARTNERSHIPS, INTERGOVERNMENTAL RELATIONSHIPS

To accomplish the mission of Ramsey County, partnerships are important to get the work done. Parks & Recreation maintains partnerships with private and nonprofit organizations, municipalities, and intergovernmental entities. Potential benefits of these partnerships include new, improved, or shared:

- Programs
- Funding strategies
- Maintenance responsibilities
- Recreational opportunities
- Cooperative agreements

Current partnerships include the following organizations:

### Metropolitan Council

Ramsey County is one of ten implementing agencies for the Regional Parks and Open Space System of over 56,000-acres of parkland and 400 miles of regional trails within the seven-county metropolitan area. Implementing agencies own and operate the parks and trails under their jurisdiction. The Metropolitan Council, with recommendations from the Metropolitan Parks and Open Space Commission, approves master plans, prepares and matches funding for the capital improvement program, and provides an overall policy framework. The agencies work together along with the Parks and Open Space Commission to connect regional trails, offer a variety of regional parks, and provide unique experiences based on a natural resource based approach.

### Saint Paul Regional Water Services

The Sucker/Vadnais Lake area of the Vadnais-Snail Lakes Regional Park contains 1,646-acres of land and water owned by the Saint Paul Regional Water Services. This land is incorporated into the regional park through a joint powers agreement between Ramsey County and the Saint Paul Regional Water Services. Per this agreement, and the park master plan, Ramsey County is responsible for capital funding and certain operations and maintenance functions, while Saint Paul Regional Water Services is responsible for natural resource management, fire protection, and certain park maintenance functions. In addition, much of Trout Brook Regional Trail is located on property owned by the Saint Paul Regional Water Services. Finally, Highland Arena is situated on land owned by Saint Paul Regional Water Services.

## PARKS & RECREATION ANALYSIS

### National Park Service

The National Park Service has transferred the Rice Creek Corridor, Long Lake Regional Park railroad spur, and an archery range located in the former Twin Cities Army Ammunition Plant to Ramsey County under the Federal Lands to Parks Program. Additional property will be transferred to provide a trail corridor in the Rice Creek Commons development connecting the Highway 96 Regional Trail to the Rice Creek Regional Trail. The county is obligated to maintain the property for public parks and recreation use.

Ramsey County also owns properties within the Mississippi National River and Recreation Area, which is administered by the National Park Service. Projects within this corridor are coordinated with the National Park Service and receive funding under various grant programs.

### Minnesota Department of Natural Resources

The Minnesota Department of Natural Resources provides grants for trails (acquisition, development and maintenance), county parks, and development of boat access sites, fishing piers, and shoreline fishing areas. In addition, the Department of Natural Resources provides technical assistance and administers grant programs for natural resource management.

### City of Saint Paul

Ramsey County and the city of Saint Paul have prepared joint master plans for Keller Phalen Regional Park, Battle Creek Regional Park, Bruce Vento Regional Trail, and Trout Brook Regional Trail, as well as a joint powers agreement for the development, operation, and maintenance of the Battle Creek Recreation Facility within Battle Creek Regional Park. The future Lexington Regional Trail Master Plan will likely be cooperatively developed by both agencies.

### City of Roseville

Ramsey County and the city of Roseville jointly own the 52-acre Reservoir Woods property. All development, operations, and maintenance costs are the responsibility of the city of Roseville.

### City of Maplewood

The city of Maplewood has a long-term maintenance agreement for trail facilities built on Ramsey County park property in Keller Regional Park, Keller Golf Course, and Holloway Marsh. All development, operations, and maintenance costs are the responsibility of the city of Maplewood. A new trail in Fish Creek Open Space was constructed in 2016 through a joint master plan effort. Portions of the Trout Brook Regional Trail will pass through city property and an agreement will cover that partnership.

### City of White Bear Lake

Ramsey County and the city of White Bear Lake jointly operate the Lake Links Regional Trail and Birch Lake Regional Trail. The city of White Bear Lake constructed both trails and maintains the Lake Links Regional Trail along Lake Avenue and sections of the Birch Lake Regional Trail. Ramsey County and the city of White Bear Lake are currently planning the Bruce Vento Regional Trail extension and the trail extension for the South Shore Boulevard Trail. Manitou Days are celebrated each year with some events happening within White Bear Lake County Park.

### White Bear Township

White Bear Township maintains sections of the Birch Lake Regional Trail. The Township is involved with plans for South Shore Boulevard Trail, Bruce Vento Regional Trail, and Poplar Lake County Park preliminary planning.



## PARKS & RECREATION ANALYSIS

### City of Shoreview

Ramsey County and the city of Shoreview have a joint powers agreement for trail maintenance within the Rice Creek Regional Trail corridor and Lake Owasso County Park. In addition, the city of Shoreview maintains an overlook connected to the Highway 96 Regional Trail overlooking the Snail Lake Marsh. The city of Shoreview also maintains the well system that provides water service to Turtle Lake County Park. The Slice of Shoreview festival is hosted at Island Lake County Park.

### City of New Brighton

Ramsey County and the city of New Brighton have collaborated on park improvements for Long Lake Regional Park and the adjacent city-owned Lion's Park. A joint powers agreement details construction and maintenance responsibilities for this partnership. The city celebrates Stockyard Days in Long Lake Regional Park.

### City of Little Canada

The city of Little Canada is a partner in seeking the preferred route for the Trout Brook Regional Trail. Some existing city trails may be incorporated into the regional trail.

## **Ramsey County Departments**

Parks & Recreation works with several Ramsey County departments to provide enhanced services and recreational opportunities.

### Ramsey County Community Corrections

Ponds at Battle Creek Golf Course was constructed on property owned by Ramsey County Corrections. For several years, the golf course has partnered with the adjacent Correctional Facility to provide labor for course maintenance. Some of the ornamental plant material at the course is provided by the greenhouse operation at the correctional facility.

### Ramsey County Libraries

Libraries along with Parks & Recreation have collaborated to provide literacy-based programming for residents. Story Trails have been set up in parks for readers to enjoy reading while walking through a park. Water park passes are provided for the summer reading program as a reward for participation.

### Ramsey County Public Works

Public Works along with Parks & Recreation have collaborated on several planning studies and road redevelopment projects that have a trail located within the road right-of-way, such as the Highway 96 and Lexington Regional Trails. Management of storm water assets is also coordinated between the departments to ensure standard practices are followed. The County Forester is a resource utilized for tree issues in the park system. The water resource staff provide water quality testing for swimming beaches and ponds in off-leash dog areas.

### Ramsey County Regional Rail

A joint powers agreement allows for use of some rail right of ways for regional trail purposes. Joint planning along transit corridors provides for trail uses and connections. The All Abilities Transportation Policy will include Parks & Recreation, Public Works, Regional Rail, and Public Health in planning efforts on all transportation related projects.

### Ramsey County Sheriff

The Sheriff's department, in conjunction with municipal police departments, provide policing for Parks & Recreation facilities and events. They also lock up gated park areas each night at park closing time.

## PARKS & RECREATION ANALYSIS

### Saint Paul-Ramsey County Public Health

Public Health operates yard waste and household hazardous waste sites on several Parks & Recreation properties. This department also coordinates recycling in Parks & Recreation facilities, provides shared or grant funding for unique projects, and assists with disposal of lake weeds and yard waste. Public Health has provided Statewide Health Improvement funding for parks and recreation related uses. Public Health participates in the Active Living Ramsey Communities.

### **Minnesota National Guard & The Minnesota Amateur Sports Commission**

The Minnesota National Guard has a lease for approximately 1,500 acres of the former Twin Cities Army Ammunitions Plant. This area is known as the Arden Hills Army Training Site. The National Guard plans to develop an administrative service center on site, and Parks & Recreation has proposed including an interpretive center in these plans. In addition, the Minnesota Amateur Sports Commission has expressed interest in developing a venue for cross-country ski and mountain biking events on this property. These trails could eventually be used by the public provided there is no conflict with National Guard training.

### **H.B. Fuller**

H.B. Fuller and Ramsey County share property at their Willow Lake site. H.B. Fuller has committed to manage this site as a nature park reserve and allow limited public access for nature interpretation and trail activities.

## LAND COVER & WILDLIFE HABITAT

Within the Parks & Recreation system, sites for natural resource management and the establishment of primary habitat land cover changes have been identified and prioritized. Staff review existing habitat, wetland, land cover, and historical aerial photograph data and visit all park units to evaluate existing habitats and land cover, and to determine future restoration projects and land cover changes. Priority is given to sections of land based on the location and size of existing habitats, and those that present the best opportunity for restoration and/or expansion now and into the future. The habitat types defined below may not all be present in any given park or park management unit.

### **Primary Land Cover & Wildlife Habitat**

Habitat types that are targeted to provide high quality native habitat for wildlife and consist of restored or remaining pre-European settlement vegetation, as referenced in the Minnesota Department of Natural Resources document: [“Natural Vegetation of Minnesota at the Time of the Public Land Survey 1847-1907.”](#)

#### Prairie

Open grassy habitats of native species, dominated by big bluestem, little bluestem, Indian grass, and or sideoats grama with sparse to patchy forb cover. They may include scattered trees, especially bur oaks, normally on drier slopes.

#### Remnant Prairie

Isolated small patches of native grasses and forbs that have been unaltered by human activity. Usually found on slopes and areas that were not desirable for development or agriculture use, including land adjacent to railroad right of ways. Includes unique and diverse grasses and forbs to Ramsey County.

## PARKS & RECREATION ANALYSIS

### Savanna

A transitional habitat between woodland and prairie with scattered trees or groves of trees, typically bur oak, northern pin oak or quaking aspen interspersed with prairie plants. The density of trees is highly variable, but open enough to allow a prairie grass based understory. Mainly located on drier hillsides within Ramsey County.

### Oak Woods

Habitat dominated by bur, white, northern pin, and northern red oaks. Other common tree species are American elm, quaking aspen, and green ash. Common understory includes cherry trees, hazelnut and black raspberry shrubs. The understory has sedges, white snakeroot, wild geranium, and other scattered prairie grasses and forb species. Oak woods are located on drier sites than mesic forests.

### Mesic Forest

A mixture of sugar maple, basswood, green ash, northern red and white oaks with ironwood, alternate leaved dogwood, and hazelnut shrubs in the understory. The wildflowers include wild ginger, jack in the pulpit, cohosh, and bloodroot. These woods tend to be found on north facing slopes and level areas.

### Floodplain Forest

Habitat dominated by silver maple and cottonwood with box elder and green ash. The midstory and understory can be open of established vegetation because of regular flooding. In poor soil conditions, wood nettle is the dominant understory plant.

### Wetlands

Lowlands with a variety of non-woody vegetation types, including, sedges, cattails, rushes, reed-canary grass. Includes cattail, wet meadows, and reed canary swales.

## **Secondary Land Cover & Wildlife Habitat**

Other land cover and habitat types to be managed include:

### Old Field

Old agricultural sites of open grassy habitats of non-native species, typically brome grass, with a very low diversity of forbs. There can be scattered trees and shrubs. Old fields can be found on a variety of slopes and soils.

### Cultivated Conifers

Planted stands of red, white, jack, or Scotch pine. Not a native community and often found in unnatural rows.

### Mixed Woods

This is a catch all for other woodland types. It includes, ash and aspen stands, second growth non-oak woods, and box elder thickets. These can be found on a variety of slopes and soils.

### Tamarack Swamp

Wetlands with a dominance of Tamarack conifers. Typical shrubs include alder, poison sumac, and red-osier dogwood.

### Shrub Swamp

Wetlands dominated by woody species, such as alder, willow and often infested with glossy buckthorn (*Rhamnus frangula*).

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### Active Use

Areas developed for public use such as picnic areas and beaches. These are mainly turf grass, consisting of Kentucky bluegrass and ryegrass, that are regularly mowed, but may include small areas of other habitats such as stormwater management rain gardens.

### Impervious

Impervious surfaces such as park roads or parking lots.

### Open Water

Areas of open water consisting of lakes, streams, or shallow open water wetlands.

The following table is a breakdown of primary habitat types and priority sites within the park system.

KEY HABITAT ACREAGES		
ITEM	EXISTING ACRES	PLANNED ACRES
<b>PRAIRIES</b>	<b>269.03</b>	<b>537.40</b>
BALD EAGLE OTTER LAKE REGIONAL PARK - BENSON PRAIRIE	44.05	45.37
BALD EAGLE OTTER LAKE REGIONAL PARK - TAMARACK	64.89	73.45
BATTLE CREEK REGIONAL PARK - CENTRAL	24.72	35.29
BATTLE CREEK REGIONAL PARK - EAST	20.3	61.25
BATTLE CREEK REGIONAL PARK - WEST	12.21	40.28
LONG LAKE	22.6	32.14
RICE CREEK NORTH	49.46	89.17
VADNAIS REGIONAL PARK - GRASS LAKE	30.8	30.8
OTHER SMALLER PRAIRIE CONVERSIONS	0	129.65
<b>SAVANNA</b>	<b>8.05</b>	<b>270.84</b>
BALD EAGLE OTTER LAKE REGIONAL PARK - TAMARACK	0	17.19
BATTLE CREEK REGIONAL PARK - CENTRAL	5.09	39.83
BATTLE CREEK REGIONAL PARK - EAST	0	2.92
BATTLE CREEK REGIONAL PARK - WEST	0	39.95
FISH CREEK OPEN SPACE	0	27.51
KELLER REGIONAL PARK	0	4.11
RICE CREEK NORTH REGIONAL PARK	0	136.37
TONY SCHMIDT REGIONAL PARK	2.96	2.96
<b>OAK WOODS</b>	<b>778.73</b>	<b>1059.96</b>
BALD EAGLE OTTER LAKE REGIONAL PARK - TAMARACK	50.20	88.92
FISH CREEK OPEN SPACE	89.51	104.56
VADNAIS REGIONAL PARK - SUCKER LAKE	89.96	89.96
BATTLE CREEK REGIONAL PARK - WEST	97.78	92.33
BATTLE CREEK REGIONAL PARK - CENTRAL	113.90	108.92
BATTLE CREEK REGIONAL PARK - EAST	124.94	152.34
OTHER SMALLER OAK WOODS	212.42	422.94
<b>MESIC FOREST</b>	<b>77.50</b>	<b>77.50</b>

KEY HABITAT ACREAGES		
ITEM	EXISTING ACRES	PLANNED ACRES
BALD EAGLE OTTER LAKE REGIONAL PARK - OTTER LAKE	65.24	65.24
BATTLE CREEK REGIONAL PARK - WEST	6.68	6.68
FISH CREEK OPEN SPACE	5.58	5.58
<b>WETLANDS</b>	<b>1,650.83</b>	<b>1,650.83</b>
BALD EAGLE OTTER LAKE REGIONAL PARK - OTTER	212.85	212.85
BATTLE CREEK REGIONAL PARK - PIG'S EYE LAKE	124.65	124.65
POPLAR LAKE COUNTY PARK	125.93	125.93
RICE CREEK NORTH REGIONAL TRAIL	329.95	329.95
SNAIL LAKE MARSH	64.28	64.28
TONY SCHMIDT REGIONAL PARK	108.55	108.55
TURTLE CREEK OPEN SPACE	139.52	139.52
VADNAIS REGIONAL PARK - SUCKER LAKE	68.60	68.60
OTHER SMALLER WETLANDS	476.49	476.49

## PARK SPECIFIC NATURAL RESOURCE INFORMATION

The natural resource information listed within each park outline includes an overview of the current park land cover and habitat, habitat restoration and management, wildlife and wildlife management, and surface water information specific to each park.

Maps include the land cover and habitat map, consisting of an existing land cover map which shows the current land cover and habitat and a proposed land cover map, which shows the proposed land cover conversions or habitat restoration planned for each specific park. Larger parks are broken down into management units for ease of future restoration funding / planning and ease of analysis. Park specific tables include the land cover and habitat table, which corresponds to the maps and breakdowns the current and future land cover by habitat type and acreage, type of proposed restoration activity, activity cost, priority, maintenance, and maintenance cost (every 3 years) for each park or management unit within a park. The table's attributes are further described below.

Land cover conversion and habitat restoration will be completed as funding is secured with importance given to priority habitat connected to larger tracts. Most habitat restoration or land cover conversion is a long process and will take years for the initial restoration project to be completed. Maintenance of restored areas will be ongoing and at a minimum of every three years for most items (for example, prescribed burns of prairies or foliar spray of re-sprouting buckthorn seedlings). Maintenance will also be variable depending on funding.

Land cover and habitat table attributes include the following:

- **Acres** – the number of acres of current and future land cover
- **Current Land Cover** – the land cover type that currently exists within the park
- **Proposed Land Cover** – the land cover type that is proposed for conversion or restoration
- **Restoration Activity** – the type of restoration proposed for any given land cover. Most of the restoration activities proposed are standard practices that will be implemented, however, other practices will be considered as new or innovative restoration practices arise.

## PARKS &amp; RECREATION ANALYSIS

- **Activity Cost** – the total cost of each restoration activity for the specified land cover conversion or habitat restoration. This cost may deviate pending on known factors that may increase or decrease cost, such as topography. A list of restoration activity costs per acre is listed below.

RESTORATION ACTIVITY COST		
MANAGEMENT TYPE	MANAGEMENT ACTIVITY	COST PER ACRE
WOODLOT MANAGEMENT	Invasive Woody Removal, Cut, Stump Treat, Stack & Burn, RX Burn, Native Seed	\$3,500.00
WOODLOT MANAGEMENT	Forestry Mow, Foliar Spray	\$1,500.00
WOODLOT MANAGEMENT	Invasive Woody Removal and Haul Off Site	\$1,200.00
WOODLOT MANAGEMENT	Invasive Woody Removal, Cut, Stump Treat, Stack & Burn	\$2,000.00
WOODLOT MANAGEMENT	RX Burn, Foliar Spray of Buckthorn	\$750-\$950
PRAIRIE CONVERSION	Seed, Hand Cast Seed	\$1,400.00
PRAIRIE CONVERSION	Mow, Herbicide, RX Burn, Drill Seed	\$2,000.00
PRAIRIE CONVERSION	Mow, Herbicide, RX Burn, Cast Seed	\$2,800.00
PRAIRIE CONVERSION	RX Burn, Foliar Spray of Herbaceous	\$750-\$1,050

Priority and maintenance cost table attributes include the following:

**Priority** – a number given to help prioritize the management and restoration for specified habitat, given the habitat features described below:

1. Important native habitat, highly connected to other habitats, large size, contains species of conservation need.
2. Has some connections to other habitats, medium to large in size, contains species of conservation need, may include native habitats.
3. Adjacent to other habitats, medium to small in size, if restored would be used by species of conservation need, and may contain remnants of native habitat.
4. Highly degraded habitat, isolated, small size, no species of conservation need

**Maintenance** – typical maintenance required following the initial habitat restoration. Projected to be completed ever three years.

**Maintenance Cost (every 3 years)** - total maintenance cost. Projected to be spent every three years. A list of some maintenance activity costs per acre is listed below.

MAINTENANCE ACTIVITY COST	
MAINTENANCE MANAGEMENT ACTIVITY	COST PER ACRE
PRESCRIPTION (RX) BURN	\$450.00
FOLIAR SPRAY OF HERBACEOUS	\$600.00
FOLIAR SPRAY OF BUCKTHORN	\$500.00

## REGIONAL PARKS

Regional parks contain diverse nature-based resources, either naturally occurring or human-built, that offer a range of outdoor recreational opportunities for metropolitan area residents and visitors. Regional parks are intended to:

- Provide public access to major waterbodies and watercourses.
- Provide sites of sufficient size (200-500 acres) that will accommodate a range of activities and large numbers of users.
- Provide a resource base with a carrying capacity that will tolerate a large number of users.
- Emphasize outdoor recreational experiences as well as resource preservation.
- Provide recreational developments that are consistent with the specific resource base.
- Protect and manage significant natural resources within park units for aesthetic enjoyment and outdoor education.
- Provide internal trail networks that link or provide access to significant natural resources or outdoor recreation facilities.
- Provide special use areas that are compatible with the natural resources and other recreational development

Environmental Natural Areas have been identified in Regional Parks having significant natural resources. Environmental Natural Areas (ENA) are defined within Regional Parks as having significant, sensitive, and unique natural resources to Ramsey County that warrant extended preservation. The habitat and vegetation within these areas is managed to support and enhance these natural communities. These areas are designated for increased habitat protection, ecological restoration, passive recreation and environmental education. Any development expansion within these areas is limited to trails only, with nature interpretation facilities allowed within the planned development areas of Tamarack Nature Center only. Public access to these areas is restricted to designated trails and the use of these areas is limited to passive forms of recreation such as hiking, skiing and nature viewing. Bicycles and off-road cycling is allowed only on designated trails. Dogs and off-trail activities are not allowed.

Official designation of regional parks requires approval by the Metropolitan Council. There are currently six regional parks under the jurisdiction of Ramsey County within the Regional Parks and Open Space System. The following sections provided detailed information on each of these parks.

## BALD EAGLE-OTTER LAKES REGIONAL PARK



### EXISTING SITE CONDITIONS

MASTER PLAN DATE: 1987



#### LOCATION AND SIZE

Bald Eagle-Otter Lakes Regional Park is located in the northeast corner of Ramsey County, in White Bear Township. The park is comprised of three segments: Bald Eagle Lake (142 acres) on the east side of Bald Eagle Lake; Otter Lake (408 acres) between Otter Lake and Bald Eagle Lake; and Tamarack Nature Center (335 acres) southwest of Bald Eagle Lake. The park is generally bounded by I-35E on the west, the county line on the north, Highway 61 on the east and Hammond Road on the south. The park consists of 885 acres.



#### SITE CHARACTERISTICS

The predominant characteristics of the park are the lakes and associated wetlands. The park includes one mile of shoreline on the east side and ¼ mile on the west side of Bald Eagle Lake. Bald Eagle Lake, the second largest lake in Ramsey County, includes 1,025 acres with a maximum depth of 39 feet and 568 acres greater than 10 feet in depth. Bald Eagle Lake is one of the most popular fishing lakes in Ramsey County. The park includes 1½ miles of shoreline on Otter Lake, which is the entire southern half of the lake. Otter Lake, 334 acres in size, is a shallow lake with 97% less than 15 feet in depth. Due to this shallow depth, the lake is subject to periodic winter kills. The Tamarack Nature Center segment of the park includes two small lakes entirely within the park boundaries. Tamarack Lake is a small 10.5-acre lake. Fish Lake is a 3.3-acre lake. Neither lake supports a fish population. There are extensive areas of wetland within the park. The Bald Eagle segment includes 32 acres of wetland which include shoreline, bays, and glacial depressions. The Otter Lake segment contains 200 acres of wetland or approximately 50% coverage. A large expanse of wetland extends from the southeast shore of Otter Lake eastward to Bald Eagle Lake. The Tamarack segment of the park includes 75 acres of wetland in two corridors passing through Fish Lake and Tamarack Lake. The remaining upland areas of the park are comprised of oak wood, former agricultural land, scattered pine plantations and 120 acres of restored prairie.

The native vegetation of the Bald Eagle-Otter Lakes Regional Park was a mixture of mesic woods, oak woodlands and scrublands, prairie, and a variety of wetlands. The unique habitats include the tamarack swamp/bog, red maple woods, and extensive shrub swamps. Current vegetation includes native habitats plus old fields and conifer plantations. The Otter Lake Unit includes some of the best examples of mesic woodlands in the county. It also includes the only healthy tamarack swamp/bog and one of the longest undeveloped shorelines in the county. Invasive species have become widespread in most habitats. The most troublesome species include buckthorn, black locust, spotted knapweed, and reed canary grass.





## RECREATION DEVELOPMENT

**Bald Eagle Lake Segment:** A 6-acre picnic area and boat launch facility is located on the east shore of Bald Eagle Lake. The area includes boat access ramp, parking for 50 car and boat trailers, and a separate 76-car parking lot for the picnic area and shoreline fishing. Other site amenities include a restroom facility, picnic shelter, play area, and fishing pier. Bituminous walkways connect these facilities. A bituminous trail extends north to Overlake Road providing access to the adjacent residential area and 2 miles of unpaved trails located between Overlake Road and County Road J.

**Otter Lake Segment:** Redevelopment occurred in 2010 to the existing boat launch and off-leash dog area parking facility located on the south end of Otter Lake. Redevelopment activities included development of a paved parking lot for 43 cars and 3 boat trailers, a boat launch, off-leash dog area, restroom, and storm water management upgrades. The parking lot provides access to a 10-acre off-leash dog area located immediately south of Otter Lake. The remainder of the Otter Lake area consists of undeveloped park space.

**Tamarack Nature Center Segment:** Tamarack Nature Center (TNC) is located on a 323.83-acre parcel within the Southwest corner of the regional park between Otter Lake Road and Interstate 35E, and has been designated as an Environmental Natural Area (ENA). The TNC facility includes a nature center, early childhood facility, Discovery Hollow, garden area, Logs and Hollow Nature Play Area, a parking lot, 1-mile of accessible paved trail, 7-miles of natural surface trails, a boardwalk, the Sugar Shack, a maintenance facility, interpretive/education programming areas, observation viewing areas, and natural habitat area. Tamarack Nature Center has been established as the primary environmental education center in the county, and has formed programming partnerships with school districts and allied non-profit groups. The benefits of these partnerships have expanded service consistent with the mission of Tamarack Nature Center. A vision planning study was completed in 2008 to address potential recreation opportunities and development opportunities for TNC. The main goal of the vision plan was to redirect TNC from the traditional role of a nature center toward becoming an essential community resource that integrates personal exploration of nature with art, play, and active investigation. The vision plan also emphasized that the new vision for TNC cannot be achieved unless TNC is transformed into a highly attractive destination offering a wide array of environments and activities for visitors to interact with nature. The 2008 vision plan set the stage and will guide a multi-year phased redevelopment project for TNC.

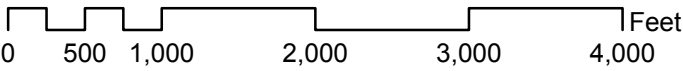
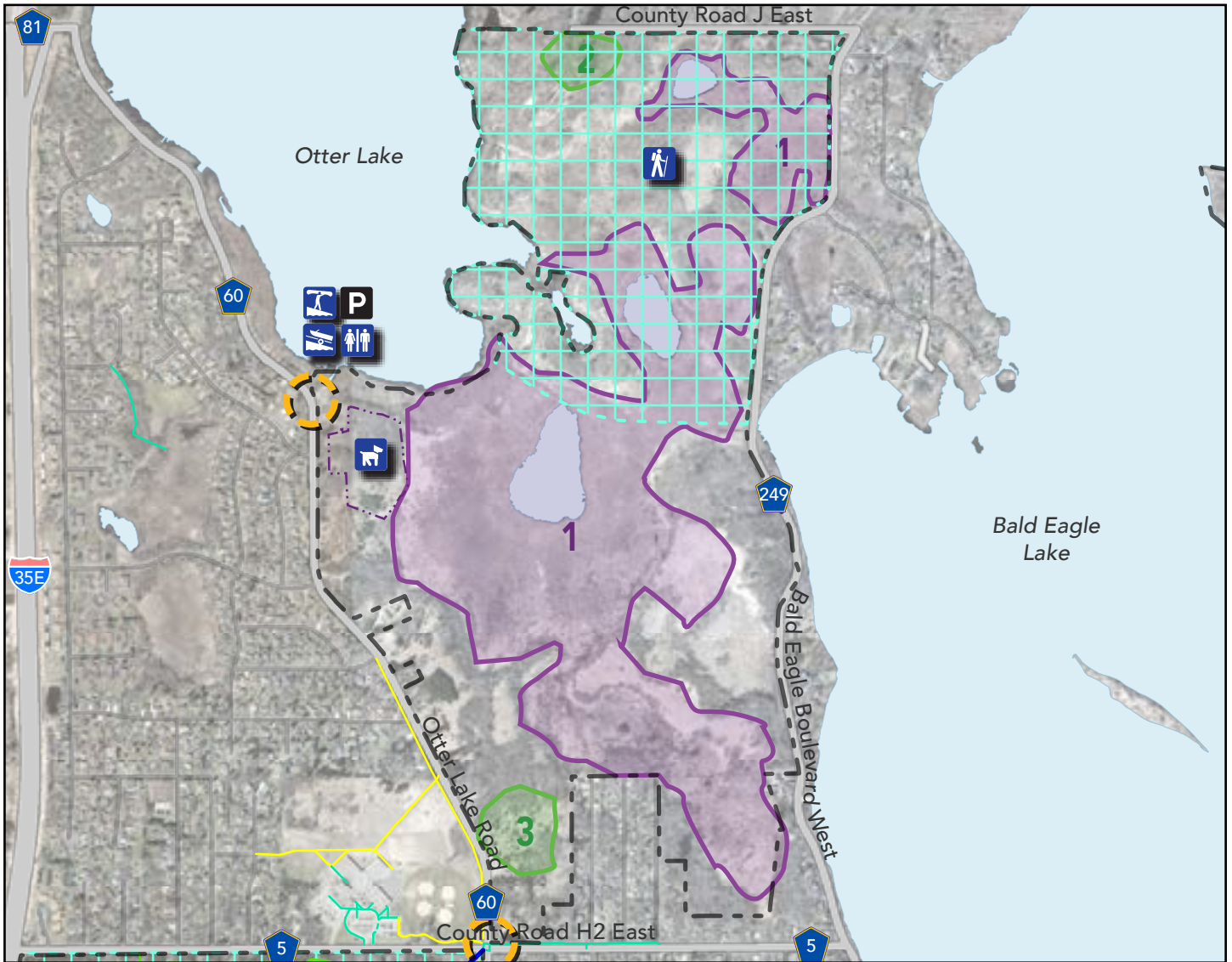




## MAINTENANCE

- Maintain parking lots and trails at Tamarack Nature Center.
- Groom cross country ski trails at Tamarack Nature Center.
- Maintain access to boat launches at Bald Eagle and Otter Lakes.
- Maintain Otter Lake OLDA parking lot.
- Maintenance at Tamarack Nature Center can be challenging with the amount of programming that takes place daily.
- The boardwalks connecting trails at TNC are degrading and need to be replaced and enlarged so equipment can travel on them.
- There is a limited amount of storage in the Nature Center building which requires the use of several out buildings that need to be maintained
- An additional maintenance and storage shed needs to be built to house the equipment used to maintain Bald Eagle-Otter Lakes Regional Park.
- Otter Lake OLDA is heavily shaded and used. The turf areas are worn and difficult to reestablish. There is also a significant wetland that runs through the park making the park muddy for a significant period in the spring. To make these areas usable large amounts of wood mulch is brought in and spread throughout the park.
- The boat launch at Otter Lake is not used very much and aquatic weeds are encroaching on the landing opening to the greater lake. The opening needs to be cut back yearly.
- Bald Eagle boat launch parking lot has sunk and is subject to flooding and is rapidly degrading needing patch work yearly.

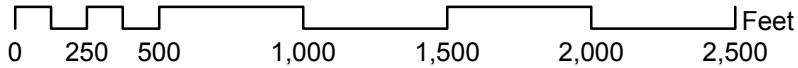




Legend

Park Border		County Paved Trail		Restrooms	
Park Entrance		County Turf Trail		OLDA	
Opportunity Area		Municipal Trail		Carry In	
Constraint Area		Municipal Ped/Bike Facility		Boat Launch	
Metro Tranist Stop		Regional Trail		Parking Lot	
Dog Park Border		Environmental Natural Area		Hiking	

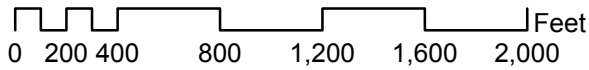
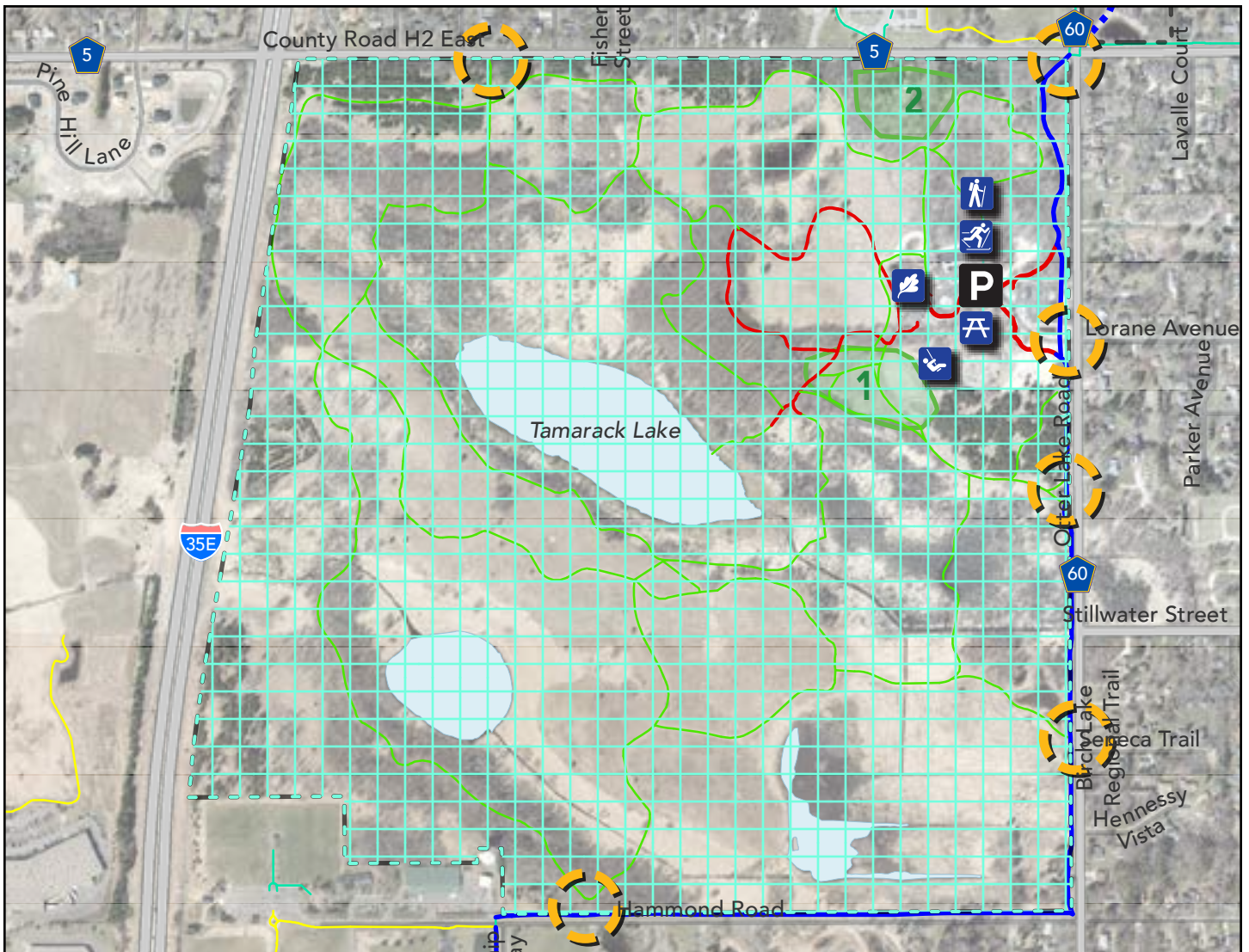
EXISTING CONDITIONS - BALD EAGLE



Legend

Park Border		Park Paved Trail		Restrooms		Picnic Area	
Park Entrance		Park Turf Trail		Picnic Shelter		Playground	
Metro Transit Stop		Municipal Trail		Carry In		Fishing Pier	
Regional Trail		Municipal Ped/Bike Facility		Boat Launch		Hiking	
				Parking Lot			

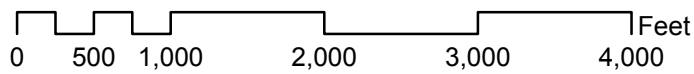
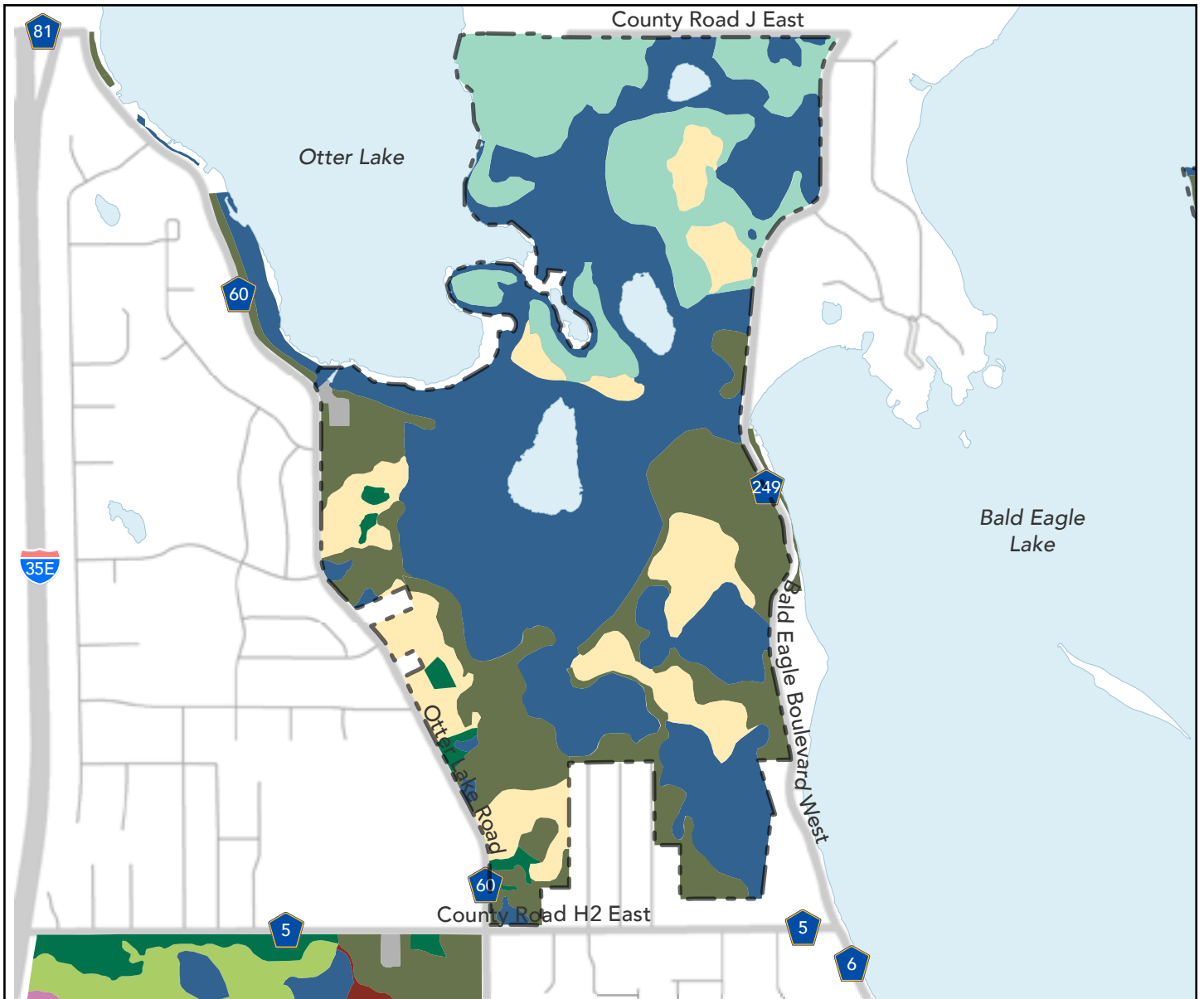
EXISTING CONDITIONS - TAMARACK NATURE CENTER



Legend

Park Border		Park Paved Trail		Hiking	
Park Entrance		Park Turf Trail		Nature Center	
Metro Tranist Stop		Municipal Trail		Picnic Area	
Proposed Regional Trail		Municipal Ped/Bike Facility		XC Ski	
		Regional Trail		Parking Lot	
				Environmental Natural Area	

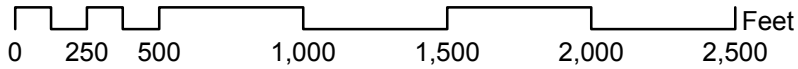
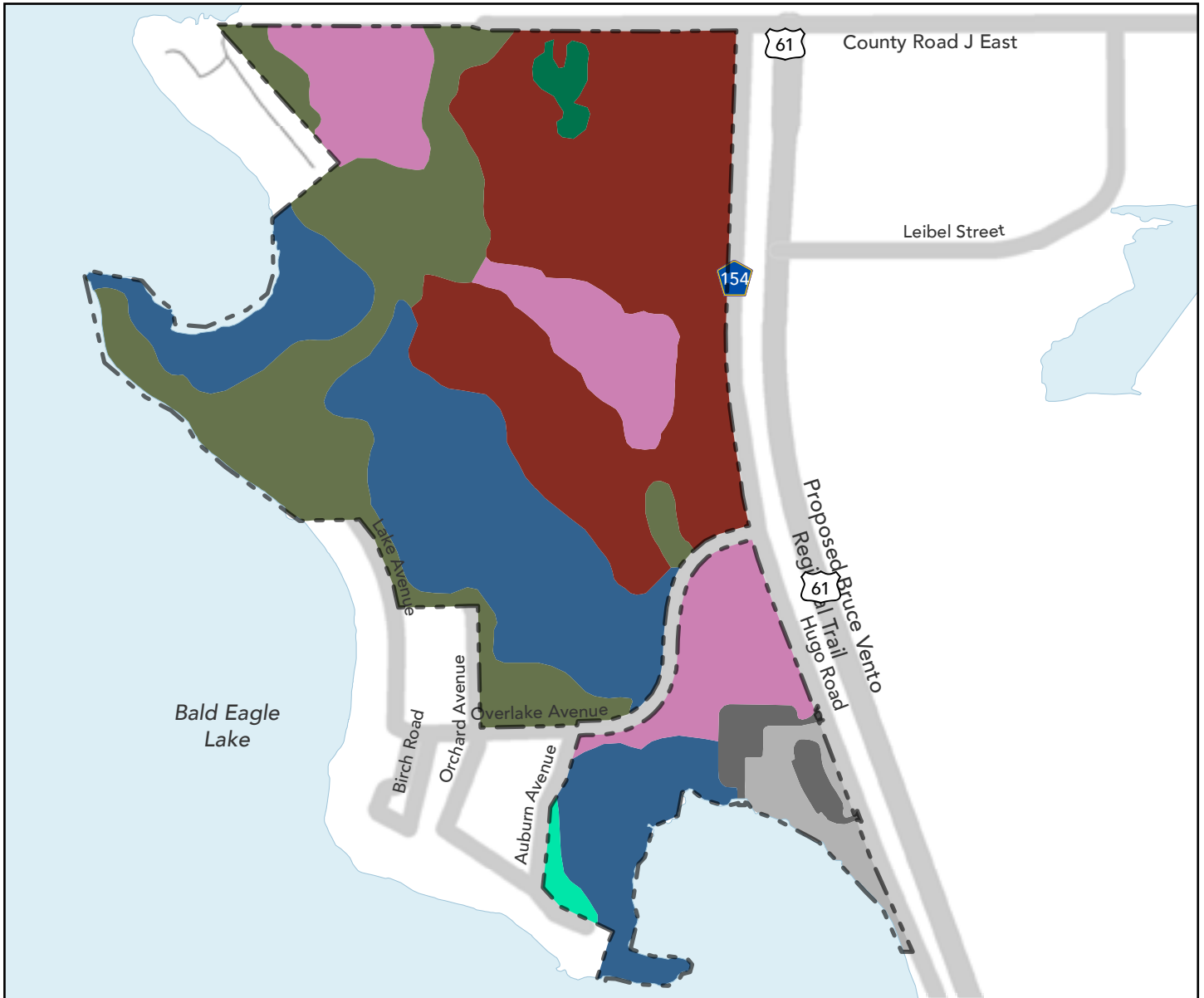
EXISTING LAND COVER - OTTER LAKE



Existing Land Cover

- |                     |                   |            |                 |
|---------------------|-------------------|------------|-----------------|
| Active Use          | Floodplain Forest | Oak Woods  | Remnant Prairie |
| Impervious          | Mesic Forest      | Old Field  | Savanna         |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp     |
| Tamarack Swamp      | Wetland           | Open Water |                 |

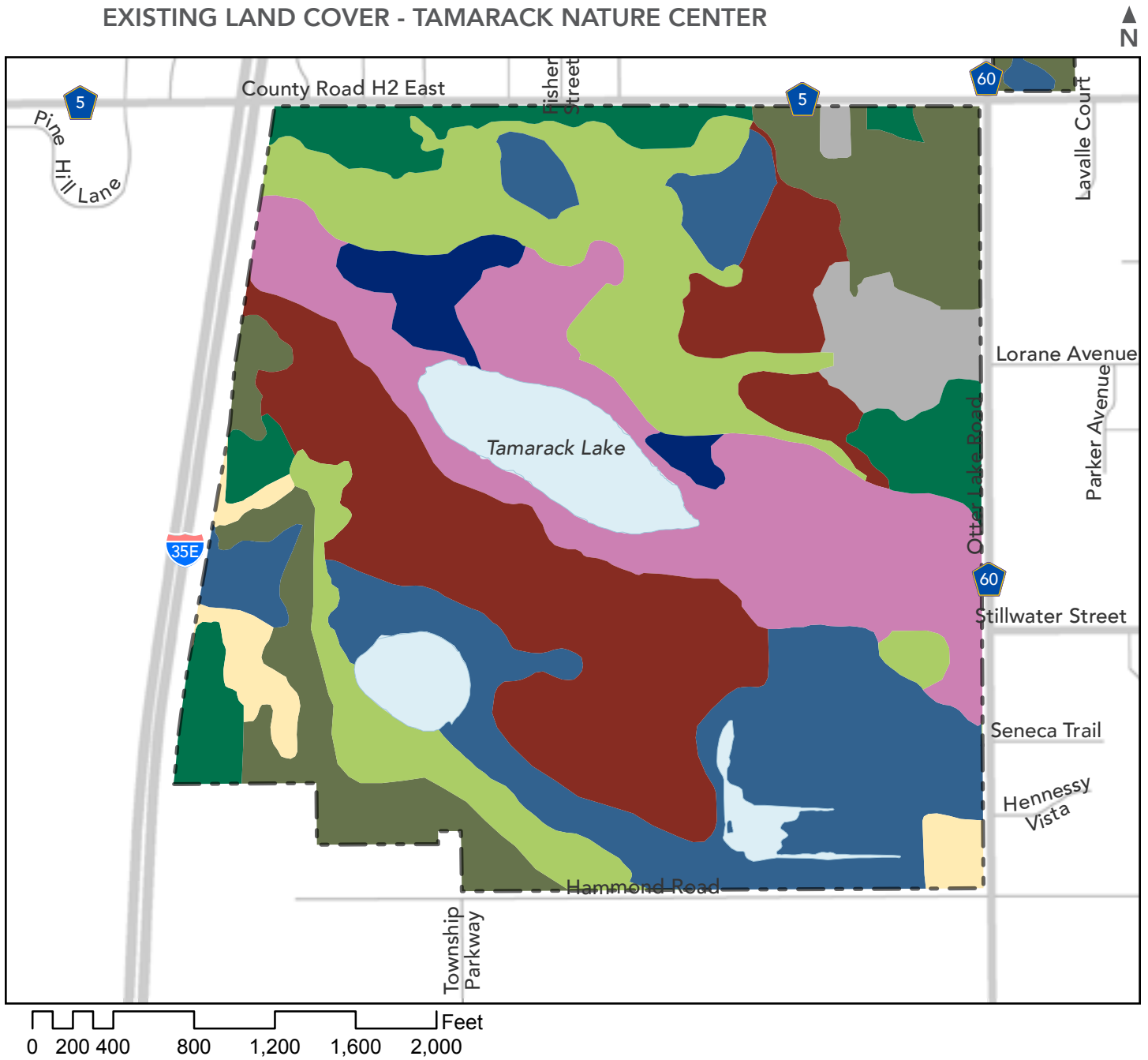
EXISTING LAND COVER - BALD EAGLE



Existing Land Cover

- |                     |                   |            |                 |
|---------------------|-------------------|------------|-----------------|
| Active Use          | Floodplain Forest | Oak Woods  | Remnant Prairie |
| Impervious          | Mesic Forest      | Old Field  | Savanna         |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp     |
| Tamarack Swamp      | Wetland           | Open Water |                 |

EXISTING LAND COVER - TAMARACK NATURE CENTER



Existing Land Cover

- |                     |                   |            |                 |
|---------------------|-------------------|------------|-----------------|
| Active Use          | Floodplain Forest | Oak Woods  | Remnant Prairie |
| Impervious          | Mesic Forest      | Old Field  | Savanna         |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp     |
| Tamarack Swamp      | Wetland           | Open Water |                 |



## LAND COVER AND HABITAT

The native vegetation of Bald Eagle-Otter Lakes Regional Park was a mixture of mesic woods, oak woods, prairie, and a variety of wetlands. Current vegetation includes portions of these native habitats, converted native prairies, plus old fields, and cultivated conifer stands. The unique habitats that require additional preservation include the tamarack swamp/bog, red maple woods, and shrub swamps within the Tamarack Nature Center section (management unit (MU) 1), the tamarack swamp/bog, and mesic woodlands within the Otter Lake section (MU2), and the undeveloped shorelines within the Otter and Bald Eagle sections (MU 2 and MU 3). The wetland complex in the southeast corner of the Tamarack Nature Center section (MU 1) is a wetland bank shared by the Ramsey County Parks & Recreation department and Ramsey County Public Works department. The restoration and reporting of this site is mainly completed by the Ramsey County Public Works department in conjunction with the Ramsey County Parks & Recreation department. Invasive species have become widespread in most habitats. The most common and destructive species include buckthorn, black locust, spotted knapweed, and reed canary grass.

## WILDLIFE

The park hosts a diverse variety of wildlife. Otter Lake and its associated wetlands are important for waterfowl nesting and migration. The extensive restored prairies are important nesting sites for grassland sparrows, bobolinks, and meadowlarks. There are bald eagles that nest within the park and other wildlife includes raptors, wild turkeys, a number of reptiles, amphibians, and mammals. Larger mammals include white-tailed deer, coyotes, red fox, and raccoons. Blanding's turtles have been found in the Otter Lake section.

## WILDLIFE MANAGEMENT

Deer populations in the area are surveyed annually to determine the need and location for special archery hunts. Deer will be managed with special hunts under the Ramsey County Cooperative Deer Management Plan in partnership with White Bear Township. Nest boxes are provided for wood ducks and eastern bluebirds throughout the park. Osprey poles have been erected in the Otter Lake section.

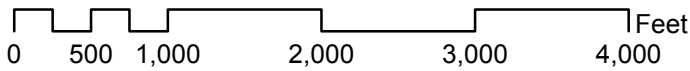
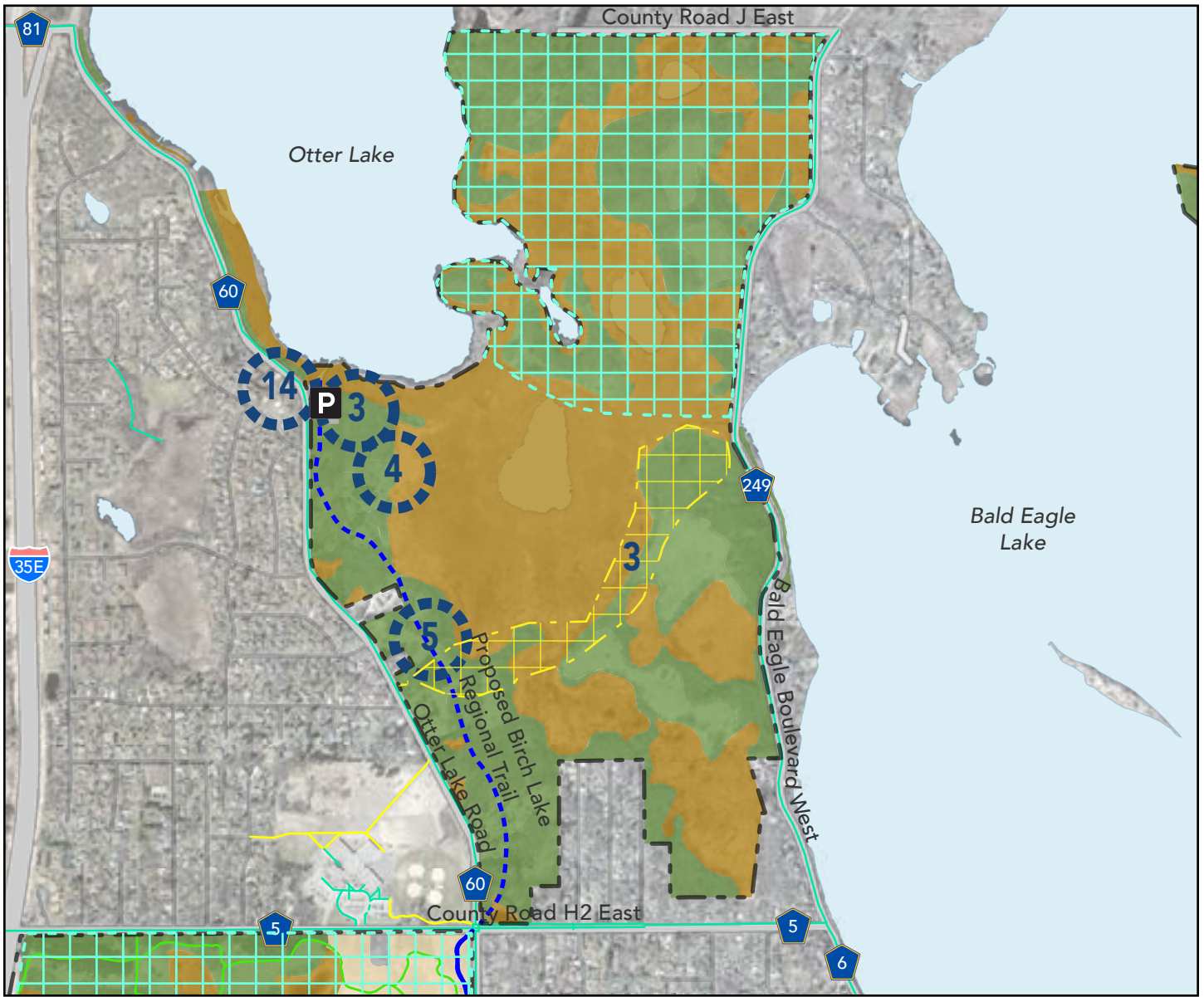
## SURFACE WATER RESOURCES

The park abuts over 7,000 feet of shoreline on Otter Lake and around 2,700 feet of shoreline on Bald Eagle Lake consisting mostly of natural shoreline and sections of active use, including boat launches on both lakes. The Otter Lake shoreline is the second longest section of natural shoreline within the park system which warrants additional preservation. Both lakes are used recreationally and Bald Eagle Lake is a popular fishing lake. In the past five years Rice Creek Watershed District has completed a large scale aluminum sulfide treatment project within Bald Eagle Lake to reduce internal phosphorus loading.

## ENVIRONMENTAL NATURAL AREAS

The Bald Eagle – Otter Lakes Regional Park's designated Environmental Natural Areas (ENA) include the northern portion of the Otter Lake section, north of the channel between Otter and Bald Eagle Lakes, and the non-developed areas of the Tamarack Nature Center section. The Otter Lake ENA includes some of the best examples of mesic woodlands in the county, the only healthy tamarack wetland and one of the longest undeveloped shorelines in the county. The Tamarack Nature Center ENA is designated to protect the area for environmental education and for expanded habitat restoration efforts.

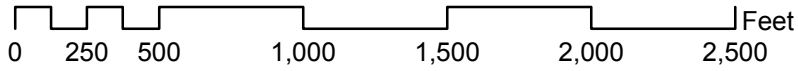
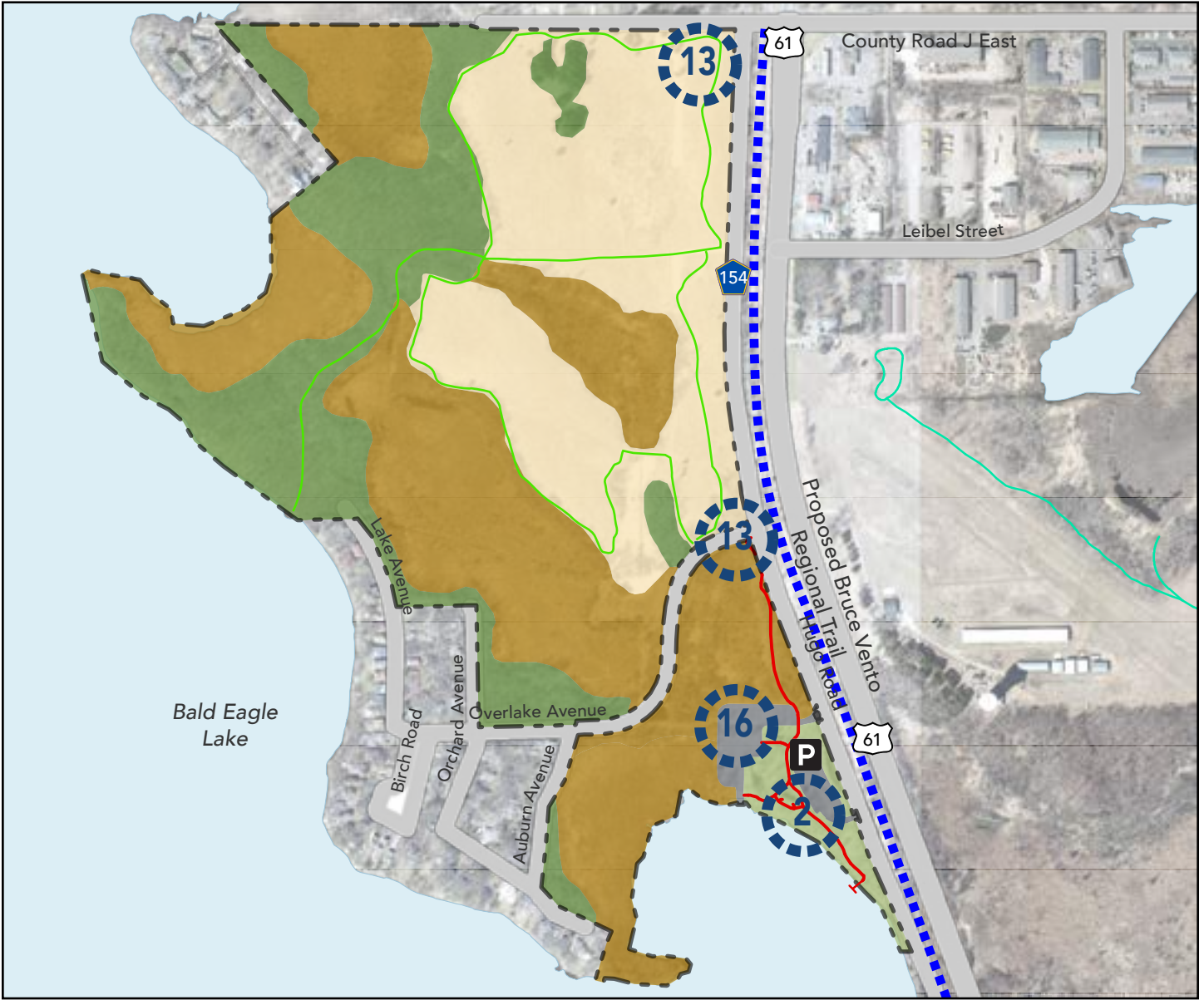
PROPOSED DEVELOPMENT - OTTER LAKE



Legend

Park Border		Park Paved Trail		Regional Trail	
Proposed Development		Park Turf Trail		Proposed Regional Trail	
Proposed Development Node		Municipal Trail		Environmental Natural Area	
Metro Tranist Stop		Municipal Ped/Bike Facility			

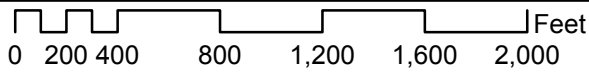
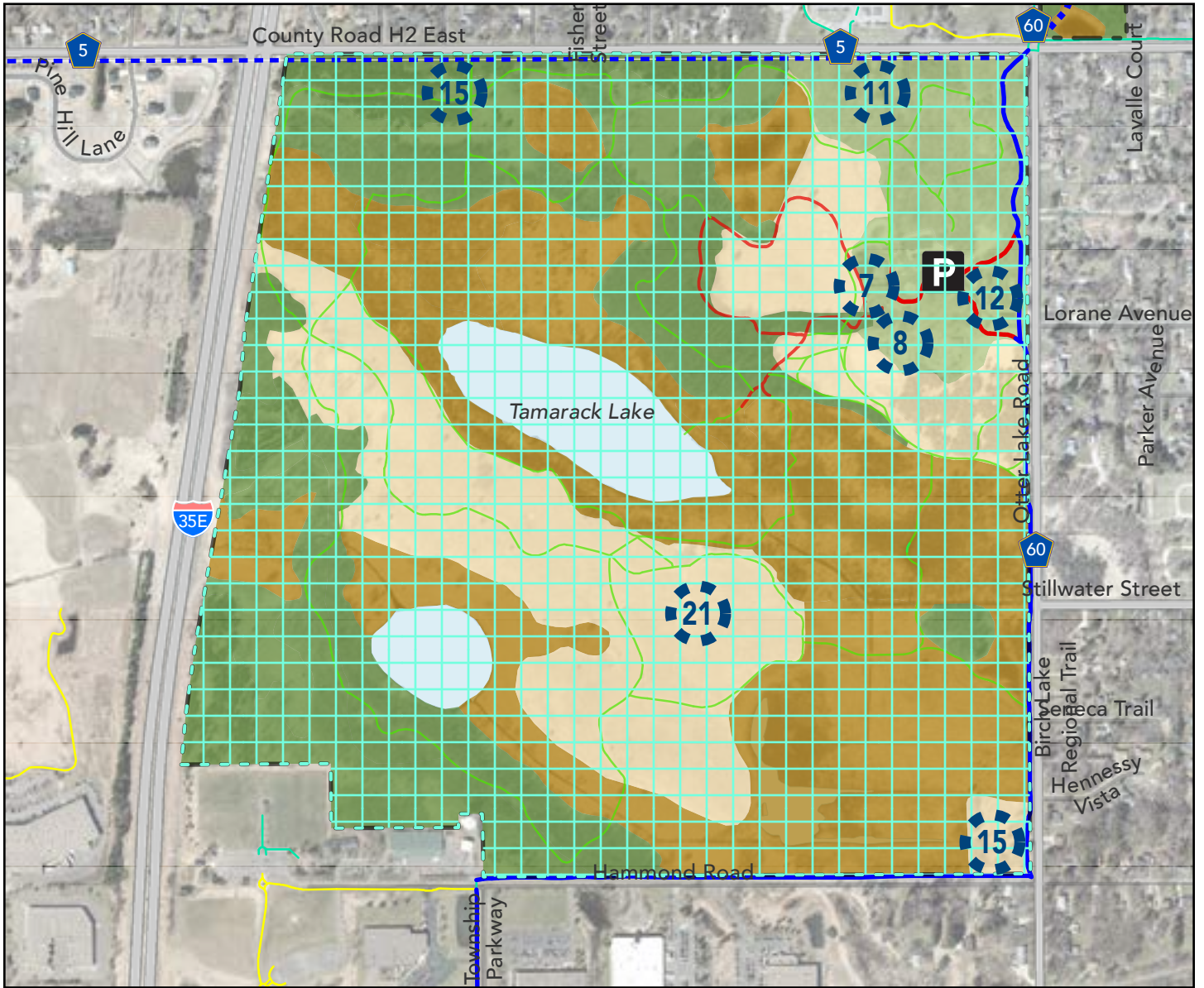
PROPOSED DEVELOPMENT - BALD EAGLE



Legend

- |                           |  |                             |  |                            |  |
|---------------------------|--|-----------------------------|--|----------------------------|--|
| Park Border               |  | Park Paved Trail            |  | Regional Trail             |  |
| Proposed Development      |  | Park Turf Trail             |  | Proposed Regional Trail    |  |
| Proposed Development Node |  | Municipal Trail             |  | Environmental Natural Area |  |
| Metro Tranist Stop        |  | Municipal Ped/Bike Facility |  |                            |  |

PROPOSED DEVELOPMENT - TAMARACK NATURE CENTER



Legend

- |                           |  |                             |  |                            |  |
|---------------------------|--|-----------------------------|--|----------------------------|--|
| Park Border               |  | Park Paved Trail            |  | Regional Trail             |  |
| Proposed Development      |  | Park Turf Trail             |  | Proposed Regional Trail    |  |
| Proposed Development Node |  | Municipal Trail             |  | Environmental Natural Area |  |
| Metro Tranist Stop        |  | Municipal Ped/Bike Facility |  |                            |  |

## PLANNING CONSIDERATIONS

The Park Master Plan is over 30 years old. The plan should be revisited and updated. Tamarack Nature Center has been established as the primary environmental education center in the county. Programming partnerships with school districts and allied non-profit groups have precipitated discussions about co-location of offices and program facilities on the site. The benefits of these partnerships will be evaluated based on potential for expanded service consistent with the mission of Tamarack Nature Center.

### Tamarack Attendance

The following tables list the program/visitor categories, the corresponding number of programs conducted, and attendance. Please note: Attendance is calculated by counting visitors attending per day, not per program registration. For example, a child attending a four-day summer camp program is counted four times even though that child is registered for just one program.

2016 TAMARACK PROGRAM ATTENDANCE		
DESCRIPTION	NUMBER OF PRO-GRAMS	ATTENDANCE (USER DAYS)
NEW SCHOOL PARTNERSHIP (WILLOW LANE)	76	2,310
DROP-IN DISCOVERY	45	1,436
DISCOVERY WALKS	45	1,436
MEET THE GARDENER	45	1,436
FREE DISCOVERY HOLLOW & GARDEN ATTENDANCE	365	50,097
SUPER STATIONS (Y'S, GIRLS & BOYS CLUBS, ETC.)	96	4,852
SCHOOL PROGRAMS	196	7,858
OUTREACH PROGRAMS	222	6,662
PUBLIC PROGRAMS (INCL. BIRTHDAY PARTIES, SCOUTS)	224	2,690
DAY CAMP PROGRAMS	248	7,223
NATURE PRESCHOOL PROGRAMS	252	14,819
<b>TOTAL PROGRAMS &amp; ATTENDANCE</b>		
	1,724	97,947

## PROPOSED DEVELOPMENT

### 1. Master Planning

The master plan for Bald Eagle-Otter Lake Regional Park was completed in June 1987, and was approved by the Ramsey County Board of Commissioners and the Metropolitan Council. Due to additional park infrastructure development throughout the regional park, changing trends of park and recreation facilities, demographics, and the need to provide improved recreational facilities, a master plan update is proposed for the regional park.

- Much has changed in the regional park since the implementation of the master plan in 1987. Most of the existing park infrastructure was developed in the 1990s to early 2000s. Additional development for park and recreation infrastructure is proposed in several areas throughout the regional park. A master plan update is proposed to address new development opportunities, previously proposed projects within the 1987 master plan, and 2006 system plan.
- Develop partnerships with the city of White Bear Lake, White Bear Township, Vadnais Lake Area Watershed Management Organization (VLAWMO), Rice Creek Watershed District (RCWD), White Bear Lake School District, other local agencies, and private sector for recreational opportunities and funding strategies for proposed improvements throughout the park.

### 2. Bald Eagle

Due to aging infrastructure improvements are proposed to the picnic area, boat parking facilities, and other site amenities improvements. The boat launch parking lot is proposed to be reconstructed due to poor pavement condition, a low parking capacity, poor internal circulation, and a need for improved storm water management. Redevelopment activities in the picnic area and boat launch facility may consist of building improvements, parking lot redevelopment or expansion, improvements to turf areas, improved trail connections, an extension of a paved trail to County Rd J, additional water play activities, and updated site amenities. A master planning study may be required to address improvements and new recreational development opportunities.

### 3. Otter Lake

Development improvements are proposed to address new opportunities throughout the park, previously proposed projects within the 1987 master plan, and 2006 system plan. As identified in the 1987 master plan and 2006 system plan additional recreational development is proposed for this area of the park. There has been a demand to increase picnic facilities, restroom facilities, interpretive and educational areas, observation viewing spaces, day camp opportunities, and provide additional trail development consisting of paved trails, natural surface trails, and a boardwalk to connect Otter Lake with Bald Eagle Boulevard. In 2017 the 1-acre property located within the park near the corner of Otter Lake Road and County Road H2 was under a life-estate agreement with the former owner and was turned over to Ramsey County for inclusion into the park system. A phase-1 environmental report was completed and it was determined that no additional environmental investigation was required. Prior to any proposed development on this 1-acre property removal of existing buildings and other debris will be required. Master planning activities for the Otter Lake park area will be required to identify potential recreational development opportunities and other recreational opportunities for this area.

### 4. Otter Lake Off Leash Dog Area

Master planning for the system-wide Off-Leash Dog Area Master Plan began in 2017 and was completed in 2018. This master plan addresses improvements to the Otter Lake Off-Leash Dog Area.

## PROPOSED DEVELOPMENT

### 5. Trail Extension

A preliminary design study was completed in 2016 for a trail extension from Tamarack Nature Center to the Otter Lake boat launch and off-leash dog area. Planning activities included in the preliminary design study consisted of site improvements for the trail extension, and potential recreation development opportunities such as boardwalks, overlook areas, interpretive/educational programming areas, additional connections to Otter Lake Road, and cleanup of the 1-acre property for further recreation development. Additionally as part of this preliminary study the extension of paved trail to County Road J along Otter Lake Road was investigated for potential trail development.

### 6. Tamarack Nature Center

Additional recreational development is proposed to expand nature play, early-childhood learning opportunities, and interpretive/educational programming. Additional master planning activities started in 2018 for TNC. This study will help inform redevelopment and additional recreational development opportunities throughout the TNC facility and property.

### 7. Nature Center & Early Childhood Facility

Building improvements have occurred since the 2006 system plan which consist of the addition of an Early Childhood building addition, and remodeling portions of the Nature Center for improved gathering areas, restrooms, and nature/wildlife exhibits. Additional building development is proposed due to an increased demand for nature programming, recreation programming, interpretive and educational opportunities, and volunteer areas. Building improvements to the nature center may consist of a building expansion to accommodate additional gathering areas with food and beverage opportunities, classrooms, improved recreation programming areas, offices and meeting rooms, storage, an outdoor deck and amphitheater, updated heating/ventilation/air conditioning systems, and electronic/visual improvements.

### 8. Discovery Hollow, Garden, Logs & Hollows

In 2009, planning activities started for the creation of a discovery area, known as Discovery Hollow and Garden Area. This planning study identified potential improvements and development at TNC. In 2010 construction started and was completed in 2011 for a nature play area and garden. Since this area was opened to the public TNC has been able to provide a unique opportunity for nature play and interpretive/educational programming. Due to heavy use and increased demand there have been several components within the Discovery Hollow area that will likely need to be addressed for improved use and operation. Enhancements include improvements to planting and program areas during heavy use, operation of existing built components, access and walkability of areas, addition of restroom facilities, possible addition and reuse of the Garden House structure for improved use and programming, garden planting areas with increased programming elements, the existing solar flower arrays, and play features.

### 9. Day Camp Areas

Day camps at TNC are integral for interpretive and educational programming. Due to heavy use and increased demand additional day camp improvements are proposed for TNC such as larger and more flexible programming areas, accessibility and access improvements, outdoor classrooms, shelter facilities, site amenities, and expanded day camp areas.

## PROPOSED DEVELOPMENT

### 10. Sugar Shack

The Sugar Shack is used for the production of maple syrup during educational programming on the subject. Due to the age of the building and heavy use redevelopment is required. There is a need for a larger area to accommodate a variety of group sizes for interpretive/educational programming. Improvements may consist of rebuilding the Sugar Shack in its current location or moving it to another location on the TNC property where there is better access and additional programming opportunities can be provided.

### 11. Maintenance & Operations

There is a small maintenance facility located on the northern portion of the property along County Road H2. This is the main maintenance facility at TNC for equipment storage, material storage, maintenance operation, and also accommodates the Conservation Corps of Minnesota (CCM). The CCM group uses this facility as a base for habitat restoration operations within TNC and other areas within the regional park and trail system. The maintenance area has limited space and is located away from the main components at TNC. There is a demand to provide an improved building facility and yard for maintenance operations. There is also a need to provide additional storage and maintenance facilities closer to Discovery Hollow and Garden area due to the amount of maintenance operations required.

### 12. TNC ENTRANCE

In 2014-2015 master planning activities were completed for the TNC entrance. This study identified development of the entrance drive, parking lots, storm water management, pedestrian connections, use of the front lawn area for general use and programming, improved circulation, and pedestrian connections. As part of this study there were potential expansion areas identified for additional day camps near the main TNC building. Redevelopment activities for the main entrance drive, parking lot facility, storm water management, entrance signs, and limited pedestrian connections were completed in 2017.

Additional development is proposed to complete remaining site components previously identified in the 2015-2015 planning study. Ongoing development for the TNC entrance area include additional pedestrian connections, drop-off nodes, programming nodes, redevelopment of the front lawn area for general use and programming, wayfinding, and site amenities.

### 13. Bald Eagle Trails & Access Points

Redevelop and improve existing trails and access points into the picnic area, boat launch, and the Benson Prairie area from adjacent residential neighborhoods. Additional access points are proposed into the picnic area and boat launch facility along Hugo Road to connect a potential future trail alignment for the Bruce Vento Regional Trail. Depending on the specific alignment route for the proposed Bruce Vento Regional Trail, sections may extend into the Bald Eagle section of the park for improved connectivity. Additional trail development is proposed along either the Benson Prairie area or Hugo Road for connection to County Rd J near Hugo Road. This will provide a future trail connection to the Hardwood Creek Regional Trail in Washington County.



## PROPOSED DEVELOPMENT

### 14. Otter Lake Trails & Access Points

Redevelop and improve existing trails and access points into the Otter Lake section from adjacent residential neighborhoods, Otter Lake Road, and Bald Eagle Boulevard. Additional access points are proposed into the Otter Lake Section from Tamarack Nature Center, Otter Lake Road, and Bald Eagle Boulevard for improved access from adjacent residential neighborhoods. Additional paved trail development is proposed for improved connections from Otter Lake Road and Bald Eagle Boulevard. A preliminary design study was completed in 2016 for a trail extension from Tamarack Nature Center to the Otter Lake boat launch and off-leash dog area. Additional trail development along Otter Lake Road to County Rd J will provide a future trail connection to regional trail systems provided by Anoka County.

### 15. Tamarack Nature Center Trails & Access Points

Redevelop and improve existing trails and access points into Tamarack Nature Center from adjacent residential neighborhoods, County Road H2, Otter Lake Road, and Hammond Road. Additional access points are proposed into Tamarack Nature Center from County Road H2, Otter Lake Road, Hammond Road, and adjacent residential neighborhoods for improved access. There is a demand for increasing paved and natural surface trails within Tamarack Nature Center for improved recreational opportunities. Additional trails would provide connection to the Birch Lake Regional Trail located along Hammond Road, and residential neighborhoods along Otter Lake Road and County Road H2.

### 16. Bald Eagle Parking Lot

Pavement maintenance was last completed in 2009. A mill and overlay will be required for the picnic area and overflow parking lots. Due to existing pavement conditions redevelopment and possible expansion is proposed to address settling within the lot and to improve stormwater management.

### 17. Otter Lake Parking Lot

Redevelopment of this lot occurred in 2011. No additional development is required except maintenance of asphalt, concrete and associated parking lot components. Additional development may be proposed to the area for additional picnic and day camp areas.

### 18. Tamarack Nature Center

Redevelopment of this lot occurred in 2016. No additional development is required except maintenance of asphalt, aggregate surfacing, concrete, and associated parking lot components.

### 19. Wayfinding

- **Pedestrian:** Improve pedestrian signage for trail access and other amenities. Provide interpretive signage in natural areas for increased nature education opportunities.
- **Bald Eagle:** Redevelop the existing entrance park ID to the picnic area and install a monument sign and adjacent components. Replace the existing wood park ID signs in other areas of the Bald Eagle section for improved wayfinding in the park.
- **Otter Lake:** The existing park ID sign was replaced with the parking lot development in 2011. Additional park ID signs are proposed for future recreational areas as development occurs.
- **Tamarack Nature Center:** The existing park ID sign was replaced with the parking lot development in 2016. Additional park ID signs are proposed for future recreational areas as development occurs.

## PROPOSED DEVELOPMENT

### 20. Recreational Opportunities

- **Bald Eagle Picnic Area Playground:** Redevelop the existing playground for improved use and play. Replace existing components and surface materials for improved accessibility and maintenance operations.
- **Nature Playground:** Redevelop and improve the existing nature play areas at TNC for enhanced use and play. Replace or repair existing components and safety surface materials for improved accessibility and maintenance operations. Specific components within the Discovery Hollow area may need to be maintained at a different interval due to heavy use or unique material requirements such as the replacement of shade structures, gathering areas, rock climbing walls, sand and water play features, play stream, safety fencing, garden planting structures, poured in place safety surfacing, wood safety surfacing, wood play elements, walkways and border pavement edging components.
- **New Playgrounds:** Additional playground development may be proposed. Master planning activities will be required for any new playground development and would likely occur in future redevelopment.
- **Multi-Use Turf:** Improve turf areas for increased recreational and community event opportunities.
- **Court Games:** Explore the development of court games near picnic areas to correspond with changing trends, demographics and park use.
- **Public Art:** Provide the opportunities and appropriate infrastructure to accommodate public art for improved connections to adjacent communities.
- **Culturally Significant Areas:** Provide access and interpretive education for culturally significant areas within Bald Eagle Otter Lake Regional Park. Improvements would consist of observation areas, interpretive educational signage, and pedestrian connections.
- **Wildlife Areas:** Provide visual and interpretive educational signage, as well as pedestrian connections. If federally or state listed protected plants or animals are discovered statutes and guidelines will be followed.
- **Bald Eagle Fishing Pier:** Provide necessary improvements to the existing fishing pier on Bald Eagle Lake for use and maintenance operations. Provide secondary fishing access points where conditions allow.
- **Fishing Opportunities at Otter Lake:** Additional fishing opportunities should be investigated to aid in increased fishing activity.
- **Programming:** Increase recreation and nature programming activities.
- **Watercraft Access:** Provide access for small water craft within the park. Increase variety of rental amenities for small watercraft.
- **Boat Launch Facilities:** Provide necessary improvements to the existing boat launch facility on Bald Eagle and Otter Lake.

## PROPOSED DEVELOPMENT

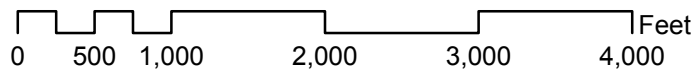
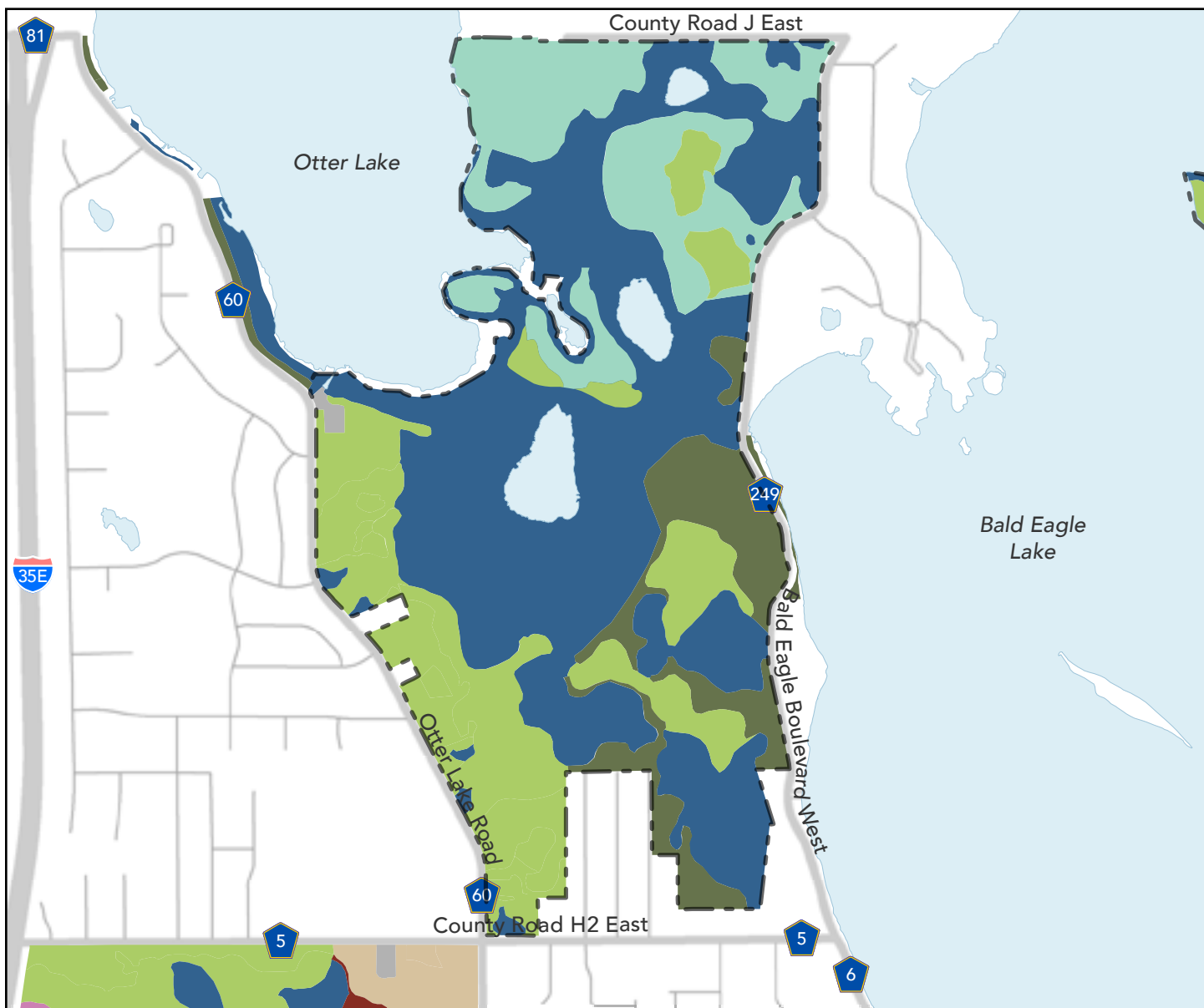
### 21. Habitat Restoration & Management

- In the past 10 years, restoration efforts to combat invasive species and improve habitat has been implemented throughout portions of Bald Eagle – Otter Lakes Region Park.
- Restoration efforts have included invasive woody removal of mostly buckthorn in the over 50 acres of mesic woods and small buckthorn removal projects within the oak woods in Management Unit 1.
- Established prairie maintenance has included prescribed burns and introduction of forbs in the 44-acre prairie in Management Unit 3 and over 60 acres of prairie in Management Unit 1.
- Ongoing maintenance will include foliar spraying of buckthorn and other invasive species as well as periodic prescribed burns of all restored sites.
- Ongoing wetland bank restoration improvements include prescribed burns, seeding of native wetland species and herbicide treatment of reed canary grass and invasive cattails.
- Future restoration and land cover changes will include portions of mixed woods, old field and cultivated conifers being converted to primarily oak woods, savanna, and prairie within all management units.

### 22. Acquisitions

Future acquisition is proposed for adjacent properties along with open space expansion for inclusion into Bald Eagle-Otter Lakes Regional Park when properties become available. Master planning activities would be required to determine potential recreation uses for any acquisitions or expansions.

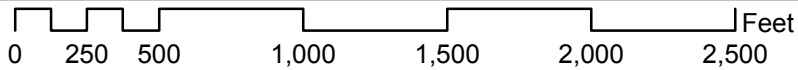
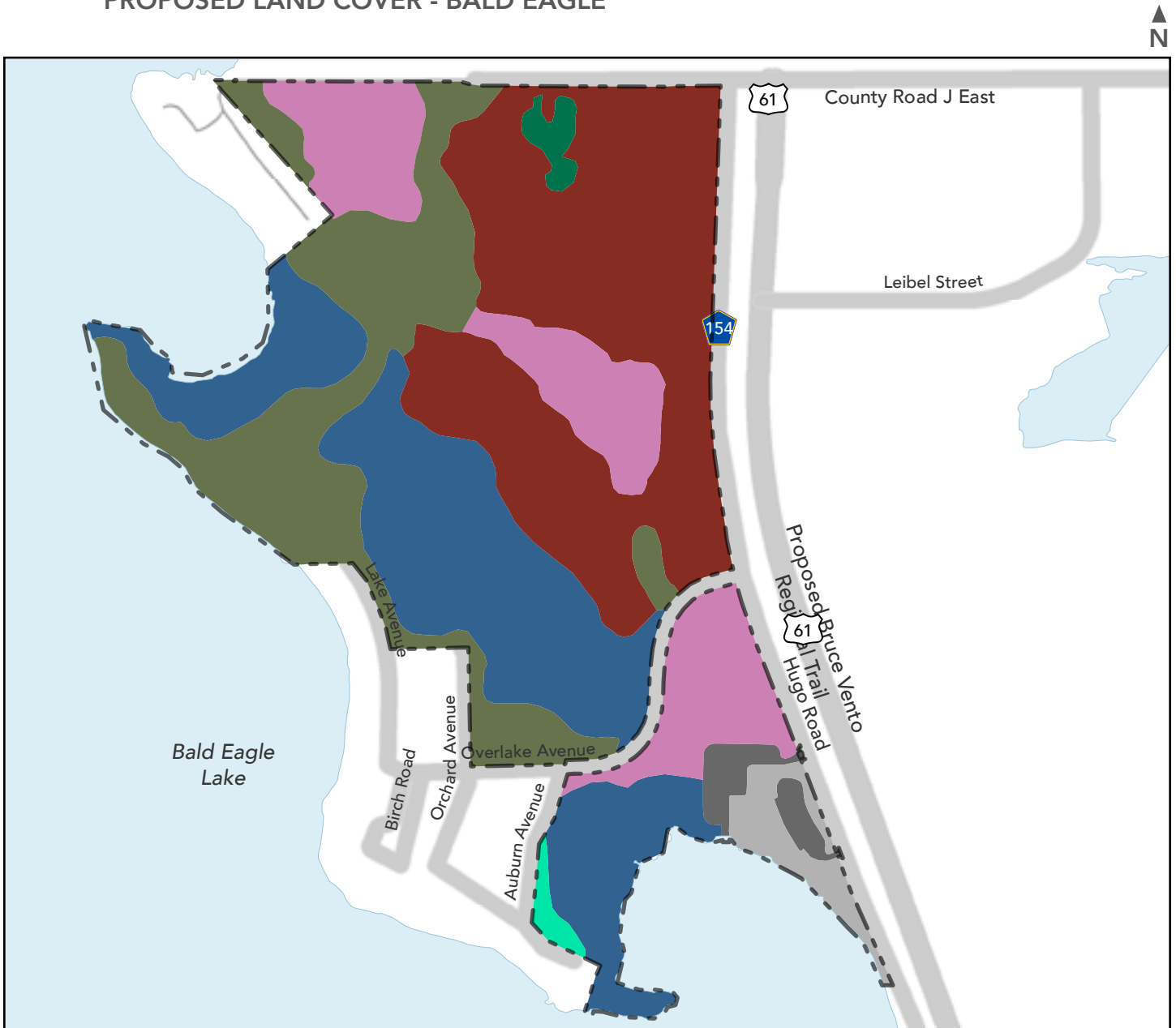
PROPOSED LAND COVER - OTTER LAKE



Proposed Land Cover

- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |

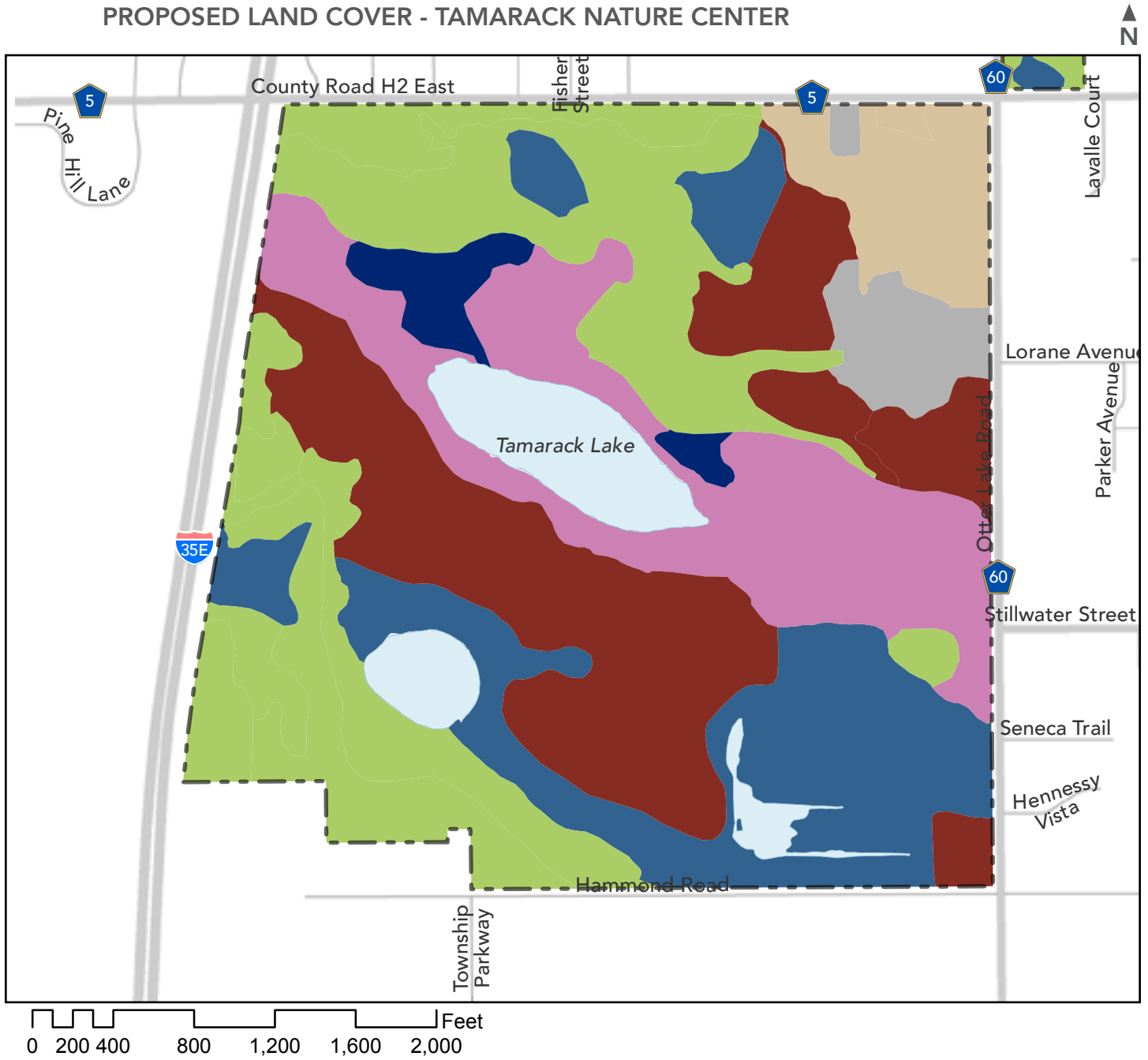
PROPOSED LAND COVER - BALD EAGLE



Proposed Land Cover

- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |

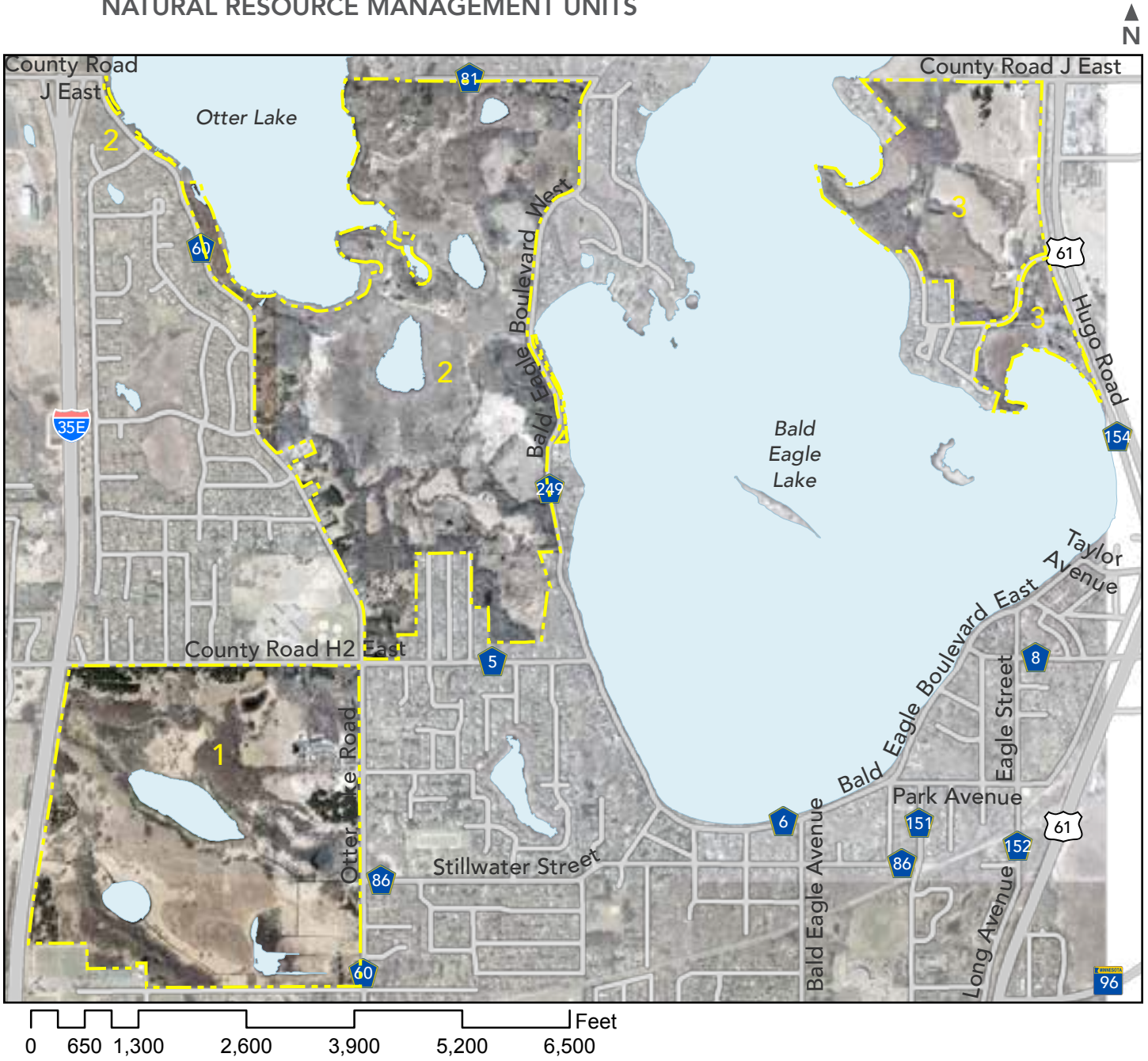
PROPOSED LAND COVER - TAMARACK NATURE CENTER



Proposed Land Cover

- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |

NATURAL RESOURCE MANAGEMENT UNITS



Legend

- Management Unit #
- Management Unit Border

NATURAL RESOURCE MANAGEMENT UNIT TABLE

MANAGEMENT UNIT 1 - BALD EAGLE OTTER LAKE REGIONAL PARK							
ACRES	CURRENT LAND COVER	FUTURE LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIORITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
7.09	OLD FIELD	PRAIRIE 2.39 ACRES	MOW, HERBICIDE, RX BURN, DRILL SEED	\$4,780.00	2	FOLIAR SPRAY OF HERBACEOUS	\$1,434.00
		OAK WOODS 4.7 ACRES	MOW, HERBICIDE, RX BURN, DRILL SEED, PLANT OAKS	\$9,400.00	2	FOLIAR SPRAY OF HERBACEOUS/ BUCKTHORN	\$2,820.00
7.67	TAMARACK SWAMP	TAMARACK SWAMP	MONITOR	N/A	2	N/A	N/A
10.65	ACTIVE USE	ACTIVE USE	N/A	N/A	N/A	N/A	N/A
17.91	OPEN WATER	OPEN WATER	N/A	N/A	N/A	N/A	N/A
22.83	CULTIVATED CONIFERS	SAVANNA 0.8 ACRES	INVASIVE WOODY REMOVAL AND HAUL OFF SITE, MOW, HERBICIDE, RX BURN, DRILL SEED, PLANT SPARSE OAKS	\$1,600.00	2	FOLIAR SPRAY OF HERBACEOUS	\$400.00
		PRAIRIE 6.16 ACRES	INVASIVE WOODY REMOVAL AND HAUL OFF SITE, MOW, HERBICIDE, RX BURN, DRILL SEED	\$12,320.00	2	FOLIAR SPRAY OF HERBACEOUS	\$3,080.00
		OAK WOODS 13.86 ACRES	INVASIVE WOODY REMOVAL AND HAUL OFF SITE, MOW, HERBICIDE, RX BURN, DRILL SEED, PLANT OAKS	\$27,720.00	2	FOLIAR SPRAY OF HERBACEOUS	\$6,930.00



NATURAL RESOURCE MANAGEMENT UNIT TABLE

MANAGEMENT UNIT 1 - BALD EAGLE OTTER LAKE REGIONAL PARK							
ACRES	CURRENT LAND COVER	FUTURE LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIORITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
50.20	OAK WOODS	OAK WOODS	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN, RX BURN, NATIVE SEED	\$175,710.87	1	N/A	N/A
34.54	MIXED WOODS	SAVANNA 16.39 ACRES	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN, RX BURN, NATIVE SEED, PLANT OAKS	\$57,365.00	2	RX BURN, FOLIAR SPRAY OF BUCKTHORN	\$8,195.00
		OAK WOODS 18.15 ACRES	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN, RX BURN, NATIVE SEED, PLANT OAKS	\$63,525.00	2	RX BURN, FOLIAR SPRAY OF BUCKTHORN	\$9,075.00
51.23	SHRUB SWAMP	SHRUB SWAMP	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN	\$50,000.00	2	RX BURN, FOLIAR SPRAY OF BUCKTHORN	\$12,500.00
57.63	WETLAND	WETLAND	N/A	N/A	N/A	N/A	N/A
64.90	PRAIRIE	PRAIRIE	N/A	N/A	2	RX BURN, FOLIAR SPRAY OF HERBACEOUS	\$68,147.94
<b>MANAGEMENT UNIT 1 TOTAL</b>							
324.66				\$402,420.87			\$112,581.94

BALD EAGLE-OTTER LAKES REGIONAL PARK

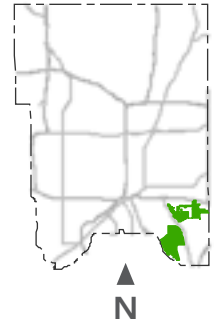
NATURAL RESOURCE MANAGEMENT UNIT TABLE

MANAGEMENT UNIT 2 - BALD EAGLE OTTER LAKE REGIONAL PARK							
ACRES	CURRENT LAND COVER	FUTURE LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIORITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
1.13	ACTIVE USE	ACTIVE USE	N/A	N/A	N/A	N/A	N/A
3.98	CULTIVATED CONIFERS	OAK WOODS	INVASIVE WOODY REMOVAL AND HAUL OFF SITE, PLANT OAKS	\$5,970.64	3	FOLIAR SPRAY OF BUCKTHORN	\$1,990.21
65.24	MESIC FOREST	MESIC FOREST	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN	\$130,487.15	2	FOLIAR SPRAY OF BUCKTHORN	\$32,621.79
53.43	OLD FIELD	OAK WOODS	FOLIAR SPRAY OF HERBACEOUS, PLANT OAKS	\$42,745.65	3	FOLIAR SPRAY OF BUCKTHORN	\$13,358.02
81.00	MIXED WOODS	OAK WOODS 37.43 ACRES	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN	\$74,860.00	2	FOLIAR SPRAY OF BUCKTHORN	\$9,357.50
		MIXED WOODS 43.57 ACRES	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN,	\$87,140.00	3	FOLIAR SPRAY OF BUCKTHORN	\$10,892.50
212.85	WETLAND	WETLAND	MONITOR	N/A	N/A	N/A	N/A
<b>MANAGEMENT UNIT 2 TOTAL</b>							
417.64				\$341,203.45			\$68,220.02

## NATURAL RESOURCE MANAGEMENT UNIT TABLE

MANAGEMENT UNIT 3 - BALD EAGLE OTTER LAKE REGIONAL PARK							
ACRES	CURRENT LAND COVER	FUTURE LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIORITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
0.90	FLOODPLAIN FOREST	FLOOD-PLAIN FOREST	MONITOR	N/A	N/A	N/A	N/A
1.32	CULTIVATED CONIFERS	CULTIVATED CONIFERS	INVASIVE WOODY REMOVAL AND HAUL OFF SITE, FOLIAR SPRAY OF HERBACEOUS, RX BURN, DRILL SEED	\$2,645.67	3	RX BURN, FOLIAR SPRAY OF HERBACEOUS	\$1,388.98
3.74	ACTIVE USE	ACTIVE USE	N/A	N/A	N/A	N/A	N/A
21.25	SHRUB SWAMP	SHRUB SWAMP	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN	\$21,253.70	3	Foliar Spray of Buckthorn	\$5,313.42
28.79	MIXED WOODS	OAK WOODS	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN	\$57,576.62	2	Foliar Spray of Buckthorn	\$7,197.08
38.66	WETLAND	WETLAND	N/A	N/A	N/A	N/A	N/A
44.05	PRAIRIE	PRAIRIE	N/A	N/A	2	RX BURN, FOLIAR SPRAY OF HERBACEOUS	\$33,038.90
<b>MANAGEMENT UNIT 3 TOTAL</b>							
138.71				\$81,475.99			\$46,938.38
<b>BALD EAGLE OTTER LAKE REGIONAL PARK TOTAL</b>							
881.01				\$825,100.31			\$227,740.34

## BATTLE CREEK REGIONAL PARK



### EXISTING SITE CONDITIONS



#### MASTER PLAN DATE: 1981 LOCATION AND SIZE

Battle Creek Regional Park is located in the southeast corner of Ramsey County in the cities of Saint Paul and Maplewood. The park is comprised of four segments: Indian Mounds (97 acres) ; Fish Hatchery (105 acres); Pigs Eye (610 acres); and Battle Creek (846 acres). In accordance with the 1981 joint master plan, the city of Saint Paul owns and operates the Indian Mounds and Fish Hatchery segments of the park. Ramsey County owns and operates the Battle Creek and Pigs Eye segments, consisting of 1,456 acres.



#### SITE CHARACTERISTICS

The park derives its name from Battle Creek, which flows from east to west through the length of the park on its way to the Mississippi River. Although the creek has been degraded and altered to accommodate extraordinary storm water run-off from surrounding development, it remains a positive asset to the park. Improvements to the creek and upstream watershed area by the Ramsey-Washington Metro Watershed District have corrected erosion problems and restored the creek within the park.

The most prominent visual characteristic of the park are the steep wooded slopes paralleling the Mississippi River and Battle Creek. The park includes approximately two miles of bluff land along the east side of the Mississippi River Corridor. Battle Creek flows through a steep wooded valley, which varies in depth from 25 feet to over 150 feet. The bluffs are significant in the development of the park as they provide a corridor and barriers, as well as panoramic views of the river valley. The entire Pigs Eye Lake segment of the park lies within the floodplain of the Mississippi River. The lake is approximately 500 acres in size and very shallow (less than 10 feet). The segment includes 610 acres surrounding the lake, which is entirely floodplain. The Pigs Eye Lake segment includes a 40-acre former landfill area at the north end of Pigs Eye Lake, which is an environmental concern that has been addressed by the city of Saint Paul and the Minnesota Pollution Control Agency. Pigs Eye Lake is also a scientific and natural area for a Heron Rookery. Ramsey County and the Army Corps Of Engineers have collaborated for potential island building within Pigs Eye Lake and have developed a feasibility study for the development of islands within the lake. Most of the remaining areas of the park consist of oak woods, prairie, and scattered ponds. At the lower end of Battle Creek, sandstone bluffs are exposed on both sides of the valley.



## RECREATION DEVELOPMENT

### Picnic Area/Family Aquatic Center

The 80-acre site, located in the northeast quadrant of McKnight Road and Upper Afton Road, is the primary recreation area within the park. The area includes a large group picnic pavilion, medium-sized picnic shelter, general picnic area, 275-car parking lot, destination play area, open game field, and a 1.2-mile bituminous biking/hiking trail. Battle Creek Waterworks, a family aquatics center, is located in the area and includes an interactive water play area, leisure pool, water slide, and sand play area. In addition to picnicking and water park activity, the area is used as a venue for special events and cross-country running meets.

### Eastern Trails Area

The area of the park southeast of McKnight Road and Upper Afton Road includes 2.5 miles of bituminous multi-use trails, and an additional 3 miles of unpaved hiking and cross-country ski trails. The bituminous trail corridors are also groomed for cross-country skiing, providing approximately 5 miles of cross-country ski trails in this area. The trails are connected to the trail system located in the picnic area to the north. A 110-car parking lot is located south of Upper Afton Road to serve this area, as well as provide overflow parking for the picnic area/family aquatics center. An additional 30-car parking lot is located on Lower Afton Road. A 35-acre fully fenced in off-leash dog area is located in the southwest portion of this area. Trail access to the off-leash dog area is provided from both parking lots.

### Battle Creek Corridor

The park encompasses land on both sides of Battle Creek between McKnight Road and State Highway 61. A 1.7-mile bituminous multi-use trail follows the creek throughout the area. A 36-car parking lot, located at the lower end of Battle Creek near State Highway 61, provides parking for trail users, as well as a small general picnic area located at the lower reaches of the corridor. An underpass of State Highway 61 provides trail access to the Fish Hatchery Lake and Indian Mounds Park areas and Sam Morgan Regional Trail.

### Lower Afton Trail

A 12ft wide multi-use trail exists along Lower Afton Road from Century Avenue to Point Douglas Road. The eastern section of this trail is located on county-owned land (Community Corrections department) outside the boundary of Battle Creek Regional Park. At the intersection of Point Douglas Road, the trail extends north and south on the existing road shoulder. This trail serves to connect Battle Creek from the Western portion of the park all the way to the east, as well as connecting it to other pedestrian and bike facilities along Century Ave.

### Battle Creek West/Winthrop Street Areas

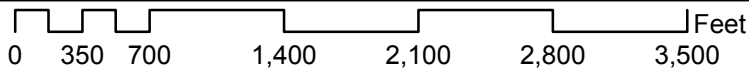
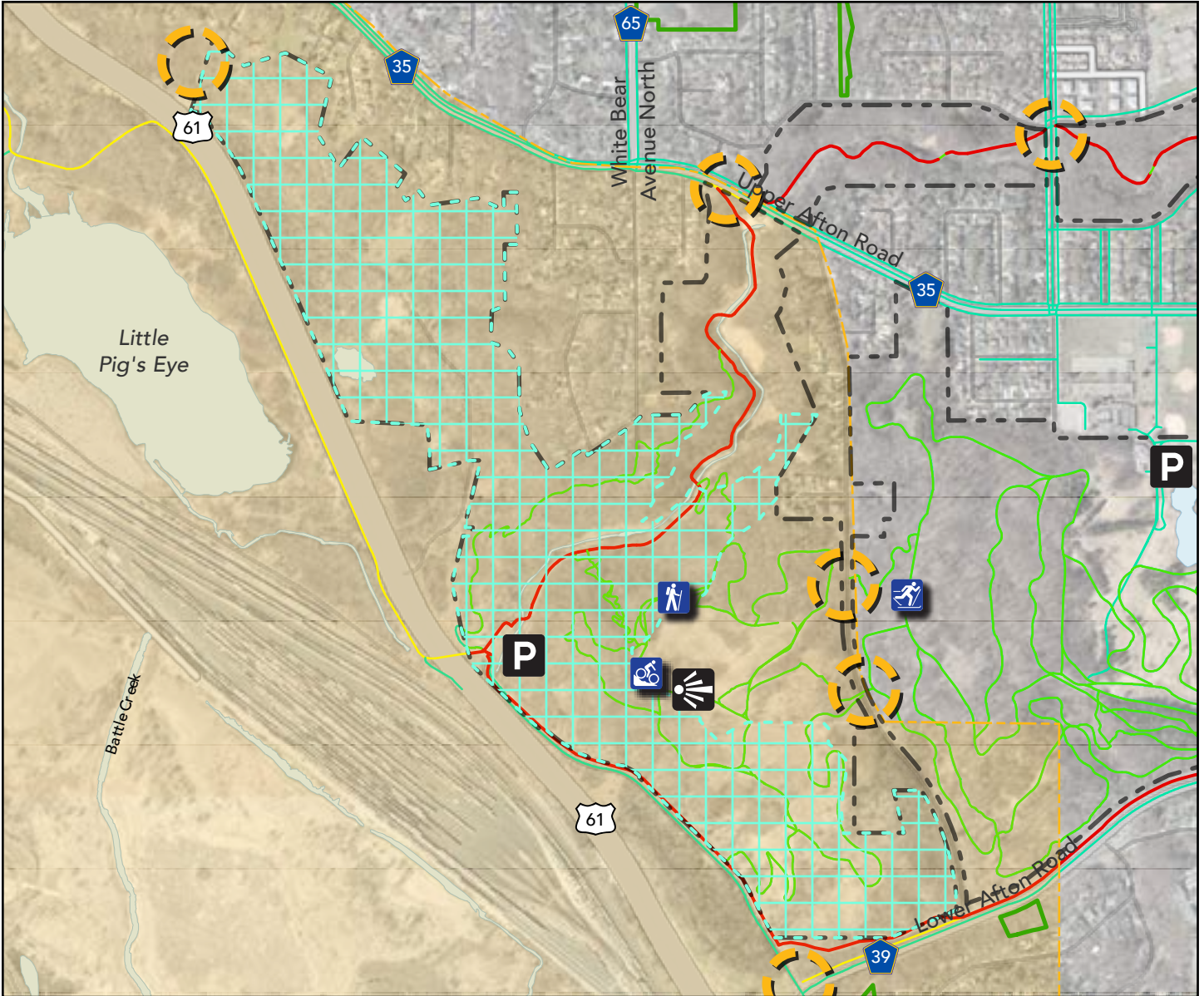
These areas of the park have been developed principally for trail use. The area includes 4 miles of mountain biking trail, 4 miles of cross-country ski trail (including 2.4 miles of lighted ski trail), and 4 miles of hiking trail. The area includes a lighted sledding hill. The primary access to the site is provided from a 180-car parking lot located off Winthrop Street. The parking lot and adjacent recreation center were developed by the city of Saint Paul under a joint powers agreement. Pursuant to this agreement, the parking lot is available for all trail users and the recreation center serves as a visitors' center for trail and sledding area users. Ramsey County has priority rights to use the recreation center for interpretive programming.



## MAINTENANCE

- Plow selected internal trails and parking lots.
- Groom cross country ski trails at Battle Creek East and West locations.
- Plow parking lots and maintain access to the Battle Creek off leash dog area.
- Battle Creek OLDA is heavily used and the turf areas are worn and difficult to reestablish. There are significant wetlands located inside the dog park and the shoreline is being degraded by overuse.
- There is an off-road cycling trail system that will occasionally need to be cleared of downed trees, grass and brush need to be cut back.
- Waterworks Water Park takes additional maintenance personnel to maintain and operate frequently.
- Due to many isolated areas in the park there are homeless camps that need to be removed frequently.
- The park is frequently used for cross country running and skiing meets which requires up keep of the turf trails.
- The pavilion is heavily used and requires cleaning and preparation daily.

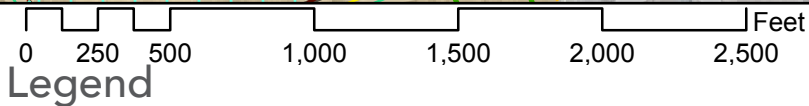
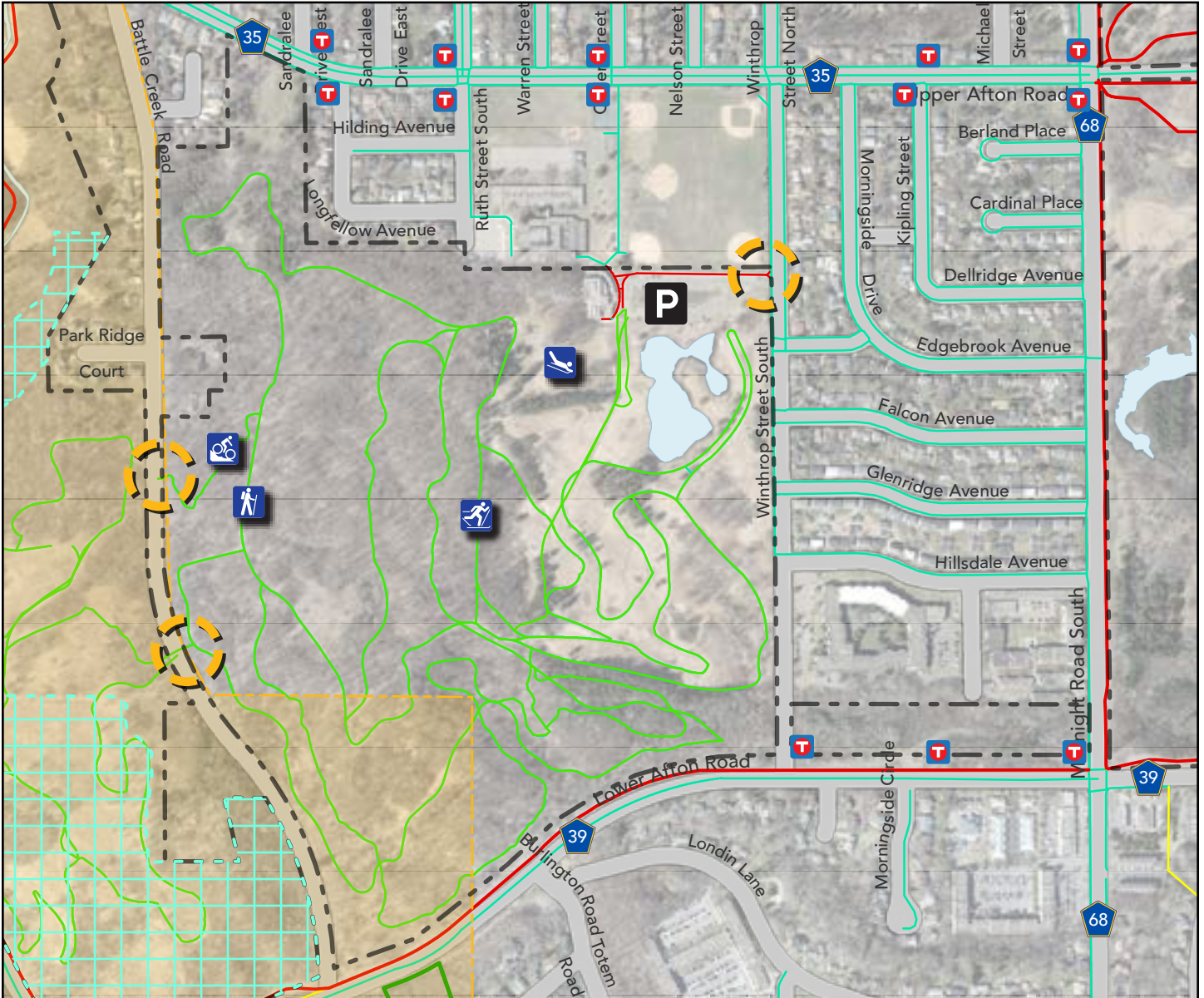
BATTLE CREEK REGIONAL PARK  
EXISTING CONDITIONS - BATTLE CREEK CORRIDOR



Legend

Park Border		Park Paved Trail		Scenic Viewpoint	
Park Entrance		Park Turf Trail		Mountain Biking	
Metro Tranist Stop		Municipal Trail		Hiking	
Mississippi River Corridor Critical Area		Municipal Ped/Bike Facility		XC Ski	
Environmental Natural Area		Regional Trail		Parking Lot	

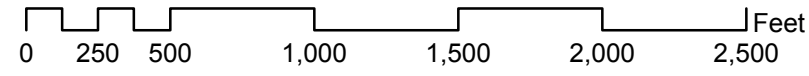
BATTLE CREEK REGIONAL PARK  
EXISTING CONDITIONS - BATTLE CREEK WEST



Park Border		Park Paved Trail		Sledding Hill	
Park Entrance		Park Turf Trail		Mountain Biking	
Metro Tranist Stop		Municipal Trail		Hiking	
Mississippi River Corridor Critical Area		Municipal Ped/Bike Facility		XC Ski	
Environmental Natural Area		Regional Trail		Parking Lot	



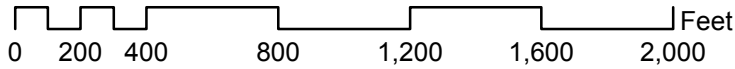
EXISTING CONDITIONS - BATTLE CREEK CONNECTION



Legend

- |                            |  |                             |  |  |  |
|----------------------------|--|-----------------------------|--|--|--|
| Park Border                |  | Park Paved Trail            |  | Mountain Biking                          |  |
| Park Entrance              |  | Park Turf Trail             |  | Hiking                                   |  |
| Metro Transit Stop         |  | Municipal Trail             |  | Mississippi River Corridor Critical Area |  |
| Regional Trail             |  | Municipal Ped/Bike Facility |  |  |  |
| Environmental Natural Area |  |                             |  |  |  |

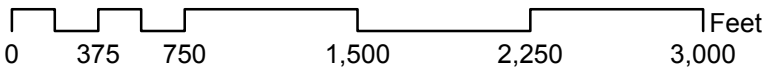
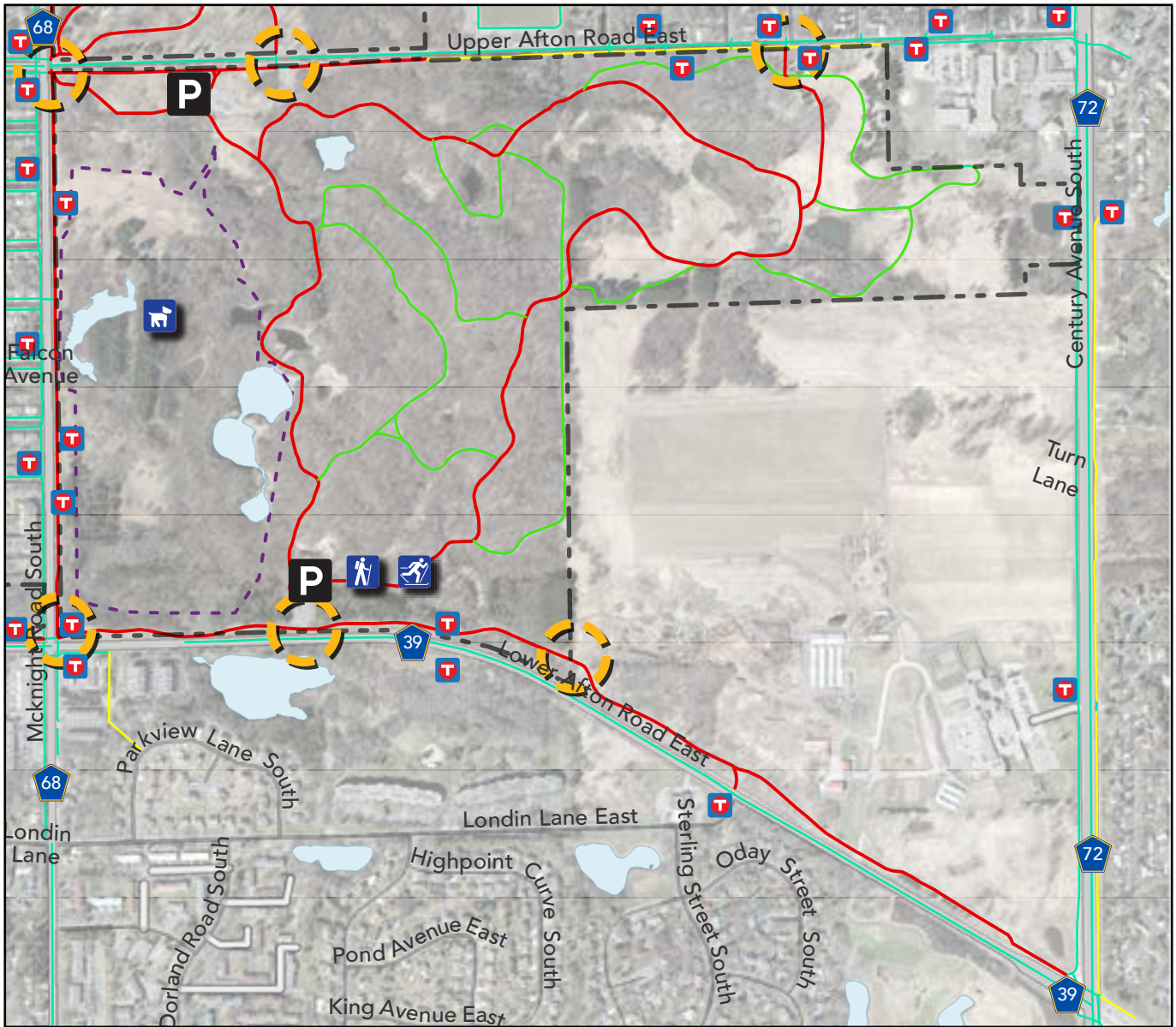
EXISTING CONDITIONS - BATTLE CREEK PICNIC AREA



Legend

Park Border		Park Paved Trail		Water Park	
Park Entrance		Park Turf Trail		Picnic Area	
Metro Tranist Stop		Municipal Trail		Pavilion	
Regional Trail		Municipal Ped/Bike Facility		Playground	
		Picnic Shelter		Parking Lot	

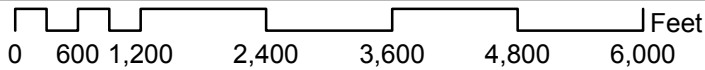
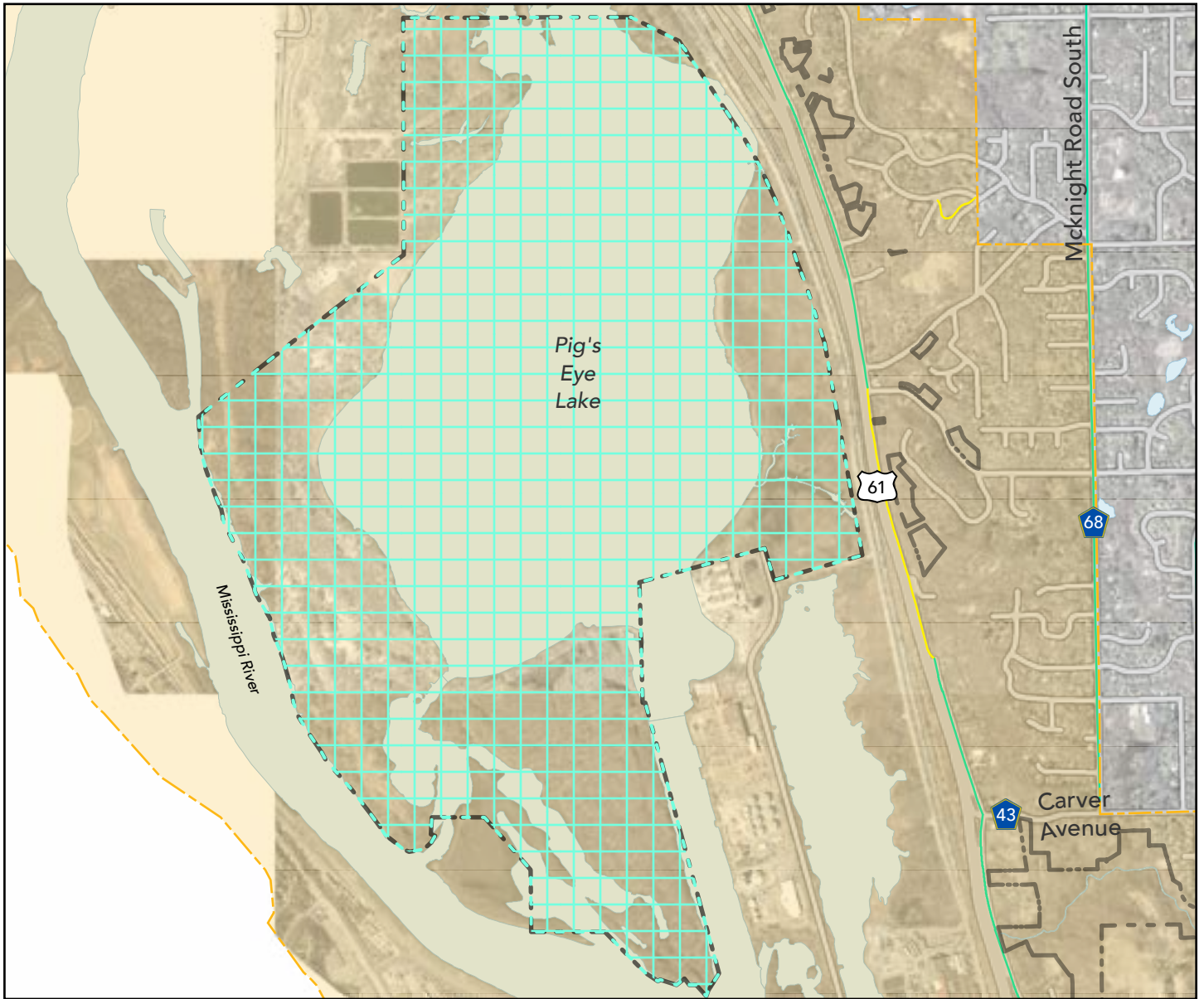
EXISTING CONDITIONS - BATTLE CREEK EASTERN TRAILS



Legend

Park Border		Park Paved Trail		OLDA	
Park Entrance		Park Turf Trail		XC Ski	
Metro Tranist Stop		Municipal Trail		Hiking	
Regional Trail		Municipal Ped/Bike Facility		Parking Lot	

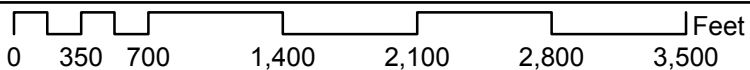
EXISTING CONDITIONS - BATTLE CREEK PIG'S EYE LAKE



Legend

Park Border		Park Paved Trail		Mississippi River Corridor Critical Area	
Park Entrance		Park Turf Trail		Environmental Natural Area	
Metro Tranist Stop		Municipal Trail			
Regional Trail		Municipal Ped/Bike Facility			

EXISTING LAND COVER - BATTLE CREEK CORRIDOR



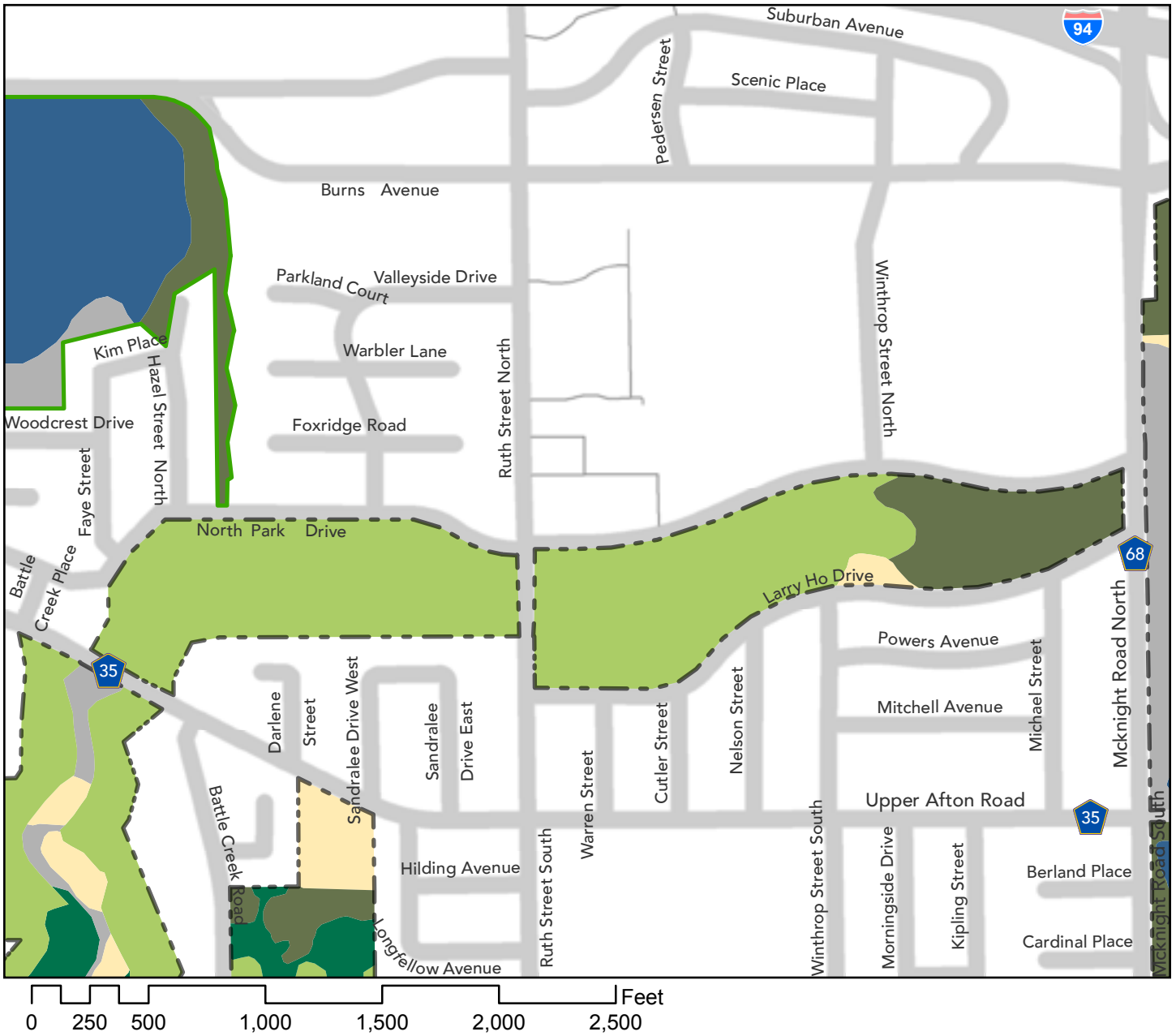
Existing Land Cover

- |                     |                   |            |                 |
|---------------------|-------------------|------------|-----------------|
| Active Use          | Floodplain Forest | Oak Woods  | Remnant Prairie |
| Impervious          | Mesic Forest      | Old Field  | Savanna         |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp     |
| Tamarack Swamp      | Wetland           | Open Water |                 |

EXISTING LAND COVER - BATTLE CREEK WEST



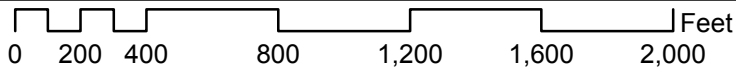
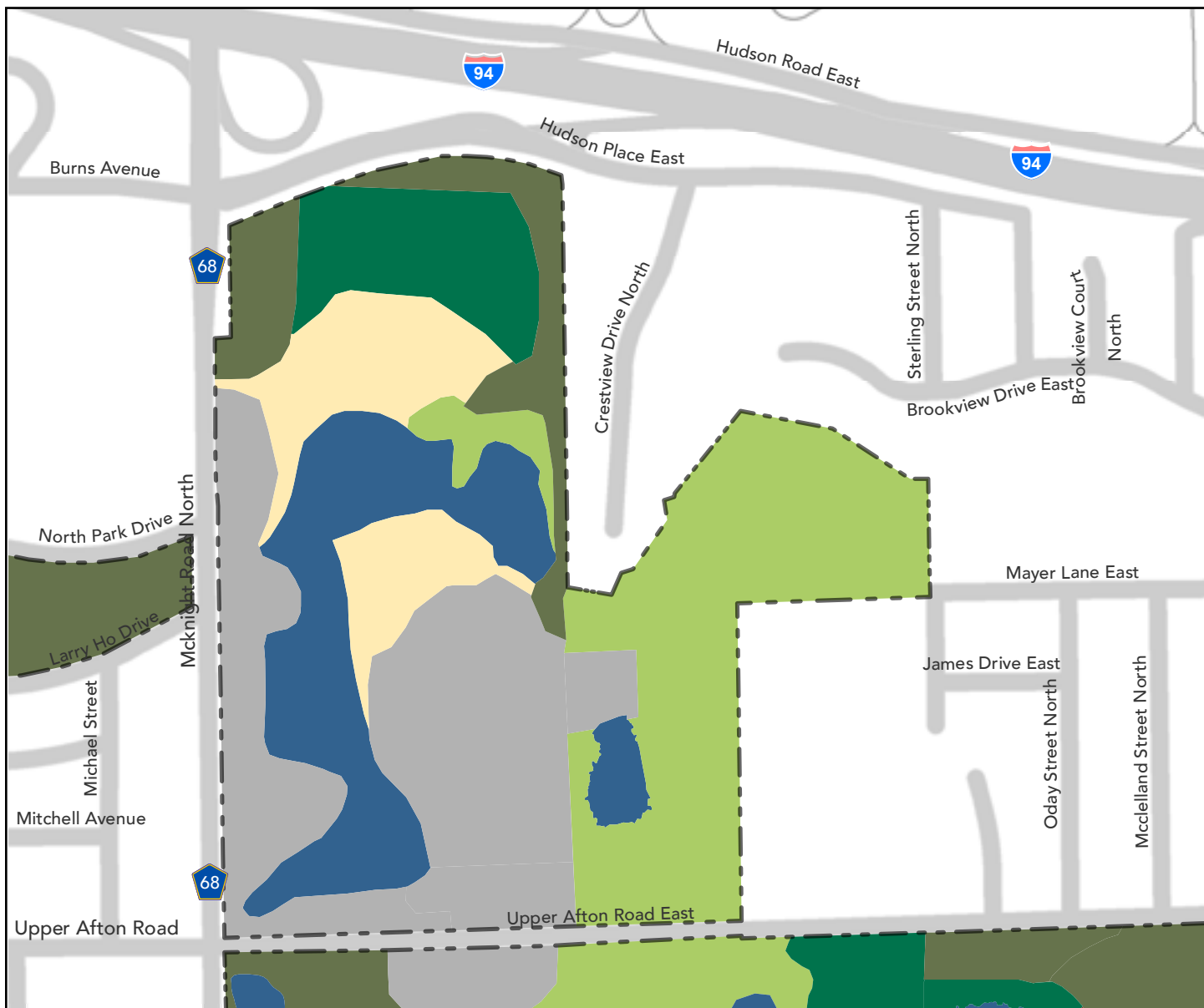
EXISTING LAND COVER - BATTLE CREEK CONNECTION



Existing Land Cover

- |                     |                   |            |                 |
|---------------------|-------------------|------------|-----------------|
| Active Use          | Floodplain Forest | Oak Woods  | Remnant Prairie |
| Impervious          | Mesic Forest      | Old Field  | Savanna         |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp     |
| Tamarack Swamp      | Wetland           | Open Water |                 |

EXISTING LAND COVER - BATTLE CREEK PICNIC AREA

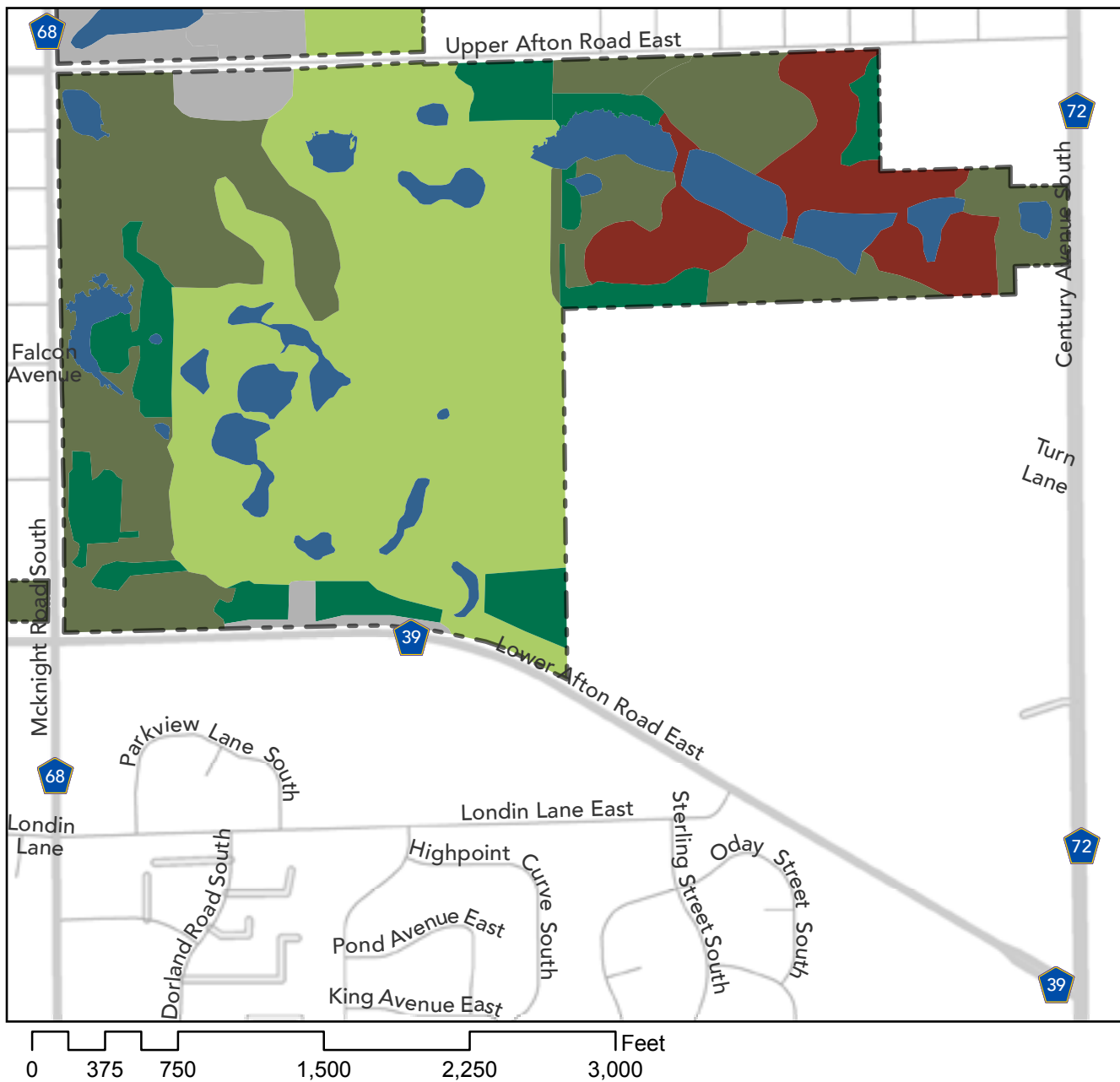


Existing Land Cover

- |                     |                   |            |                 |
|---------------------|-------------------|------------|-----------------|
| Active Use          | Floodplain Forest | Oak Woods  | Remnant Prairie |
| Impervious          | Mesic Forest      | Old Field  | Savanna         |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp     |
| Tamarack Swamp      | Wetland           | Open Water |                 |



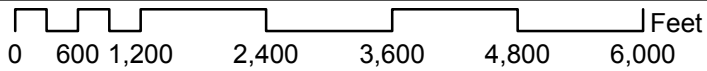
EXISTING LAND COVER - BATTLE CREEK EASTERN TRAILS



Existing Land Cover

- |                     |                   |            |                 |
|---------------------|-------------------|------------|-----------------|
| Active Use          | Floodplain Forest | Oak Woods  | Remnant Prairie |
| Impervious          | Mesic Forest      | Old Field  | Savanna         |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp     |
| Tamarack Swamp      | Wetland           | Open Water |                 |

EXISTING LAND COVER - BATTLE CREEK PIG'S EYE LAKE



Existing Land Cover

- |                     |                   |            |                 |
|---------------------|-------------------|------------|-----------------|
| Active Use          | Floodplain Forest | Oak Woods  | Remnant Prairie |
| Impervious          | Mesic Forest      | Old Field  | Savanna         |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp     |
| Tamarack Swamp      | Wetland           | Open Water |                 |

## LAND COVER AND HABITAT

Battle Creek Regional Park is the ninth largest regional park in the twin cities metro area and contains the largest tract of undeveloped natural parkland within the twin cities I-694-494 ring, making it the closest and largest natural park to the cities of Saint Paul and Minneapolis. The western portion of Battle Creek Regional Park, including the entire Pig's Eye section, is within the Mississippi River Corridor Critical Area (MRCCA), which shares the boundary with the Mississippi National River and Recreation Area. This section of park is subject to MRCCA regulations (State statute under Minnesota Rule 6106) which is in place to protect the unique natural and cultural resources and values within this corridor. The Pig's Eye section of Battle Creek Regional Park also contains one of the largest heron rookeries in the State of Minnesota and is designated as a State Scientific and Natural Area by the Minnesota Department of Natural Resources. Battle Creek Regional Park provides wildlife habitat and urban users a "natural" experience in a major urban environment and all preservation of natural, undeveloped parkland should take priority over any future park development.

The native vegetation of Battle Creek Regional Park was a mixture of prairies, oak savanna, oak woods, and wetlands. Current habitat and land cover includes native habitat, including established prairies, some of the highest quality oak, floodplain, and mesic woods in the area, plus old field, cultivated conifers, and mixed woods. There are also several smaller unique remnant habitats, including wetland seep swamps with skunk cabbage and marsh marigolds, mesic hardwoods with yellow birch and white pine, and native bluff land prairies and savannas, which include a variety of rare plants, particularly the state listed Kittentails (*Besseyia bullii*). Invasive species have become widespread in most habitats. The most troublesome species include buckthorn, black locust, garlic mustard, and purple loosestrife. More recent invasive species include Japanese knotweed, Japanese hedge parsley, and narrowleaf bittercress.



## WILDLIFE

The wildlife diversity of the park is very high and includes a variety of nesting songbirds, waterfowl, raptors, and wild turkeys. Larger mammals include white-tailed deer, coyotes, red fox, and raccoons. The Pig's Eye section of the park is especially unique and contains a heron rookery, nesting area for bald eagles, and habitat for countless amphibian, reptiles, migratory waterfowl, and shorebirds

## WILDLIFE MANAGEMENT

Deer populations in the area are surveyed annually to determine the need and location for deer management. Deer management has been occurring in the park since 2000, through special archery hunts under the Ramsey County Cooperative Deer Management Plan in partnership with the cities of Saint Paul and Maplewood. Nest boxes are provided for wood ducks and eastern bluebirds.

## SURFACE WATER RESOURCES

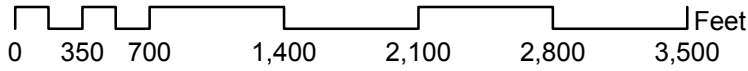
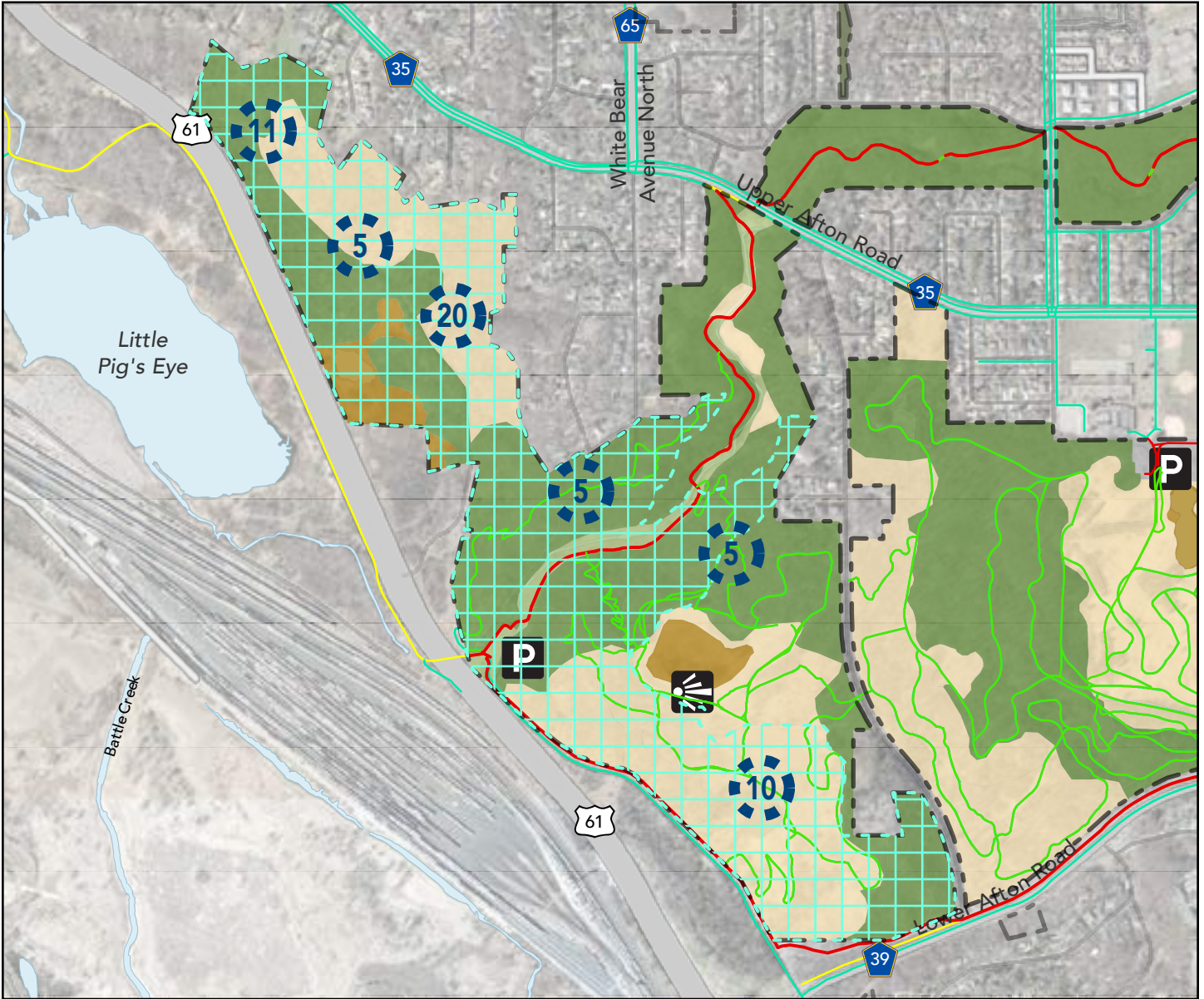
The surface waters in Battle Creek Regional Park include numerous wetland complexes, most of Pig's Eye Lake, and Battle Creek. Battle Creek is a perennial, urban stream that originates at the outlet from Battle Creek Lake and flows west, mostly through Battle Creek Regional Park, and discharging into Pig's Eye Lake and the Mississippi River. Ramsey-Washington Metro Watershed District (RWMWD), in cooperation with the Metropolitan Council, monitors the flow and water quality of Battle Creek. Historically, Battle Creek frequently flooded and in the early 1980s the Ramsey-Washington Metro Watershed District implemented an erosion and flood control project to capture flash flood overflows. This project included the installation of storm sewer piping under the above ground stream located in the lower section of the creek corridor within the park. In addition, storm ponds and an overflow structure were created for flood control within the creek corridor located in the park, north of Upper Afton road. Pigs' Eye Lake is an open water shallow lake with a sediment laden bottom. The lake is prime habitat for waterfowl, shoreline birds, raptors, amphibians, and reptiles. The lake has the longest section of natural shoreline in the park system, which warrants additional preservation.



## ENVIRONMENTAL NATURAL AREAS

Battle Creek Regional Park's designated Environmental Natural Areas (ENA) include the entire Pig's Eye Lake section and the bluff area along the western portion of the main park, south of Upper Afton Road and west of Battle Creek Road. The Pig's Eye lake ENA consists of extensive flood plain forest and a peninsula that contains a large heron colony and important eagle nesting and roosting habitat. The heron rookery is designated as a State Scientific and Natural Area by the Minnesota Department of Natural Resources. The bluff lands are a unique ecosystem that contain remnants of bluff prairies and savannas which include a variety of rare plants, including the State listed Kittentails (*Besseyia bullii*).

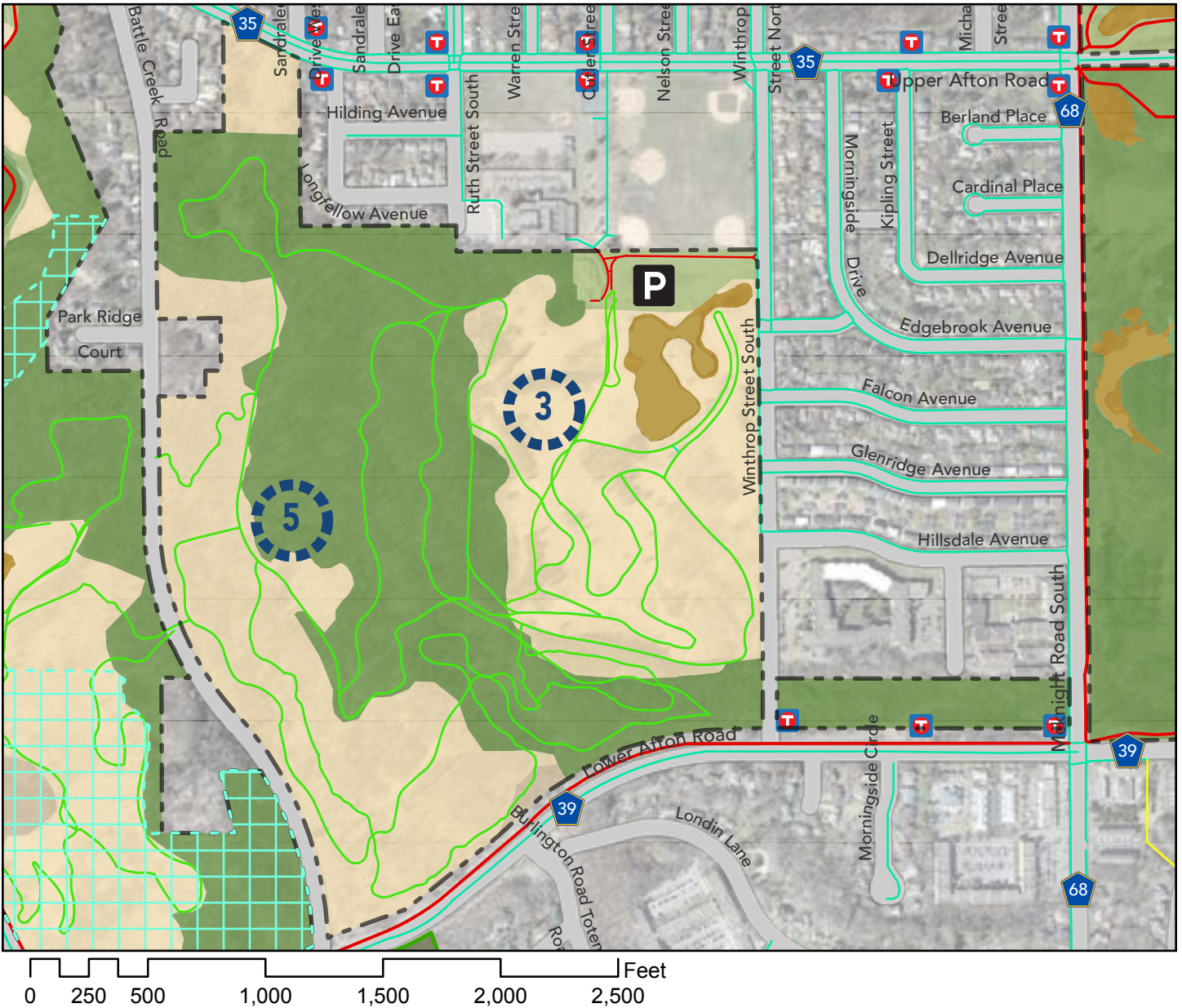
PROPOSED DEVELOPMENT - BATTLE CREEK CORRIDOR



Legend

- |                           |              |                             |            |                            |                |
|---------------------------|--------------|-----------------------------|------------|----------------------------|----------------|
| Park Border               | - - - -      | Park Paved Trail            | — (red)    | Regional Trail             | — (blue)       |
| Proposed Development      | [ ] (yellow) | Park Turf Trail             | — (green)  | Proposed Regional Trail    | - - - - (blue) |
| Proposed Development Node | ⊙ (blue)     | Municipal Trail             | — (yellow) | Environmental Natural Area | [ ] (green)    |
| Metro Transit Stop        | T (red)      | Municipal Ped/Bike Facility | — (cyan)   |                            |                |
| Parking Lot               | P (black)    | Significant Views           |            |                            | ☀ (black)      |

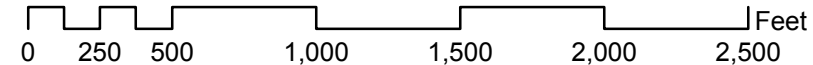
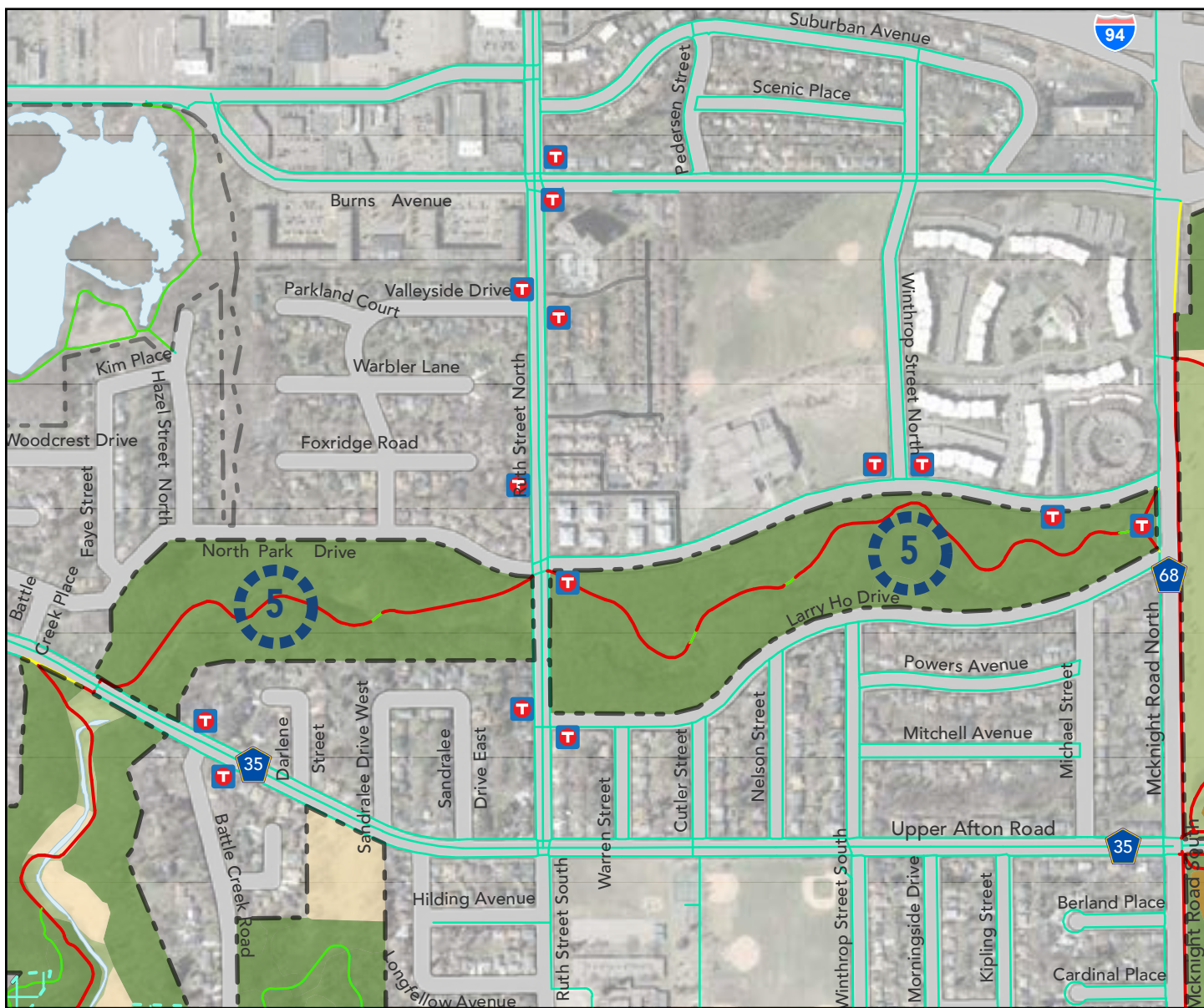
PROPOSED DEVELOPMENT - BATTLE CREEK WEST



Legend

- Park Border  Park Paved Trail  Regional Trail
- Proposed Development  Park Turf Trail  Proposed Regional Trail
- Proposed Development Node  Municipal Trail  Environmental Natural Area
- Metro Tranist Stop  Municipal Ped/Bike Facility
- Parking Lot

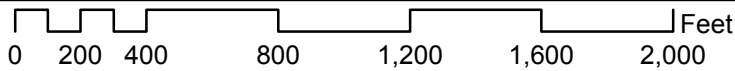
PROPOSED DEVELOPMENT - BATTLE CREEK CONNECTION



Legend

- Park Border  Park Paved Trail  Regional Trail
- Proposed Development  Park Turf Trail  Proposed Regional Trail
- Proposed Development Node  Municipal Trail  Environmental Natural Area
- Metro Tranist Stop  Municipal Ped/Bike Facility

PROPOSED DEVELOPMENT - BATTLE CREEK PICNIC AREA

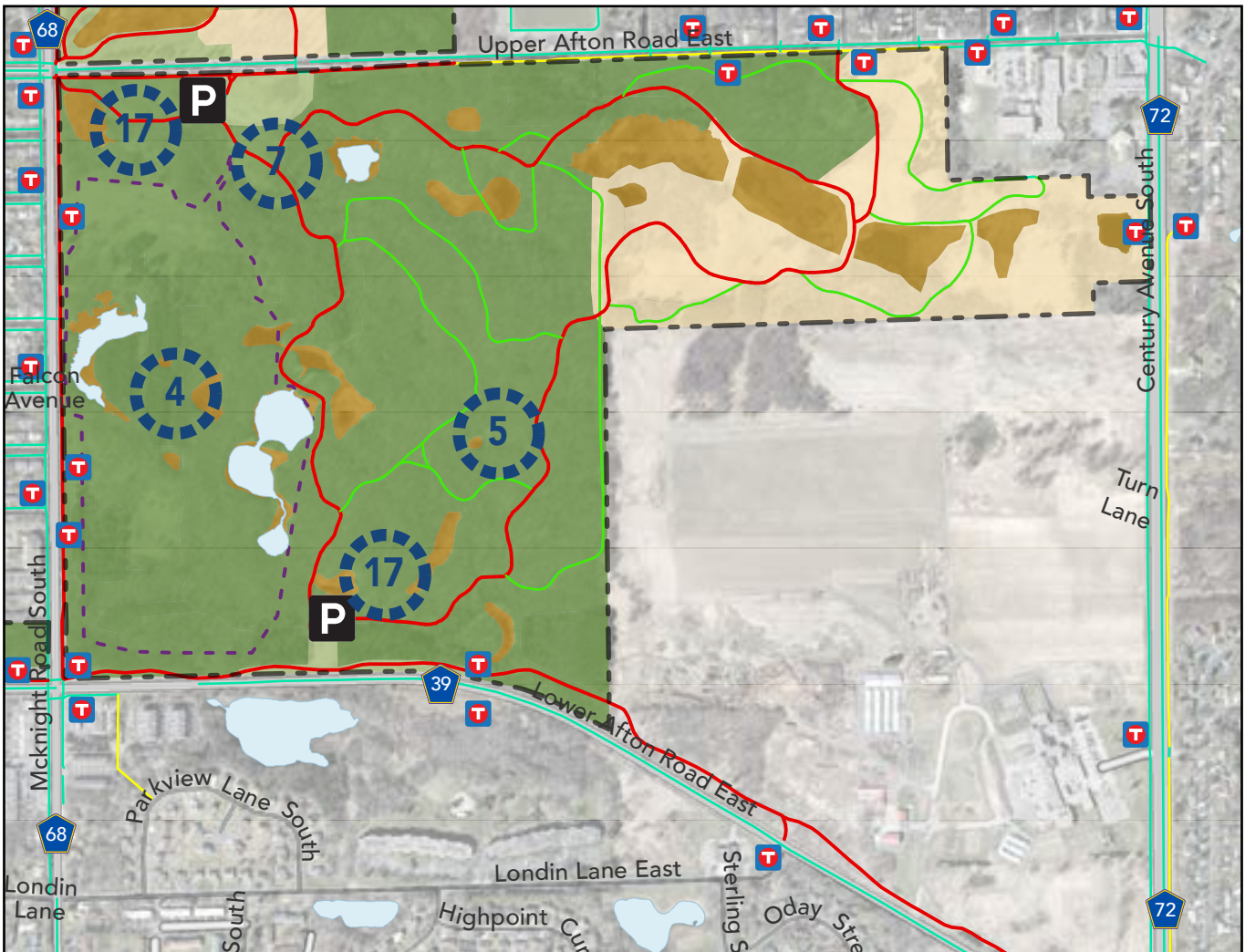


Legend

- |                           |  |                             |  |                         |  |
|---------------------------|--|-----------------------------|--|-------------------------|--|
| Park Border               |  | Park Paved Trail            |  | Regional Trail          |  |
| Proposed Development      |  | Park Turf Trail             |  | Proposed Regional Trail |  |
| Proposed Development Node |  | Municipal Trail             |  | Parking                 |  |
| Metro Tranist Stop        |  | Municipal Ped/Bike Facility |  |                         |  |



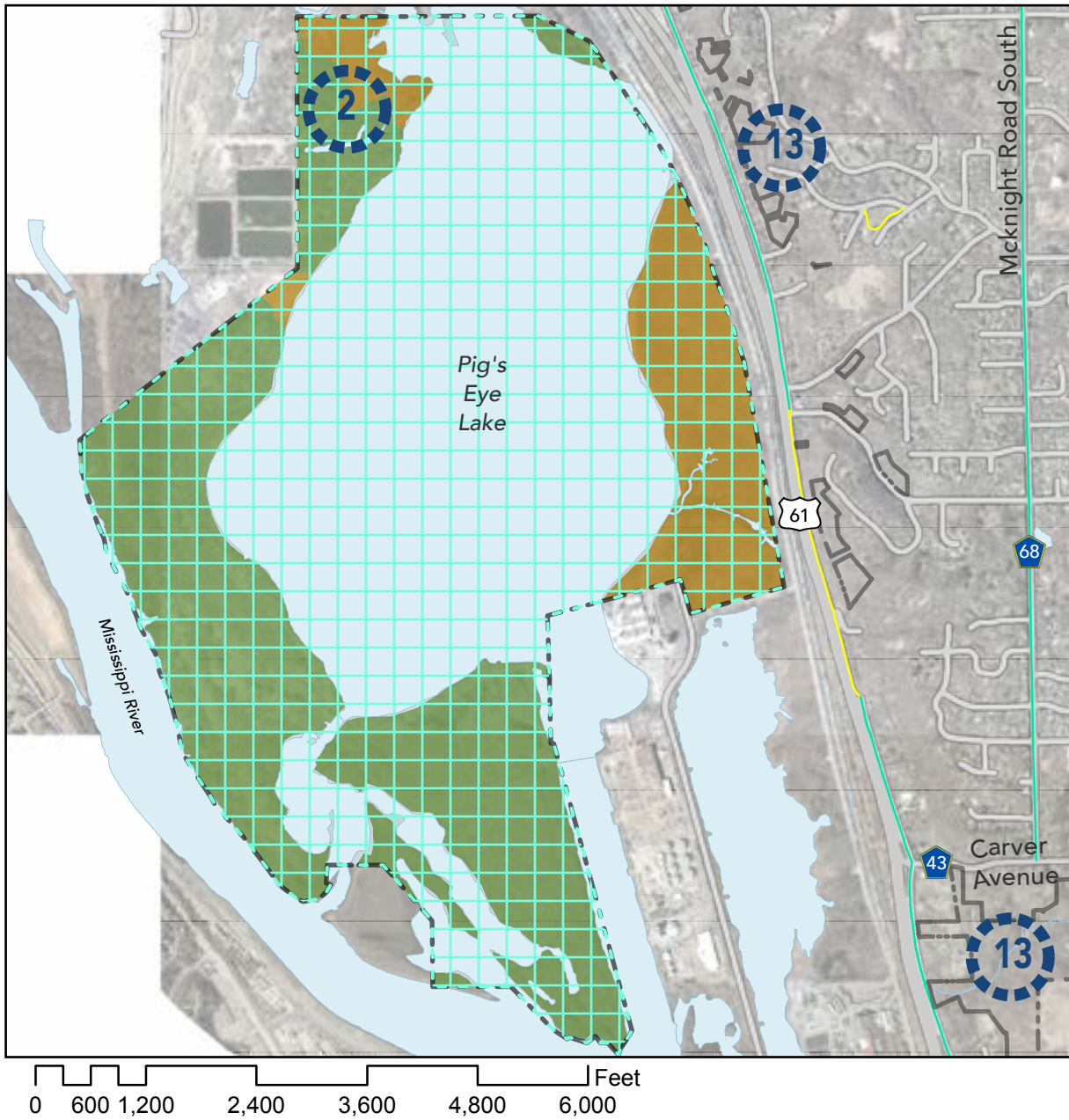
PROPOSED DEVELOPMENT - BATTLE CREEK EASTERN TRAILS



Legend

- Park Border - - - - - Park Paved Trail — Regional Trail —
- Proposed Development [ 3 ] Park Turf Trail — Proposed Regional Trail - - - - -
- Proposed Development Node [ 1 ] Municipal Trail — Parking [ P ]
- Metro Tranist Stop [ T ] Municipal Ped/Bike Facility —

PROPOSED DEVELOPMENT - BATTLE CREEK PIG'S EYE LAKE



Legend

- |                           |  |                             |  |                            |  |
|---------------------------|--|-----------------------------|--|----------------------------|--|
| Park Border               |  | Park Paved Trail            |  | Regional Trail             |  |
| Proposed Development      |  | Park Turf Trail             |  | Proposed Regional Trail    |  |
| Proposed Development Node |  | Municipal Trail             |  | Environmental Natural Area |  |
| Metro Tranist Stop        |  | Municipal Ped/Bike Facility |  |                            |  |

## PLANNING CONSIDERATIONS

The Battle Creek Regional Park Master Plan is over 35 years old. The plan will be updated during 2018-2019.

Portions of Battle Creek Regional Park are within the boundary of the Mississippi National River and Recreation Area (MNRRA). Plans for MNRRA may provide opportunities for coordinated development. In accordance with the Battle Creek Regional Park Master Plan, Saint Paul and Ramsey County will continue to coordinate development and operations of the park. Portions of the Battle Creek segment and Pig's Eye Lake segment of the park are included in the "National Great River Park" and as such future plans for development will be coordinated with the Saint Paul Riverfront Corporation and the city of Saint Paul. A logical relationship exists for adjacent schools to use the park for environmental education. Three schools (Carver Elementary, Battle Creek Elementary and Battle Creek Middle) all have easy access to the park and positive use of the park should be encouraged. In accordance with the joint powers agreement between Ramsey County and the city of Saint Paul, the Battle Creek Recreation Center and parking lot are located within Battle Creek Regional Park. These shared facilities provide opportunities for trail access and joint programming. The master plan for Battle Creek Regional Park identifies the adjacent land area as a winter sports area. The current cross-country ski trails and sledding hill provide these services, however, in order to provide predictable snow conditions consideration will be given to installation of snowmaking equipment to maintain a portion of the cross-country ski trail and the snowboarding and tubing hill. The golf facility known as the Ponds at Battle Creek provides a 9-hole regulation golf course and driving range on the Ramsey County Community Corrections property located south of Lower Afton Road.

## PROPOSED DEVELOPMENT

### 1. Master Planning

A joint master plan between the city of Saint Paul and Ramsey County for Battle Creek Regional Park was completed in June 1981. The master plan was approved by the city of Saint Paul, the Ramsey County Board of Commissioners, and the Metropolitan Council. Portions of Battle Creek Regional Park are within the Mississippi National River and Recreation Area (MNRRA). Plans for MNRRA may provide opportunities for coordinated development. Due to changing trends of park and recreation facilities, demographics, and the need to provide improved recreational facilities a master plan update is proposed for the regional park.

- Develop partnerships with the Cities of Saint Paul, Maplewood, the National Park Service, the Army Corps of Engineers (ACOE), Ramsey Washington Metro Watershed District (RWMWD), local schools, local agencies, and private parties for increased recreational opportunities and funding strategies for improvements throughout the park.
- Master planning activities for a master plan update are anticipated to begin in 2018 and will assess the entire regional park for recreational uses, redevelopment of existing facilities, new recreation development opportunities, improvements to existing recreational facilities, storm water management best practices, funding strategies, and partnerships.

## PROPOSED DEVELOPMENT

### 2. Pig's Eye Lake

Potential improvements to the Pigs Eye Lake area will be compatible with the Great River Passage Plan created by the city of Saint Paul and may consist of a parking facility, nature interpretation and educational programming components, a restroom facility, paved trails, natural surface trails, a boardwalk, and observation areas. Master planning activities will be required for improvements and will be addressed in the Battle Creek Regional Park Master Plan update.

### 3. Winter Recreation Area

The 1981 master plan for Battle Creek Regional Park identified a portion of park between Battle Creek Road and Winthrop as a winter sports area. A long-term plan exists to make the winter recreation area in Battle Creek Regional Park a destination for the east metro area. Planning activities have started for the implementation of snowmaking equipment and supporting infrastructure including a parking expansion, expansion of the cross-country ski trail system, cross-country ski trail lighting improvements, an improved crossing over Battle Creek Road for connection to trails located on either side of the road, and additional building infrastructure such as a winter chalet and maintenance storage. Further master planning activities will be required for proposed winter recreation development.

### 4. Battle Creek Off Leash Dog Area

Master planning for the system-wide Off-Leash Dog Area Master Plan began in 2017 and was completed in 2018. This master plan addresses improvements to the Battle Creek Off-Leash Dog Area.

### 5. Battle Creek Mountain Bike Trails

Master planning for the Battle Creek mountain bike trails began in 2016 and was completed in 2018. This master plan addresses improvements to the Battle Creek Mountain Bike system.

### 6. Picnic Area

Redevelopment activities are proposed within the large group picnic area consisting of pavilion improvements, parking lot redevelopment or expansion, use of the turf area, playground development, improved trail connections, mountain bike trails, interpretive education programming areas, and site amenities. Master planning activities will be required for potential improvements and will be addressed in the Battle Creek Regional Park Master Plan update.

### 7. Eastern Trails

Redevelopment activities are proposed consisting of parking lot redevelopment and expansion, trail redevelopment, improved trail connections, interpretive education programming areas, potential restroom facilities, mountain bike trails, improved site amenities, and potential recreation improvements such as a disc golf course. Master planning activities will be required for potential improvements and will be addressed in the Battle Creek Regional Park Master Plan update.

## PROPOSED DEVELOPMENT

### 8. Battle Creek Corridor

Redevelopment activities are proposed consisting of parking lot redevelopment and expansion, trail redevelopment, improved trail connections, interpretive education programming areas, potential restroom facilities, improved site amenities, mountain bike trails, and recreation improvements. Master planning activities will be required for potential improvements and will be addressed in the Battle Creek Regional Park Master Plan update.

### 9. Battle Creek West, Winthrop Street Area

Redevelopment activities are proposed consisting of parking lot redevelopment and expansion, winter recreation development, mountain bike and hiking trail improvements, cross-country ski trail improvements, and interpretive education programming areas. Master planning activities will be required for potential improvements and will be addressed in the Battle Creek Regional Park Master Plan update.

### 10. Battle Creek Road to Park Entrance Road

Redevelopment activities are proposed consisting of parking lot development, mountain bike and hiking trail improvements, cross-country ski trail improvements, and interpretive education programming areas. A bluff top visitor center facility overlooking the Mississippi River Valley is proposed to provide interpretive, educational, and recreational programming with adjacent parking opportunities, site amenities, and scenic overlooks. Master planning activities will be required for potential improvements and will be addressed in the Battle Creek Regional Park Master Plan update.

### 11. Northwest Bluff Area

Redevelopment activities are proposed consisting of mountain bike and hiking trail improvements, bituminous trail development for connections to the Burns Avenue Overlook in coordination with the city of Saint Paul and MNDOT, overlooks, and interpretive education programming areas. Master planning activities will be required for potential improvements and will be addressed in the Battle Creek Regional Park Master Plan update.

### 12. Regional Park Expansion Opportunities

Investigate opportunities for expansion of Battle Creek Regional Park to include Suburban Pond, Mississippi River Bluff Protection Open Space, Fish Creek Open Space (Maplewood and Ramsey County sections), and possibly the land owned by the city of Maplewood located on the north side of Carver Road. Another possibility for expansion is including Carver Lake Park in the city of Woodbury into the regional park system. Future planning activities will require a comprehensive study with the Metropolitan Council, city of Maplewood, city of Saint Paul, and city of Woodbury for viability as a Regional Park component.

### 13. Recreation Events

There is a need for improvements to accommodate recreation events such as cross-country running, mountain biking, and cross-country skiing. Possible improvements may consist of improved vehicular and pedestrian access, event areas, and improved recreational amenities that would be conducive for these types of events.

## PROPOSED DEVELOPMENT

### 14. Expand Recreational Opportunities

Explore alternative types of recreation opportunities that are not currently provided at Battle Creek Regional Park due to changing trends of park and recreation facilities, and the need to provide improved recreational facilities. Additional master planning activities will be required to identify new recreation opportunities as part of the Battle Creek Regional Park Master Plan update.

### 15. Access Points

- **Upper Afton Picnic Area:** Ramsey County proposes additional access points from McKnight Road, Upper Afton Road, adjacent neighborhoods, and Afton Heights Park for connections to the existing trail system. Explore additional access points from the overflow parking lot located on the south side of Upper Afton Road for improved access and safe crossing at Upper Afton Road.
- **Eastern Trails Area:** Ramsey County proposes additional trail access points from Upper Afton Road, Lower Afton Road, and adjacent neighborhoods for connection to the existing trail system.
- **Battle Creek Corridor:** Ramsey County proposes additional access points from Battle Creek Road, Lower Afton Road, Winthrop Street, and adjacent neighborhoods for connection to the existing trail system. Explore additional access points and crossings at Battle Creek Road for improved connection to cross-country ski and mountain bike trails located on both sides of Battle Creek Road.
- **Northwest Bluff:** Ramsey County proposes additional trail access points to the existing trails within Battle Creek Corridor on the north side of the bluff area for connection to the Burns Avenue Scenic Overlook.
- **Pigs Eye Lake:** Explore additional access points for pedestrians and vehicles from Childs Road and city of Saint Paul park land on the north side of Pigs Eye Lake. An additional access may be developed to connect the Lower Afton Trail to the Pigs Eye Lake area such as a pedestrian bridge over Highway 61. Additional master planning activities will be required as part of the Battle Creek Regional Park master plan update for improved connection.

### 16. Trail Development

- Redevelop existing internal park trails for more direct and user-friendly trail connections to park amenities. Improvements shall consist of trail repaving, re-aligning of trail sections for improved connections, the reduction of sharp corners and steep slopes adjacent to trail sections, and trail rebuilding through wet areas.
- **Eastern Trails Area:** Ramsey County proposes additional paved trails between Upper and Lower Afton Road, and natural surface trails such as mountain biking, hiking, and cross-country ski trails for improved use and connections to recreation amenities. Proposed mountain bike and hiking trails are identified in the Battle Creek Off Road Cycling Master Plan.
- **Battle Creek Corridor:** Ramsey County proposes additional paved trails to provide connection between Winthrop and Battle Creek Road, and Battle Creek Road to Park Entrance Road adjacent to Highway 61. Develop additional natural surface trails such as mountain biking, hiking, and cross-country ski trails for improved use and connection to recreation amenities. Proposed mountain bike and hiking trails are identified in the Battle Creek Off Road Cycling Master Plan.
- **Northwest Bluff:** Ramsey County proposes additional paved trails to connect the trail system within the Battle Creek corridor to the Burns Avenue Scenic Overlook, and additional natural surface trails such as mountain biking and hiking trails for improved use and connection to recreation amenities. Proposed mountain bike and hiking trails are identified in the Battle Creek Off Road Cycling Master Plan.

## PROPOSED DEVELOPMENT

- **Pigs Eye:** Explore trail development within the Pigs Eye Lake area for paved trails, natural surface trails, boardwalks with interpretive and educational programming, and observation viewing areas.

### 17. Vehicular Access

- **Upper Afton Picnic Area**

- Pavilion Parking Lot: A mill and overlay was completed in 2014 and will require future pavement maintenance. Parking expansion is proposed due to an increase in demand. During any parking lot redevelopment additional parking should be considered along with improved pedestrian connections, signage, storm water management best practices, and site amenities.

- Waterworks Parking Lot: Pavement maintenance was last completed in 2008. A mill and overlay will be required for this parking lot. Parking expansion is also proposed due to an increase in demand. During any parking lot redevelopment additional parking should be considered along with improved pedestrian connections, signage, storm water management best practices, and site amenities.

- Entrance Road: A mill and overlay was completed in 2014 and will require future pavement maintenance.

- **Eastern Trails Area**

- Upper Afton Parking Lot: Pavement maintenance was last completed in 2010. A mill and overlay will be required for this parking lot. Additional parking expansion is proposed due to an increase in demand for recreation use. During any parking lot redevelopment additional parking should be considered along with improved pedestrian connections, signage, storm water management practices, and site amenities.

- Lower Afton Parking Lot: Pavement maintenance was last completed in 2010. A mill and overlay will be required for this parking lot. Additional parking expansion is proposed due to an increase in demand for recreation use. During any parking lot redevelopment additional parking should be considered along with improved pedestrian connections, signage, storm water management practices, and site amenities.

- **Battle Creek Corridor**

- Winthrop Parking Lot: Pavement maintenance was last completed in 2009. A mill and overlay will be required for this parking lot. Parking expansion is proposed due to an increase in demand for recreation use. During any parking lot redevelopment additional parking should be considered along with improved pedestrian connections, signage, storm water management best practices, and site amenities.

- Lower Afton Parking Lot: Pavement maintenance was last completed in 2009. A mill and overlay will be required for this parking lot. Parking expansion is proposed due to an increase in demand for recreation use. During any parking lot redevelopment additional parking should be considered along with improved pedestrian connections, signage, storm water management best practices, and site amenities.

### 18. Wayfinding

- Pedestrian signage was implemented in 2015 for improved wayfinding to trail accesses and other amenities. Provide interpretive signage in natural areas for increased wayfinding to nature education opportunities. Additional pedestrian signage will be required along with any new trail development.

## PROPOSED DEVELOPMENT

- Improve vehicular entrance signage at parking lot entrances and key high traffic areas for better wayfinding to and within the park. Redevelop existing wood vehicle park ID signs and replace with appropriate main entrance or tertiary signage according to the Ramsey County Parks & Recreation's department's Wayfinding Master Plan

### 19. Recreation Opportunities

- **Shelter/Pavilion/Restrooms/Water Works:** Development of the existing picnic pavilion, shelters, restrooms, and Water Works in the picnic area occurred from 1984 (large pavilion and restroom) to 1999 (Water Works), and most recently in 2011 for the new picnic shelter. Due to aging infrastructure and changing recreation trends redevelopment of these facilities will likely be required to provide enhanced recreation amenities for picnic reservations, water recreation, and improved use with adjacent recreational amenities. Improvements to these facilities should comply with the Americans with Disabilities Act (ADA) and Universal Design standards.
- **Playground:** Due to the existing age of the playground equipment and location, redevelopment is required for improved use and play. Master planning and community engagement activities started in 2017 for the relocation and redevelopment of the playground in the open area to the north of the parking lot. An outcome from the community engagement and master planning process was a need to plan for a destination playground consisting of multiple components including traditional playground equipment, nature playground components, water play with education and interpretive programming, a challenge or high ropes course, and a children's bike park. Additional partnerships are encouraged for funding strategies and increased use. Development will likely occur in multiple phases and is planned to start in 2019. Additional playground development within the regional park may be proposed as part of the Battle Creek Master Plan update and as development occurs in the park.
- **Multi-Use Turf:** Improve turf areas for increased recreation and community event opportunities.
- **Court Games:** Explore the development of court games to correspond with changing trends, demographics and park uses.
- **Public Art:** Provide the opportunity and appropriate infrastructure to accommodate public art, this will strengthen the bond between the department and its public user base.
- **Culturally Significant Areas:** Provide access and interpretive education for culturally significant areas within the regional park. Proposed improvements would consist of observation areas, interpretive educational signage, and pedestrian connections.
- **Wildlife Areas:** Provide visual and interpretive educational signage, and pedestrian connections to wildlife areas. If federally or state listed protected plants or animals are discovered statutes and guidelines will be followed.
- **Fishing:** Fishing in Pigs Eye Lake is minimal. Most fishing activity occurs in backwaters of the Mississippi River and Pigs Eye Lake. Additional master planning activities are required to determine appropriate locations for proposed access points and fishing opportunities in Pigs Eye Lake.
- **Programming:** Increase recreation and nature programming activities.
- **Water Access:** Provide access for small water craft within Pigs Eye Lake. This would likely be developed along with access improvements to the northwest corner of the lake. Along with park development there may be enough demand to provide rental amenities for small watercraft in Pigs Eye Lake.



## PROPOSED DEVELOPMENT

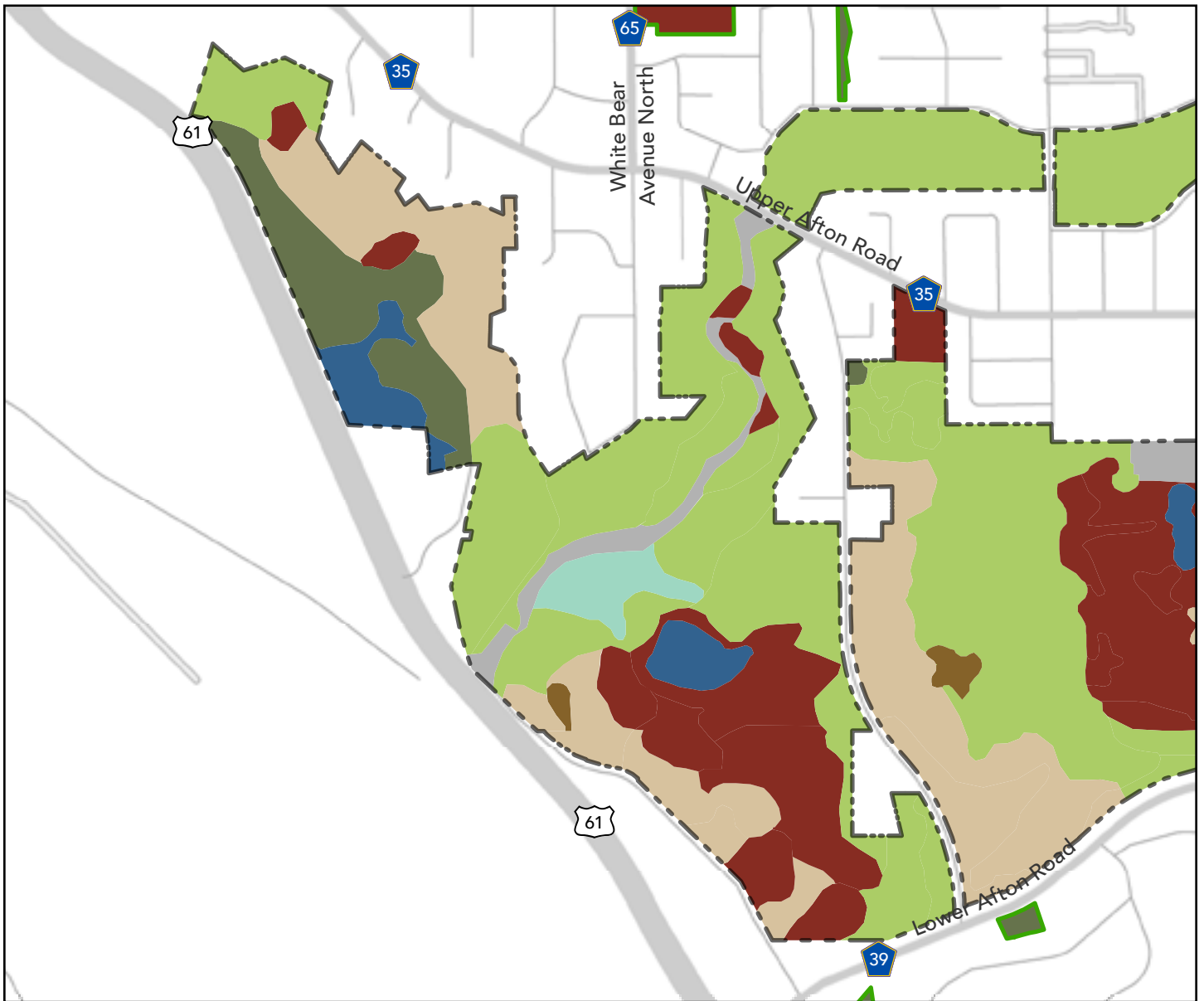
### 20. Habitat Restoration & Management

- In the past 20 years, restoration efforts to combat invasive species and improve habitat within Battle Creek Regional Park have been extensive. Restored and maintained habitat includes restoration through sections of old growth oak woods, maintenance of around 57 acres of established native prairie, around 70 acres of oak and mixed woods, and conversion of old field to prairie within the northwest section of the park.
- Land cover changes and ongoing future restoration across other sections of the park will include woodland restoration, prioritizing established old growth oak forest and bluff savannas, conversion of old field to oak woods or prairie, and removal of cultivated conifers to natural habitat.
- Continued restoration and ongoing maintenance of established savanna and woodlands will include removal of buckthorn and other woody invasives, foliar spraying of buckthorn and other invasives, prescribed burns through select areas, and casting of native herbaceous seed as needed.
- Prairie conversion and maintenance of established prairies across the park will include herbicide weed treatment, prescribed burns, removal of noxious weeds and drill seeding or inter-seeding of forbs as needed.

### 21. Acquisitions

Future land acquisition is proposed when properties or easements become available. Future acquisition would allow additional park and recreation opportunities, trail development, and long-term expansion of the regional park. Acquisition of properties along Battle Creek Road would provide an opportunity to close a portion of the road within the park, causing the removal of a barrier between park areas located on either side of the road for improved trail connections, additional recreation opportunities, and habitat restoration.

PROPOSED LAND COVER - BATTLE CREEK CORRIDOR

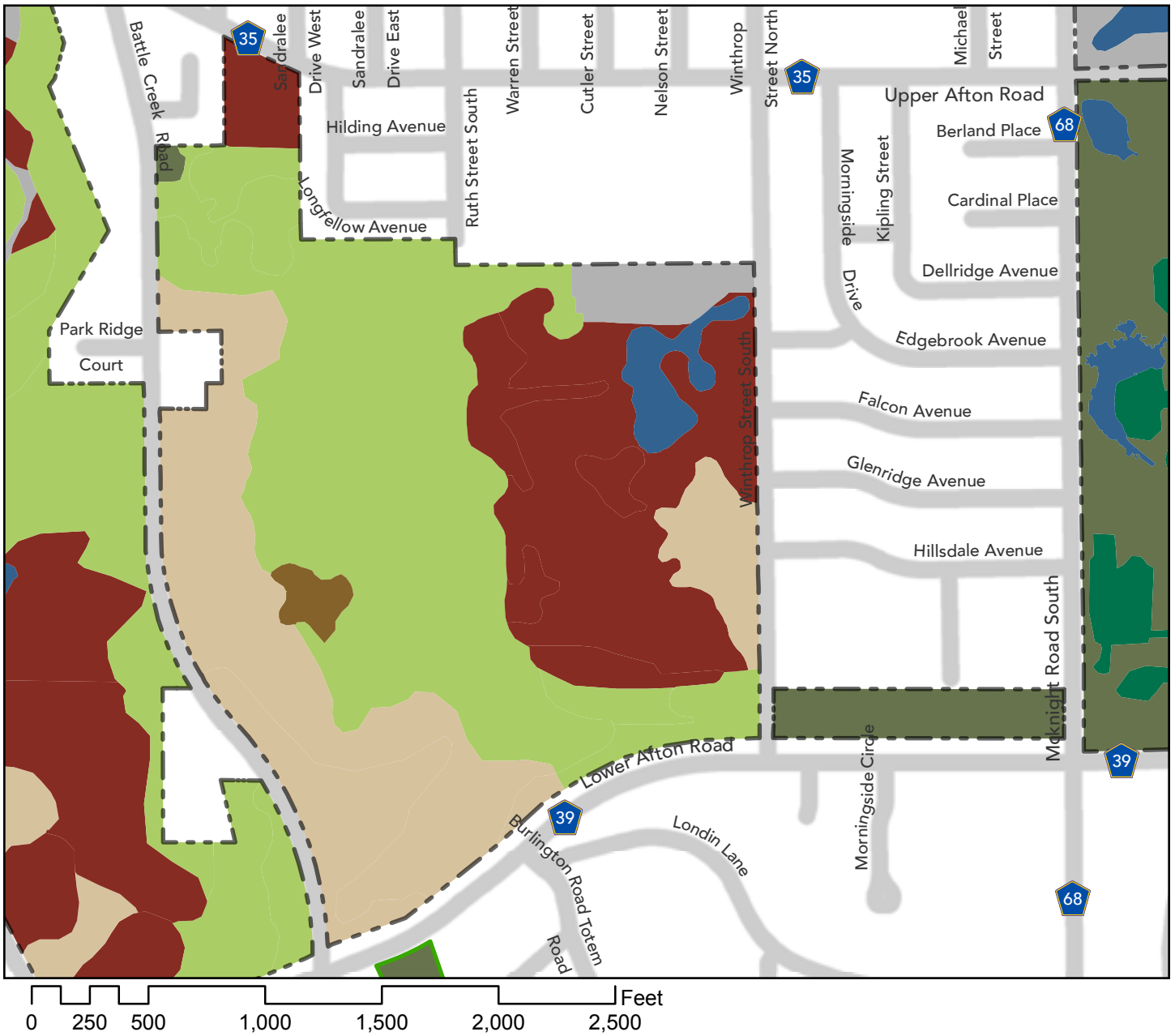


0 350 700 1,400 2,100 2,800 3,500 Feet

Proposed Land Cover

- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |

PROPOSED LAND COVER - BATTLE CREEK WEST



Proposed Land Cover

- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |

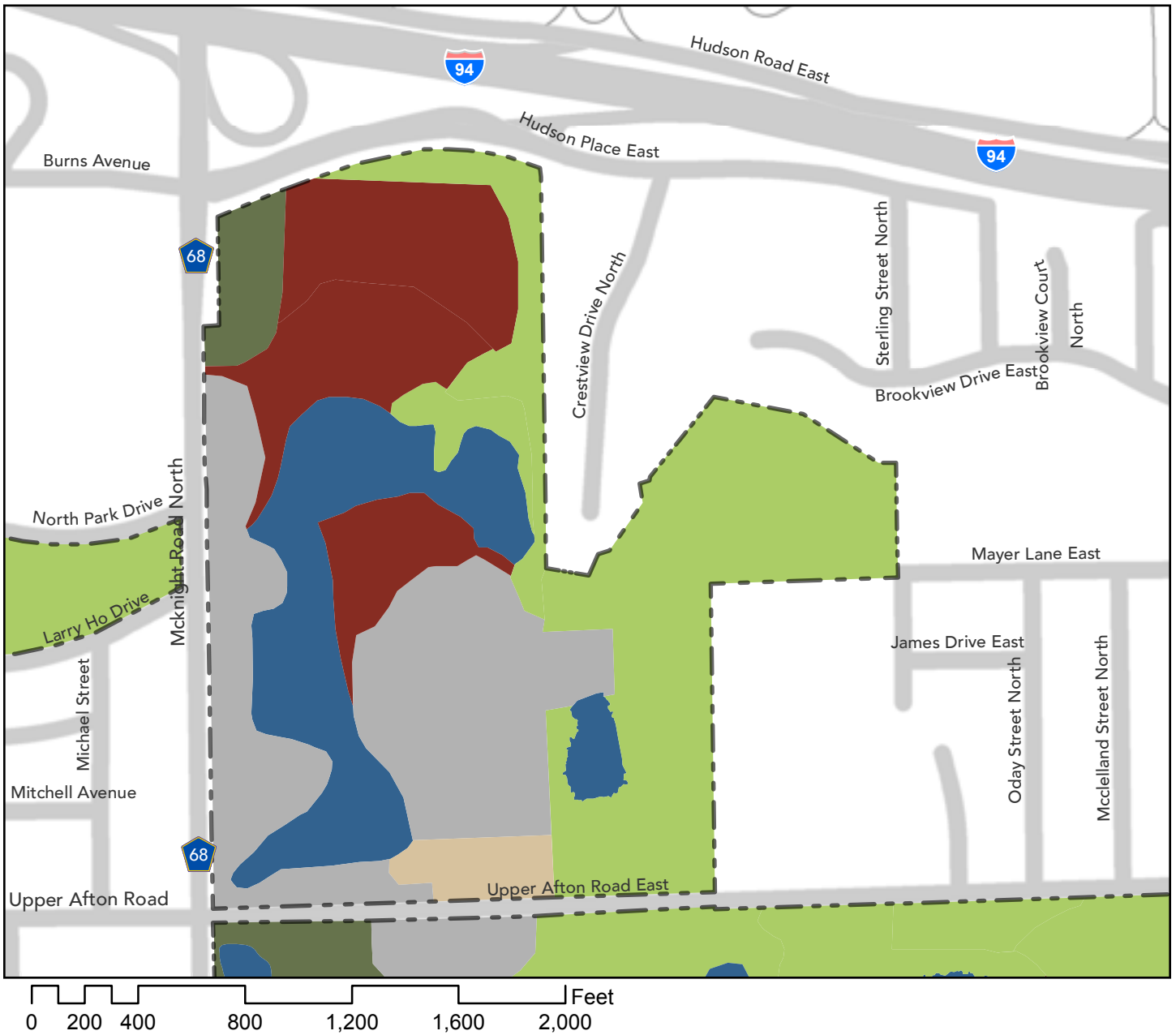
PROPOSED LAND COVER - BATTLE CREEK CONNECTION



Proposed Land Cover

- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |

PROPOSED LAND COVER - BATTLE CREEK PICNIC AREA



Proposed Land Cover

- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |

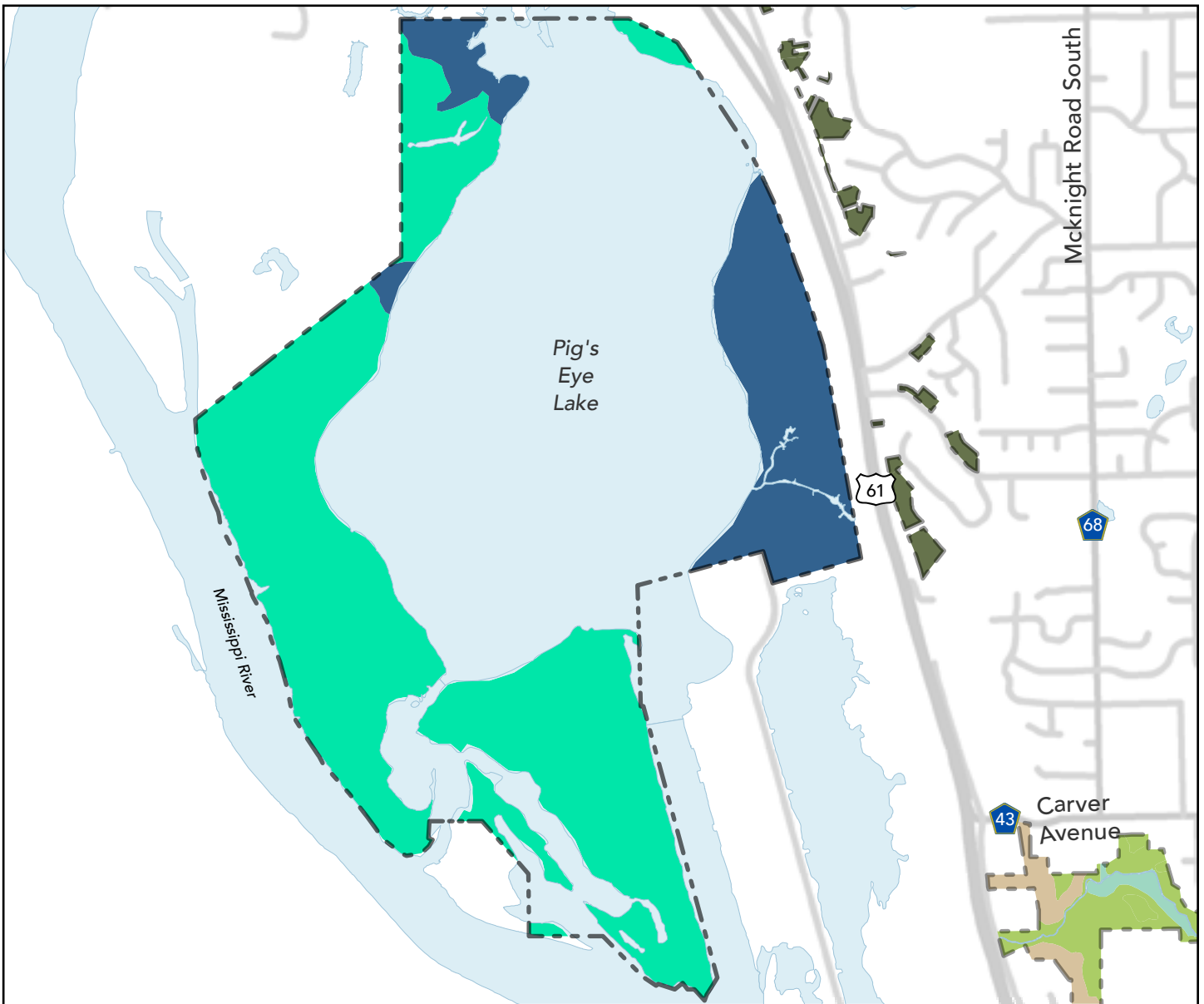
PROPOSED LAND COVER - BATTLE CREEK EASTERN TRAILS



Proposed Land Cover

- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |

PROPOSED LAND COVER - BATTLE CREEK PIG'S EYE LAKE

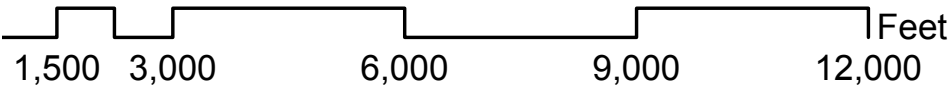
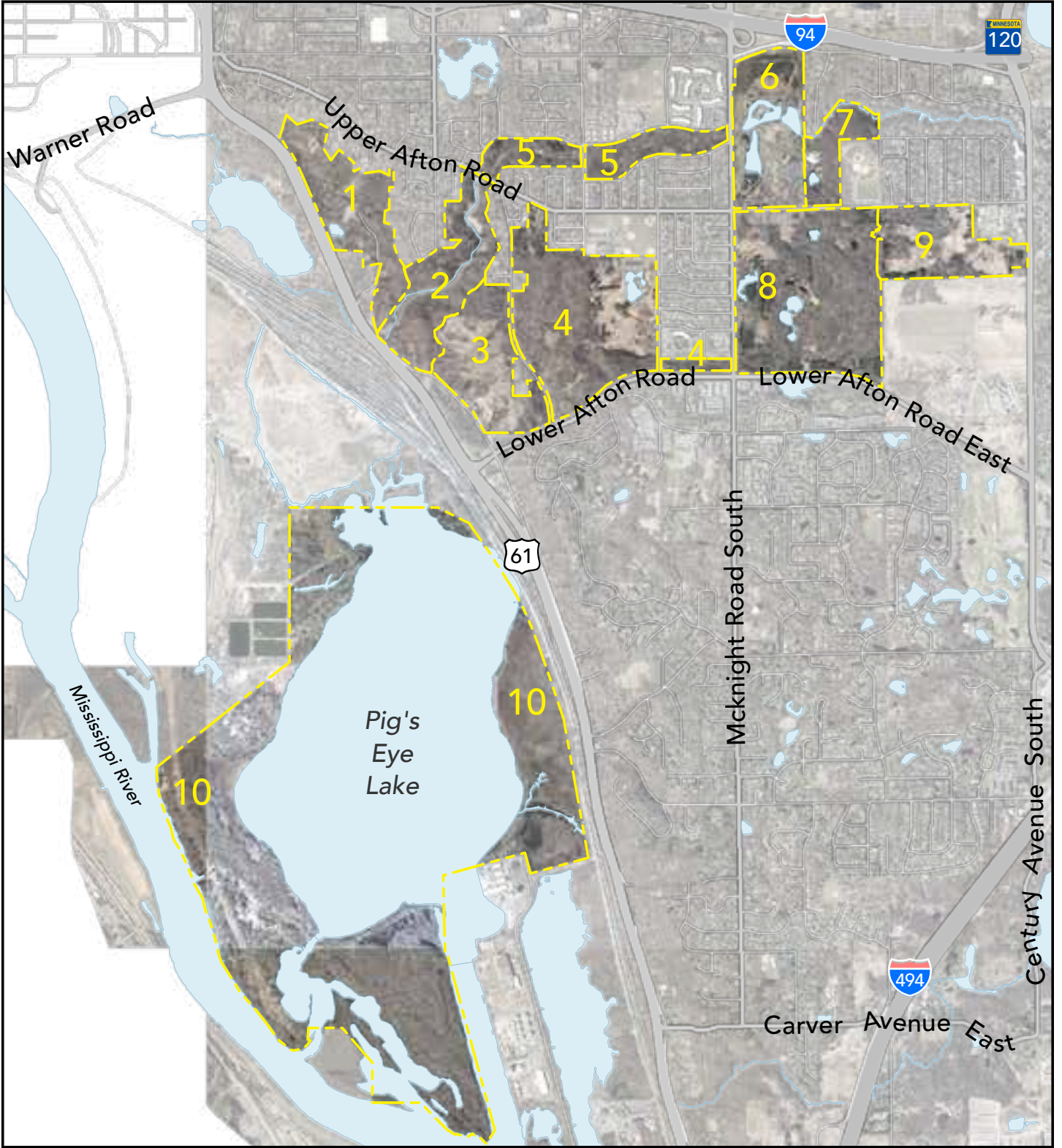


0 600 1,200 2,400 3,600 4,800 6,000 Feet

Proposed Land Cover

- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |

BATTLE CREEK REGIONAL PARK  
NATURAL RESOURCE MANAGEMENT UNITS



Legend

- Management Unit #
- Management Unit Border



NATURAL RESOURCE MANAGEMENT UNIT TABLE

MANAGEMENT UNIT 1 - BATTLE CREEK REGIONAL PARK							
ACRES	CURRENT LAND COVER	FUTURE LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIORITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
2.42	OLD FIELD	PRAIRIE	MOW, HERBICIDE, RX BURN, CAST SEED	\$8,470.00	2	RX BURN, FOLIAR SPRAY OF HERBACEOUS	\$2,541.00
6.40	WETLAND	WETLAND	MONITOR	N/A	N/A	N/A	N/A
27.15	MIXED WOODS	MIXED WOODS 20.35 ACRES	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN	\$50,875.00	2	RX BURN, FOLIAR SPRAY OF BUCKTHORN	\$15,262.50
		OAK WOODS 6.8 ACRES	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN, RX BURN, NATIVE SEED	\$23,800.00	3	RX BURN, FOLIAR SPRAY OF BUCKTHORN	\$5,100.00
37.07	OAK WOODS	OAK WOODS 12.94 ACRES, SAVANNA 24.136 ACRES	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN, RX BURN, NATIVE SEED	\$129,745.00	2	RX BURN, FOLIAR SPRAY OF BUCKTHORN	\$27,802.50
<b>MANAGEMENT UNIT 1 TOTAL</b>							
73.04				\$212,890.00			\$50,706.00

NATURAL RESOURCE MANAGEMENT UNIT TABLE

MANAGEMENT UNIT 2 - BATTLE CREEK REGIONAL PARK							
ACRES	CURRENT LAND COVER	FUTURE LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIORITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
0.72	PRAIRIE (REMNANT)	PRAIRIE (REMNANT)	MONITOR	N/A	1	RX BURN, FOLIAR SPRAY OF HERBACEOUS	\$755.22
2.27	OLD FIELD	PRAIRIE	MOW, HERBICIDE, RX BURN, DRILL SEED	\$4,530.47	2	RX BURN, FOLIAR SPRAY OF HERBACEOUS	\$2,378.50
2.85	MIXED WOODS	PRAIRIE	REMOVE TREES, HERBICIDE, RX BURN, DRILL SEED	\$9,960.36	3	RX BURN, FOLIAR SPRAY OF HERBACEOUS	\$2,134.36
6.68	MESIC FOREST	MESIC FOREST	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN	\$13,353.89	1	RX BURN, FOLIAR SPRAY OF BUCKTHORN	\$3,004.63
6.84	CULTIVATED CONIFERS	OAK WOODS	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN, RX BURN, NATIVE SEED	\$23,932.76	3	RX BURN, FOLIAR SPRAY OF BUCKTHORN	\$6,496.03
7.40	ACTIVE USE	ACTIVE USE	N/A	N/A	N/A	N/A	N/A
46.94	OAK WOODS	OAK WOODS	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN, RX BURN, NATIVE SEED	\$164,274.29	1	RX BURN, FOLIAR SPRAY OF BUCKTHORN	\$44,588.74
MANAGEMENT UNIT 2 TOTAL							
73.68				\$216,051.77			\$59,357.47

NATURAL RESOURCE MANAGEMENT UNIT TABLE

MANAGEMENT UNIT 3 - BATTLE CREEK REGIONAL PARK							
ACRES	CURRENT LAND COVER	FUTURE LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIORITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
4.37	WETLAND	WETLAND	MONITOR	N/A	N/A	N/A	N/A
12.21	PRAIRIE	PRAIRIE	MONITOR	N/A	1	RX BURN, FOLIAR SPRAY OF HERBACEOUS	\$12,815.40
13.78	OAK WOODS	OAK WOODS 5.65 ACRES	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN, RX BURN, NATIVE SEED	\$19,775.00	2	RX BURN, FOLIAR SPRAY OF BUCKTHORN	\$5,367.50
		SAVANNA 8.13 ACRES	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN, RX BURN, NATIVE SEED	\$28,455.00	2	RX BURN, FOLIAR SPRAY OF BUCKTHORN	\$7,723.50

NATURAL RESOURCE MANAGEMENT UNIT TABLE

MANAGEMENT UNIT 3 - BATTLE CREEK REGIONAL PARK							
ACRES	CURRENT LAND COVER	FUTURE LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIORITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
16.97	OLD FIELD	PRAIRIE	MOW, HERBICIDE, RX BURN, DRILL SEED	\$33,943.71	2	RX BURN, FOLIAR SPRAY OF HERBACEOUS	\$10,183.11
24.46	MIXED WOODS	SAVANNA 1.61 ACRES	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN, RX BURN, NATIVE SEED	\$5,635.00	2	RX BURN, FOLIAR SPRAY OF BUCKTHORN	\$1,529.50
		PRAIRIE 3.56 ACRES	REMOVE TREES, HERBICIDE, RX BURN, DRILL SEED	\$12,460.00	3	RX BURN, FOLIAR SPRAY OF HERBACEOUS	\$2,136.00
		OAK WOODS 19.25 ACRES	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN, RX BURN, NATIVE SEED	\$85,593.69	3	RX BURN, FOLIAR SPRAY OF BUCKTHORN	\$18,287.50
MANAGEMENT UNIT 3 TOTAL							
71.78				\$185,862.41			\$58,042.51

NATURAL RESOURCE MANAGEMENT UNIT TABLE

MANAGEMENT UNIT 4 - BATTLE CREEK REGIONAL PARK							
ACRES	CURRENT LAND COVER	FUTURE LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIOR-ITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
1.59	PRAIRIE (REMNANT)	PRAIRIE (REMNANT)	MONITOR	N/A	1	RX BURN, FOLIAR SPRAY OF HERBACEOUS	\$1,671.41
2.93	OLD FIELD	PRAIRIE	MOW, HERBICIDE, RX BURN, DRILL SEED	\$5,862.80	3	RX BURN, FOLIAR SPRAY OF HERBACEOUS	\$3,077.97
3.28	WETLAND	WETLAND	MONITOR	N/A	N/A	N/A	N/A
3.96	ACTIVE USE	ACTIVE USE	N/A	N/A	N/A	N/A	N/A
5.09	SAVANNA	SAVANNA	N/A	N/A	2	RX BURN, FOLIAR SPRAY OF BUCKTHORN, RESEEDING OF FORBS	\$10,172.44
12.90	CULTIVATED CONIFERS	OAK WOODS 3.43 ACRES	REMOVE TREES, HERBICIDE, RX BURN, PLANT OAKS	\$6,860.00	3	RX BURN, FOLIAR SPRAY OF BUCKTHORN	\$3,258.50
		PRAIRIE 9.47 ACRES	REMOVE TREES, HERBICIDE, RX BURN, DRILL SEED	\$18,940.00	3	RX BURN, FOLIAR SPRAY OF HERBACEOUS	\$9,943.50

NATURAL RESOURCE MANAGEMENT UNIT TABLE

MANAGEMENT UNIT 4 - BATTLE CREEK REGIONAL PARK							
ACRES	CURRENT LAND COVER	FUTURE LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIORITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
20.57	MIXED WOODS	OAK WOODS 5.31	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN, RX BURN, NATIVE SEED	\$18,585.00	3	RX BURN, FOLIAR SPRAY OF BUCKTHORN	\$5,044.50
		MIXED WOODS 6.45 ACRES	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN, RX BURN, NATIVE SEED	\$22,575.00	3	RX BURN, FOLIAR SPRAY OF BUCKTHORN	\$6,127.50
		SAVANNA 8.81 ACRES	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN, RX BURN, NATIVE SEED	\$30,835.00	2	RX BURN, FOLIAR SPRAY OF BUCKTHORN	\$8,369.50
27.72	PRAIRIE	PRAIRIE	N/A	N/A	2	RX BURN, FOLIAR SPRAY OF BUCKTHORN	\$30,047.95
75.12	OAK WOODS	OAK WOODS	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN, RX BURN, NATIVE SEED	\$262,919.56	2	RX BURN, FOLIAR SPRAY OF BUCKTHORN	\$30,047.95
MANAGEMENT UNIT 4 TOTAL							
150.17				\$366,577.36			\$127,156.94

NATURAL RESOURCE MANAGEMENT UNIT TABLE

MANAGEMENT UNIT 5 - BATTLE CREEK REGIONAL PARK							
ACRES	CURRENT LAND COVER	FUTURE LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIORITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
0.70	OLD FIELD	OAK WOODS	HERBICIDE, RX BURN, PLANT OAKS	\$1,400	3	RX BURN, FOLIAR SPRAY OF BUCKTHORN	\$665.00
1.36	CULTIVATED CONIFERS	OAK WOODS	REMOVE TREES, HERBICIDE, RX BURN, PLANT OAKS	\$2,720.00	3	RX BURN, FOLIAR SPRAY OF BUCKTHORN	\$1,292.00
8.31	MIXED WOODS	OAK WOODS	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN, RX BURN, NATIVE SEED	\$29,085.00	3	RX BURN, FOLIAR SPRAY OF BUCKTHORN	\$7,894.50
38.78	OAK WOODS	OAK WOODS	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN, RX BURN, NATIVE SEED	\$135,730	3	RX BURN, FOLIAR SPRAY OF BUCKTHORN	\$15,512.00
MANAGEMENT UNIT 5 TOTAL							
49.15				\$168,935.00			\$25,363.50

NATURAL RESOURCE MANAGEMENT UNIT TABLE

MANAGEMENT UNIT 6 - BATTLE CREEK REGIONAL PARK							
ACRES	CURRENT LAND COVER	FUTURE LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIORITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
2.10	OAK WOODS	OAK WOODS	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, HAUL OFF SITE	\$4,203.76	3	RX BURN, FOLIAR SPRAY OF BUCKTHORN	\$1,996.78
8.87	CULTIVATED CONIFERS	PRAIRIE	REMOVE TREES, MOW, HERBICIDE, RX BURN, DRILL SEED	\$17,749.60	3	RX BURN, FOLIAR SPRAY OF HERBACEOUS	\$4,437.40
9.26	MIXED WOODS	MIXED WOODS 3.36 ACRES	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN	\$6,720.00	3	RX BURN, FOLIAR SPRAY OF BUCKTHORN	\$3,192.00
		OAK WOODS 5.9 ACRES	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN, RX BURN, NATIVE SEED, PLANT OAKS	\$20,031.09	3	RX BURN, FOLIAR SPRAY OF HERBACEOUS	\$5,605.00
12.52	OLD FIELD	PRAIRIE	MOW, HERBICIDE, RX BURN, DRILL SEED	\$25,031.09	2	RX BURN, FOLIAR SPRAY OF HERBACEOUS	\$6,257.77
17.12	WETLAND	WETLAND	MONITOR	N/A	N/A	N/A	N/A
29.28	ACTIVE USE	ACTIVE USE	N/A	N/A	N/A	N/A	N/A
<b>MANAGEMENT UNIT 6 TOTAL</b>							
79.15				\$74,354.45			\$21,488.96



BATTLE CREEK REGIONAL PARK

NATURAL RESOURCE MANAGEMENT UNIT TABLE

MANAGEMENT UNIT 7 - BATTLE CREEK REGIONAL PARK							
ACRES	CURRENT LAND COVER	FUTURE LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIORITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
1.54	WETLAND	WETLAND	MONITOR	N/A	N/A	N/A	N/A
1.59	ACTIVE USE	ACTIVE USE	N/A	N/A	N/A	N/A	N/A
26.90	OAK WOODS	OAK WOODS	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN, RX BURN, NATIVE SEED	\$94,150.00	2	RX BURN, FOLIAR SPRAY OF BUCKTHORN	\$25,555.00
MANAGEMENT UNIT 7 TOTAL							
30.03				\$94,150.00			\$25,555.00

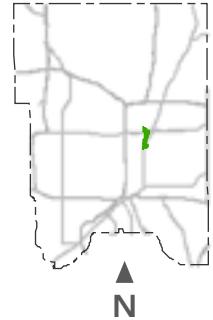
MANAGEMENT UNIT 8 - BATTLE CREEK REGIONAL PARK							
ACRES	CURRENT LAND COVER	FUTURE LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIORITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
5.08	ACTIVE USE	ACTIVE USE	N/A	N/A	N/A	N/A	N/A
12.27	WETLAND	WETLAND	MONITOR	N/A	N/A	N/A	N/A
17.69	CULTIVATED CONIFERS	CULTIVATED CONIFERS 6.77 ACRES	MONITOR	N/A	N/A	N/A	N/A
		OAK WOODS 10.92 ACRES	REMOVE TREES, HERBICIDE, RX BURN, PLANT OAKS	\$21,840.00	3	RX BURN, FOLIAR SPRAY OF BUCKTHORN	\$4,914.00
40.00	MIXED WOODS	MIXED WOODS	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN	\$80,220.00	4	RX BURN, FOLIAR SPRAY OF BUCKTHORN	\$18,049.50
95.94	OAK WOODS	OAK WOODS	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN, RX BURN, NATIVE SEED	\$287,820.00	2	RX BURN, FOLIAR SPRAY OF BUCKTHORN	\$43,173.00
MANAGEMENT UNIT 8 TOTAL							
171.09				\$389,880.00			\$66,136.50

BATTLE CREEK REGIONAL PARK

NATURAL RESOURCE MANAGEMENT UNIT TABLE

MANAGEMENT UNIT 9 - BATTLE CREEK REGIONAL PARK							
ACRES	CURRENT LAND COVER	FUTURE LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIORITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
6.06	CULTIVATED CONIFERS	OAK WOODS 1.44 ACRES	REMOVE TREES REMOVE TREES, HERBICIDE, RX BURN, PLANT OAKS	\$2,880.00	3	RX BURN, FOLIAR SPRAY OF BUCK- THORN	\$648.00
		PRAIRIE 4.61 ACRES	REMOVE TREES, HERBICIDE, RX BURN, DRILL SEED	\$13,830.00	3	RX BURN, FOLIAR SPRAY OF HERBA- CEOUS	\$4,840.50
10.94	WETLAND	WETLAND	MONITOR	N/A	N/A	N/A	N/A
20.30	PRAIRIE	PRAIRIE	N/A	N/A	2	RX BURN, FOLIAR SPRAY OF HERBA- CEOUS	\$10,150.11
25.49	MIXED WOODS	PRAIRIE	REMOVE TREES, HERBICIDE, RX BURN, DRILL SEED	\$76,455.27	3	RX BURN, FOLIAR SPRAY OF HERBA- CEOUS	\$12,742.54
MANAGEMENT UNIT 9 TOTAL							
62.79				\$93,165.27			\$28,381.15
MANAGEMENT UNIT 10 - BATTLE CREEK REGIONAL PARK							
ACRES	CURRENT LAND COVER	FUTURE LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIORITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
124.65	WETLAND	WETLAND	MONITOR	N/A	N/A	N/A	N/A
377.92	MIXED WOODS	FLOOD- PLAIN FOREST	INVASIVE WOODY RE- MOVAL, CUT, STUMP TREAT, STACK & BURN	\$377,916.41	N/A	N/A	\$94,479.10
629.12	OPEN WATER	OPEN WATER	MONITOR	N/A	N/A	N/A	N/A
MANAGEMENT UNIT 10 TOTAL							
1,161.69				\$377,916.41			\$94,479.10
BATTLE CREEK REGIONAL PARK TOTAL							
1,829.57				\$2,179,782.67			\$556,667.14

## KELLER REGIONAL PARK



### EXISTING SITE CONDITIONS

**MASTER PLAN DATE: 1978, 2011**



#### LOCATION AND SIZE

Keller Regional Park is located in the east-central part of Ramsey County, in the city of Maplewood. The park is 248 acres in size. The park is contiguous to Phalen Regional Park and in the metropolitan council regional park system they are considered one regional park (Phalen-Keller Regional Park). Ramsey County and the city of Saint Paul prepared a joint master plan for the park in 1978. Keller Regional Park is the oldest park in the Ramsey County parks system with initial acquisition beginning in 1927.



#### SITE CHARACTERISTICS

The primary feature of the park is the chain of lakes which flows into Lake Phalen. The park includes shoreline on 3 of these lakes (Spoon, Keller and Round Lake). The upstream lakes (Gervais and Kohlman) are accessible by boat; downstream Lake Phalen is accessible by canoes and trails. The park includes 3 miles of shoreline. The majority of the park area is mowed grass with moderate tree cover. Areas adjacent to Keller Lake and Spoon Lake are flat and the remainder of the park is relatively hilly.



#### RECREATION DEVELOPMENT

**Golf Course:** The largest section of the park (140 acres) is occupied by the golf course. The course was constructed in 1929 and is an 18-hole championship course that includes a driving range. Buildings on the site include a maintenance center, pro shop, and clubhouse.

**Picnic Areas:** The park has 6 distinct areas for small groups and individual picnicking. They are listed as Spoon Lake, Keller Island, Keller Lakeside, Lower Keller (fire circle), Keller Golfview, and Keller Round Lake. Keller Regional Park has the greatest number of shelters of any park in the Ramsey County system. There are 7 shelters which each serve groups of approximately 50 people. In addition to the shelters each picnic area has parking and a restroom. The largest area, Golfview Picnic Area, also includes a play area, volleyball court, a game field, tuj lub courts, and an archery range.

**Boat Access:** A boat ramp and parking for 10 car/boat trailers is located on the west side of Spoon Lake. Bridges and channels allow boaters to go upstream to Lake Gervais and Kohlman Lake, and downstream to Keller Lake. A dam between Keller and Round Lakes prevents boats from going downstream to Round Lake and Lake Phalen. Only electric motors are allowed on Lake Phalen. Canoeists can easily portage around the small dam structure.

**Shoreline Fishing:** The extensive shoreline of Spoon, Keller and Round lakes are used for shore fishing. A handicapped-accessible fishing pier is located on Round Lake. A handicapped- accessible shore fishing area is provided on the east shore of Spoon Lake.

**Trails:** Bituminous multi-use trails at Keller Park to connect to the 3 - mile loop around Lake Phalen, as well as all other trails in Phalen Regional Park. Bituminous trail exists north of Phalen through Golfview and under Hwy 61 to Lower Keller. From there a combination permeable bituminous trail and 2,500 lineal feet of boardwalk connect Lakeside and Island picnic areas to the Spoon Lake area of the regional park by an underpass of Hwy 36.

The trails also connect to the 18-mile-long Gateway Trail segment of the Willard Munger State Trail which currently extends from Saint Paul to Stillwater.

**Archery Range:** An archery range consisting of 11 shooting lanes of various lengths is located adjacent to the Golfview Picnic Area. Access to the site is provided from the upper parking lot of the Golfview area.

**Tuj Lub courts:** Tuj Lub courts were constructed in 2016 near the Golfview picnic area in coordination with the city of Maplewood. Three turf and conveyor belting throw lane courts are combined in a single fenced area to provide professional Tuj Lub courts for the public. The courts offer areas for public seating, and can be used for special events or tournaments.



## MAINTENANCE

- Maintain winter access to the boat launch at Spoon Lake. Plow trail from Round Lake to Lower Keller.
- There are seven shelters and bathroom buildings spread throughout the park, which is divided by a highway making maintenance operations difficult. Equipment is trailered from location to location resulting in time lost to transportation.
- The park is heavily used and turf areas around the shelters are difficult to maintain and reestablish.

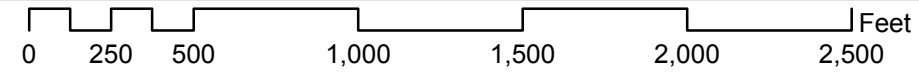
### Outdoor Court Maintenance: Tuj Lub Court

- Mowing turf will occur once weekly.
- Trim around fence and retaining wall weekly.
- Control weeds in court and surrounding area yearly.
- Maintain backstops, lanes, and throwing pads.
- Top dress and repair turf as needed.

### Archery maintenance:

- Mow turf a minimum of every other week.
- Replace target bales yearly prior to hunting season.
- Check signage to ensure archery range is being used properly.

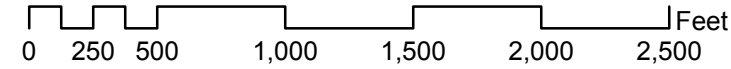
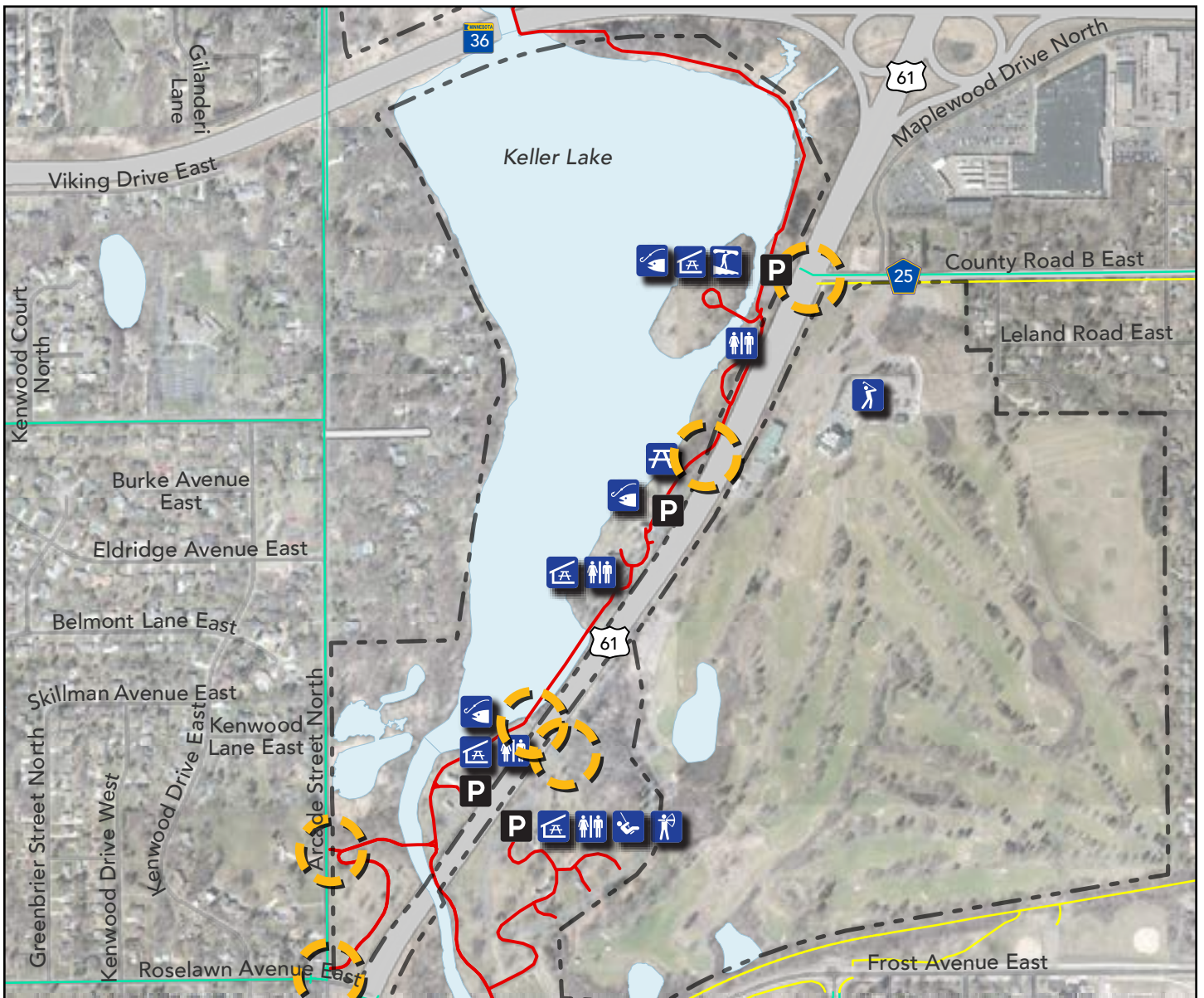
EXISTING CONDITIONS - ROUND LAKE TO HIGHWAY 61



Legend

Park Border		Park Paved Trail		Restrooms		Fishing Pier	
Park Entrance		Park Turf Trail		Picnic Area		Shore Fishing	
Metro Transit Stop		Municipal Trail		Picnic Shelter		Archery Range	
Regional Trail		Municipal Ped/Bike Facility		Playground			

EXISTING CONDITIONS - KELLER LAKE



Legend

Park Border		Park Paved Trail		Restrooms		Shore Fishing	
Park Entrance		Park Turf Trail		Picnic Area		Carry In Access	
Metro Tranist Stop		Municipal Trail		Picnic Shelter		Archery Range	
Regional Trail		Municipal Ped/Bike Facility		Playground			

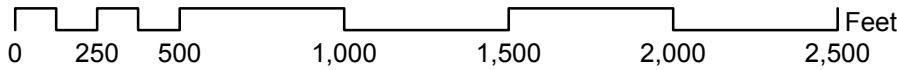
EXISTING CONDITIONS - SPOON LAKE



Legend

Park Border		Park Paved Trail		Restrooms	
Park Entrance		Park Turf Trail		Boat Launch	
Metro Tranist Stop		Municipal Trail		Fishing Pier	
Regional Trail		Municipal Ped/Bike Facility		Shore Fishing	
				Carry In Access	

EXISTING LAND COVER - ROUND LAKE TO HIGHWAY 61



Existing Land Cover

- |                     |                   |            |                 |
|---------------------|-------------------|------------|-----------------|
| Active Use          | Floodplain Forest | Oak Woods  | Remnant Prairie |
| Impervious          | Mesic Forest      | Old Field  | Savanna         |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp     |
| Tamarack Swamp      | Wetland           | Open Water |                 |



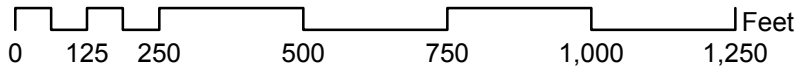
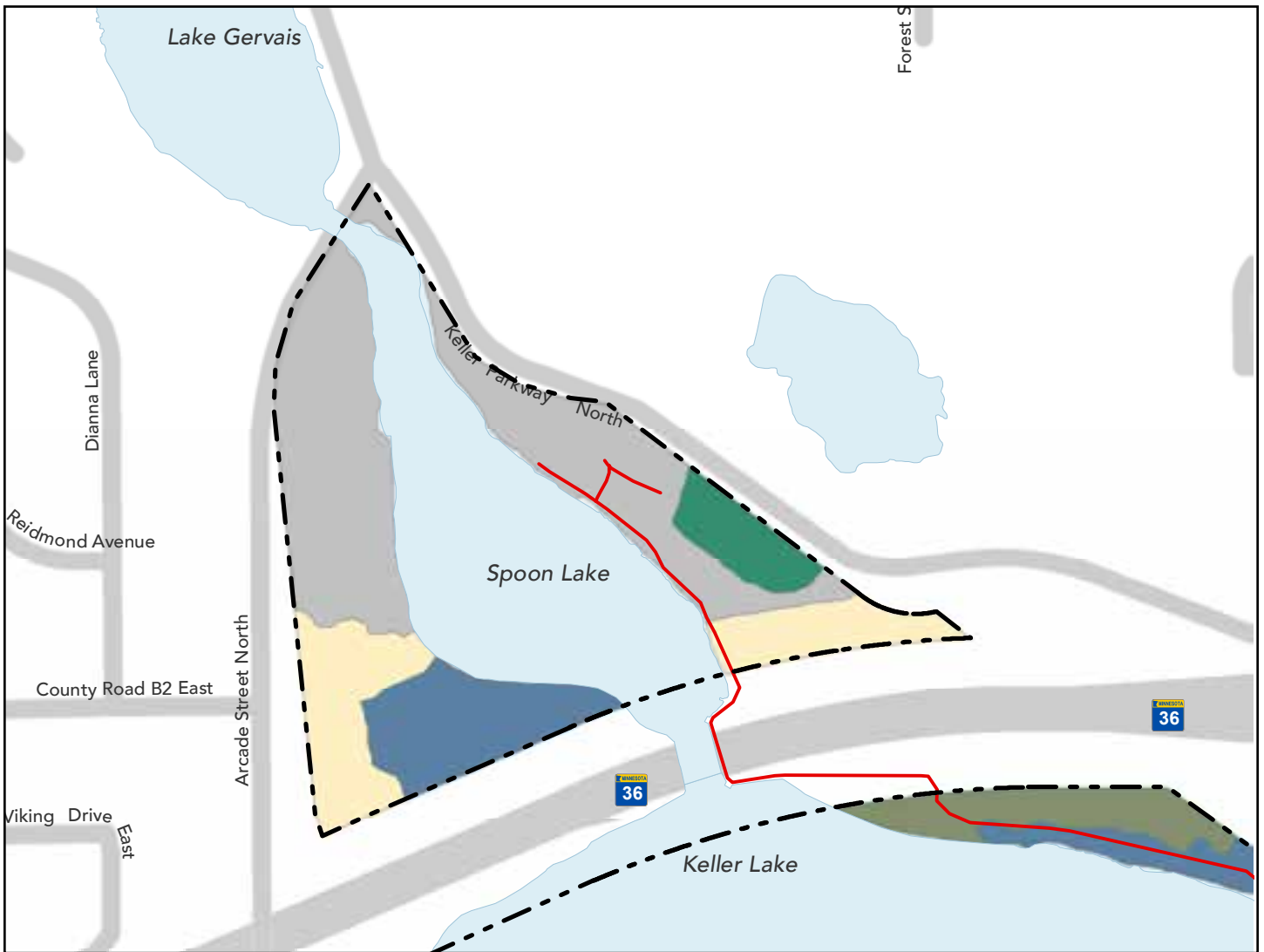
EXISTING LAND COVER - KELLER LAKE



Existing Land Cover

- |                     |                   |            |                 |
|---------------------|-------------------|------------|-----------------|
| Active Use          | Floodplain Forest | Oak Woods  | Remnant Prairie |
| Impervious          | Mesic Forest      | Old Field  | Savanna         |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp     |
| Tamarack Swamp      | Wetland           | Open Water |                 |

EXISTING LAND COVER - SPOON LAKE



Existing Land Cover

- |                     |                   |            |                 |
|---------------------|-------------------|------------|-----------------|
| Active Use          | Floodplain Forest | Oak Woods  | Remnant Prairie |
| Impervious          | Mesic Forest      | Old Field  | Savanna         |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp     |
| Tamarack Swamp      | Wetland           | Open Water |                 |

## KELLER REGIONAL PARK

### LAND COVER AND HABITAT

The native vegetation of Keller Lake Regional Park was a mixture of oak woods and wetlands. The land cover that exists today consists of mostly active use surrounding Spoon Lake, north of Round Lake, the east side of Keller Lake including parkland and pavilions, and the golf course. Most of the habitat in this park is located within the southwest corner of Keller Lake consisting of oak woods, old field, mixed woods, and scattered wetlands. These habitats were heavily degraded with buckthorn and other herbaceous invasives, such as garlic mustard, until the implementation of recent restoration practices, which has set back the buckthorn throughout the park.

### WILDLIFE

The park is used by migratory waterfowl and other common wildlife. The small, fragmented pieces of habitat limit the overall wildlife diversity, but are excellent for nesting song birds. Bald eagles also reside within the park. A bald eagle nest on the north side of the lake collapsed in late 2015 and a new nest was built on the southwest side of Keller Lake in 2016. A pair of bald eagles have been nesting at this location since its creation.



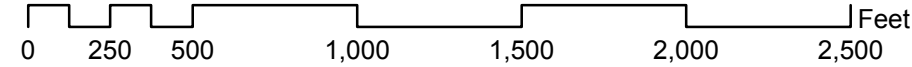
### WILDLIFE MANAGEMENT

Wildlife management in the park involves the control of the Canada goose population. Geese are controlled by selective removal of nesting birds in areas where they are nuisances.

### SURFACE WATER RESOURCES

Keller Lake Regional Park surrounds Spoon, Keller and a portion of Round Lake. There is a county boat launch on Spoon lake and fishing pier access on Keller and Round lake, with shoreline fishing access throughout most sections of the park. In addition to the shoreline restoration work completed, the Ramsey Washington Metro Watershed District has removed 60% of the common carp throughout the chain to aid in pollution reduction efforts. The chain includes Kohlman, Gervais, Spoon, Keller, Round, and Phalen Lakes.

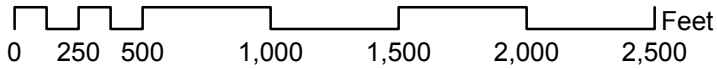
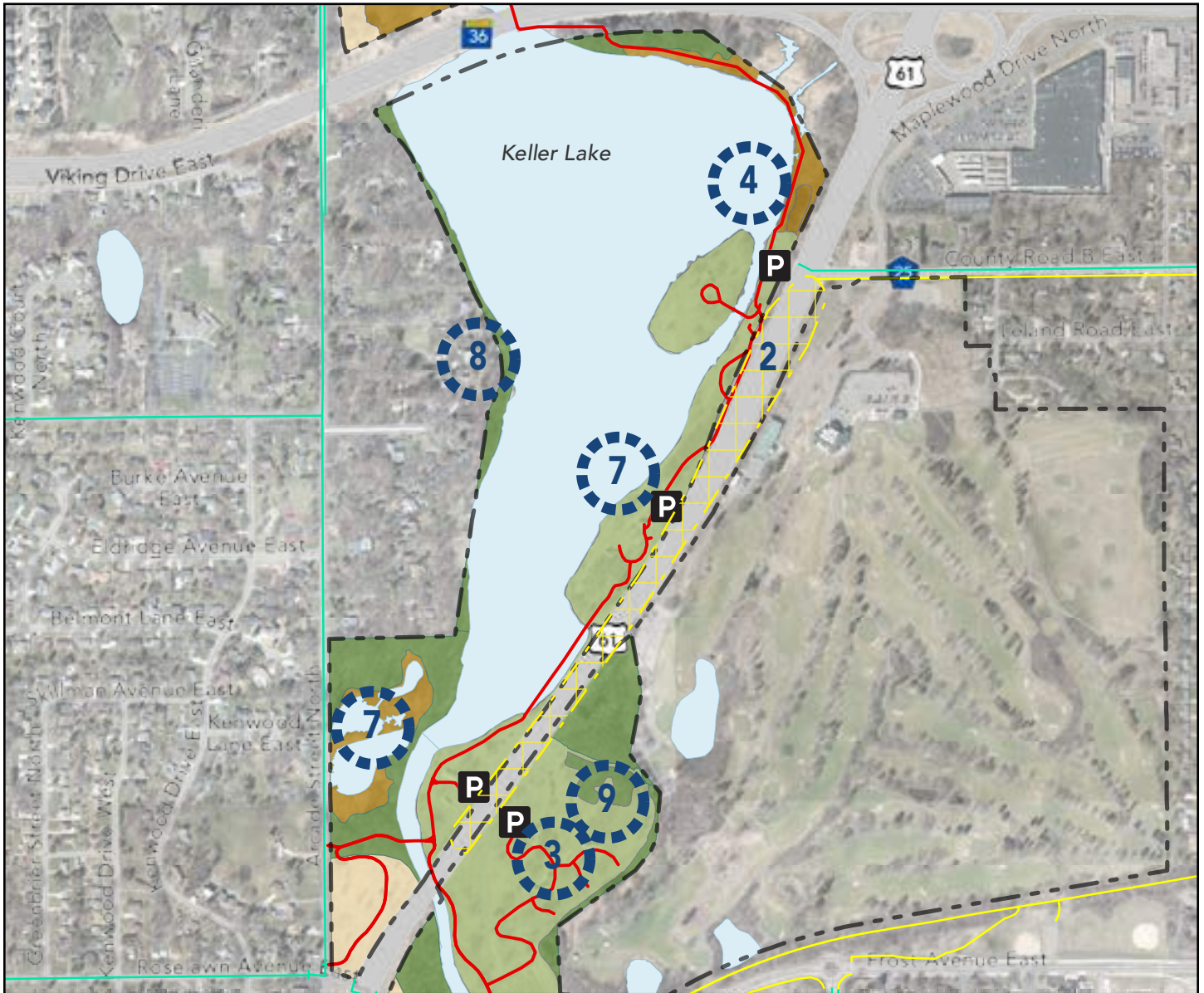
PROPOSED DEVELOPMENT - ROUND LAKE TO HIGHWAY 61



Legend

Park Border		Park Paved Trail		Regional Trail	
Proposed Development		Park Turf Trail		Proposed Regional Trail	
Proposed Development Node		Municipal Trail		Parking Lot	
Metro Tranist Stop		Municipal Ped/Bike Facility			

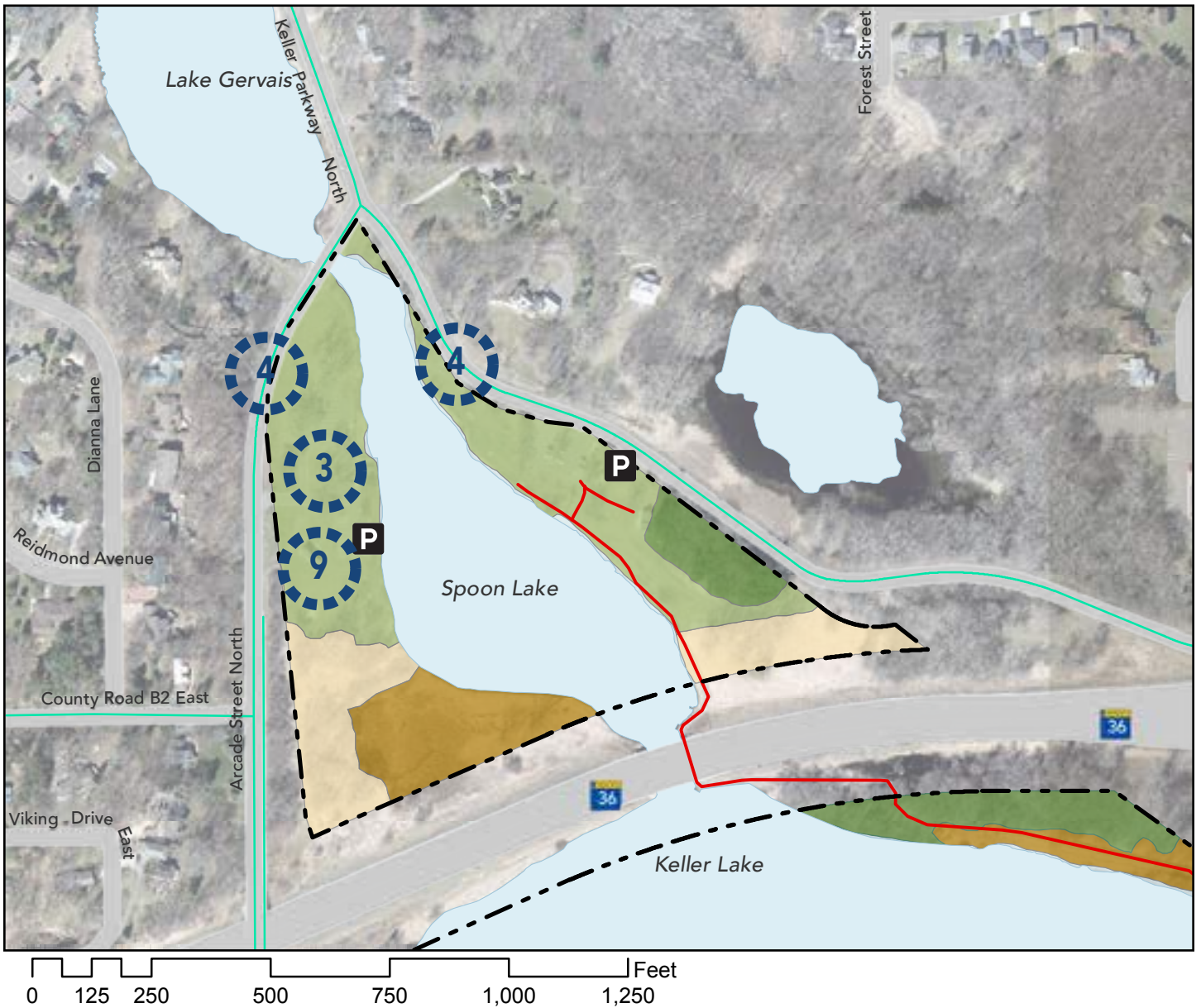
PROPOSED DEVELOPMENT - KELLER LAKE



Legend

Park Border		Park Paved Trail		Regional Trail	
Proposed Development		Park Turf Trail		Proposed Regional Trail	
Proposed Development Node		Municipal Trail		Parking Lot	
Metro Tranist Stop		Municipal Ped/Bike Facility			

PROPOSED DEVELOPMENT - SPOON LAKE



Legend

- |                           |  |                             |  |                         |  |
|---------------------------|--|-----------------------------|--|-------------------------|--|
| Park Border               |  | Park Paved Trail            |  | Regional Trail          |  |
| Proposed Development      |  | Park Turf Trail             |  | Proposed Regional Trail |  |
| Proposed Development Node |  | Municipal Trail             |  | Parking Lot             |  |
| Metro Tranist Stop        |  | Municipal Ped/Bike Facility |  |                         |  |

## PLANNING CONSIDERATIONS

Keller Regional Park is part of the overall Phalen-Keller Regional Park. Facilities provided in each location should be complimentary, recognizing the common customer base.

The primary access to Keller Regional Park is US Highway 61, which passes through the center of the park. This roadway is scheduled for transfer from the state to Ramsey County through the State Road Turnback Program. Redevelopment of the section of road between County Road B and Parkway Drive as a parkway section would significantly enhance the park and driving experience.

Re-decking of the boardwalk should take into account material longevity when considering deck material type. The railing and deck may be different materials as they age differently.

## PROPOSED DEVELOPMENT

**1. Master Planning** - The master plan for Keller-Phalen Regional Park was last updated in November 2010 and was approved by the Ramsey County Board of Commissioners and the Metropolitan Council. This master plan covered proposed improvements for both Keller Regional Park and Phalen Regional Park. Continued development of the regional park will follow items addressed in the 2010 master plan amendment until future changes are required to the park as redevelopment needs arise for park improvements.

- Redevelopment of existing park infrastructure will require a master planning process to address proposed park and recreational opportunities for changing trends, demographics, and improved recreational amenities. Any future master planning process shall be coordinated with Saint Paul Parks & Recreation for improved connections and recreational opportunities with Phalen Regional Park.
- Develop partnerships with the city of Maplewood, Minnesota Department of Transportation (MNDOT), Minnesota Department of Natural Resources (MNDNR), Saint Paul Parks & Recreation, and Ramsey Washington Metro Watershed District (RWMWD) for increased recreational opportunities and funding strategies for improvements.

**2. Develop Highway 61 as a Parkway** - A long term transportation plan identifies Highway 61 as being turned back to Ramsey County. It is desirable to develop the segment between Highway 36 south through the park as a parkway. Improvements would consist of appropriate turn lanes, a median, enhanced landscaping, and signage. Further master planning will be required during the turn back process for this segment of road to provide appropriate park connections and amenities to adjacent areas within Keller Regional Park.

### 3. Recreation Opportunities

- Redevelopment of existing picnic shelters and restrooms occurred in 2008-2013. Additional redevelopment of picnic shelters and restrooms will likely be required in the future to provide enhanced recreational amenities for picnic reservations, to improve use with adjacent recreational amenities and comply with the Americans with Disabilities Act (ADA) and Universal Design standards.
- Redevelop the existing playground in the Golfview Picnic Area. Replace existing playground surface materials to support accessibility and maintenance operations.
- Additional playground development is proposed in the Round Lake Picnic Area and Island Lake Picnic Area.
- Improve large turf areas for increased recreation and community event opportunities.

## PROPOSED DEVELOPMENT

- Expansion of the tuj lub court within the Golfview Picnic area may be required if use increases. An additional tuj lub court may be considered in another location.
- Provide opportunities and appropriate infrastructure to accommodate local public art for connections to the community.
- Provide connection and interpretive education for culturally significant areas within Keller Regional Park such as the existing the Indian Mound site in the Lakeside Picnic area. Proposed cultural improvements could consist of fencing for protection of the Indian Mounds, interpretive educational signage, and pedestrian connections for viewing opportunities.
- Provide visual and interpretive education for endangered wildlife areas such as the bald eagle nest located near the channel between Keller and Spoon Lake adjacent to Highway 36.
- Provide necessary improvements to the existing fishing pier on Round Lake for enhanced use and maintenance operations. A new fishing pier is proposed at Spoon Lake West to accommodate increased fishing activity on Spoon Lake.
- Provide secondary fishing access points along the east and west shores of Spoon Lake and along the east shore of Keller lake where conditions allow.
- Increase recreation and nature programming activities.
- Redevelop the existing archery range and access points to provide access for individuals of all abilities. Improvements to the archery range would include a paved accessible trail from the Golfview Picnic area parking lot, connection to the existing trail system along Keller Creek, redevelopment of shooting lanes, targets, signage, and other range site components.
- Provide access for small water craft within the park area. Increase variety of rental amenities for potential small watercraft rental.
- Provide necessary improvements to the portage area around the Keller dam/weir on Keller Creek to improve access and recreational use.
- Provide necessary improvements to the existing boat launch facility to enhance access to Spoon Lake.

## 4. Trail Development

- Redevelop the existing trail system and access points and provide new trails and access points to improve connectivity and access to recreation amenities and the surrounding community.
- **Pedestrian Tunnel under Highway 61**
  - Remove access to the existing pedestrian tunnel under Highway 61. This tunnel only provides limited access from Lower Keller and Golfview Picnic areas. The pedestrian tunnel does not meet current needs or design standards for safe use.
- **Pedestrian Access under Highway 61 and Frost Avenue adjacent to Keller Creek**
  - Both access areas are currently adjacent to Keller Creek and are located under roadway bridges. Redevelopment of both pedestrian accesses would provide improved pedestrian use, safety, and better a connection to Keller Creek.
  - Develop an at-grade trail crossing for improved connection from Round Lake Picnic Area to the Gateway State Trail.
- **Internal Park Trails:**
  - Redevelop existing internal park trails to provide a more direct and user-friendly trail connection to park amenities. Improvements shall consist of trail repaving, re-alignment of trail sections for improved connections, and the reduction of sharp corners and steep slopes adjacent to the trail.
- **Boardwalk:**
  - Redevelop the existing boardwalk as needed for improved used and maintenance operations.



## PROPOSED DEVELOPMENT

- **Trail Development Along Keller Parkway and Arcade Street:**
  - Develop a trail on the east and west side of Spoon Lake within the park or adjacent to Keller Parkway and the Arcade Street right-of-way to provide connection to trail systems planned for Keller Parkway and Arcade Street by the city of Little Canada and the city of Maplewood. Trail development may consist of on-road as well as off-road sections.

### 5. Vehicular Access Points and Parking Improvements

- **Spoon Lake West:**
  - Redevelopment of the parking lot occurred in 2009. A mill and overlay will be required for improved use and maintenance operations. During any parking lot redevelopment, additional parking expansion for boat trail and vehicular parking should be considered, improved pedestrian connections, signage, stormwater management, and site amenities shall be updated for improved recreational opportunities.
- **Spoon Lake East:**
  - Redevelopment of the parking lot occurred in 2008. A mill and overlay will be required for improved use and maintenance operations. During any parking lot redevelopment additional parking should be considered along with improved pedestrian connections, signage, stormwater management best practices, and site amenities.
- **Keller Island:**
  - Redevelopment of the parking lot occurred in 2015. No additional development is required except pavement maintenance and associated parking lot components.
- **Keller Lakeside:**
  - Redevelopment of the parking lot occurred in 2007. A mill and overlay will be required for improved use and maintenance operations. During any parking lot redevelopment additional parking should be considered along with improved pedestrian connections, signage, stormwater management best practices, and site amenities.
- **Lower Keller:**
  - Redevelopment of the parking lot occurred in 2010. No additional development is required except pavement maintenance, and associated parking lot components.
- **Golfview:**
  - Redevelopment of the parking lot occurred in 2007. A mill and overlay will be required for improved use and maintenance operations. During any parking lot redevelopment additional parking should be considered along with improved pedestrian connections, signage, stormwater management best practices, and site amenities.
- **Round Lake:**
  - A mill and overlay for this parking lot was completed in 2015 and consisted of replacement of the asphalt wear course layer and selective curb and gutter replacement. No additional development is required except pavement maintenance, and associated parking lot components.
- **Overflow Parking Lot at Keller Golf Course:**
  - Redevelopment of the parking lot occurred in 2013 with the redevelopment of Keller Golf Course Clubhouse and Pro-Shop. No additional development is required except pavement maintenance, and associated parking lot components.

## PROPOSED DEVELOPMENT

### 6. Wayfinding

- **Pedestrian:** Improve signage to enhance pedestrian wayfinding to trail accesses, and other amenities. Provide interpretive signage in natural areas for increased nature education opportunities.
- **Vehicular:** Improve vehicular entrance wayfinding
- **Picnic Areas:** Replace existing park entrance park signs to picnic areas.
- **Monument Signs:** Install monument signs along Highway 61 for main north and south entrance accesses into the regional park. The monument sign on the north end of the park is proposed to be located near the Keller Golf Course entrance along County Road B2 and may include an electronic board for digital displays. The south monument is proposed to be located near the corner of Frost Avenue and Highway 61. A standard monument following the Wayfinding Master Plan is proposed for this location

### 7. Habitat Restoration & Management

- **Shoreline Restoration**
  - Starting in 2010 the Ramsey Washington Metro Watershed District has been partnering with the Ramsey County Parks & Recreation department to complete over 2,000 linear feet of shoreline restoration along Keller Lake.
  - Restoration includes natural stabilization, such as brush bundles and coconut fiber bio-rolls, and planting of native vegetation.
  - Shoreline improvements and buffers are currently being maintained by the Ramsey Washington Metro Watershed District.
- **Habitat Restoration**
  - Managed by the Ramsey County Parks & Recreation department.
  - Upland habitat restoration started in 2014 with buckthorn removal from the mixed woods surrounding Round Lake in conjunction with removal of buckthorn being completed on adjacent municipal owned lands surrounding Round Lake.
  - Beginning in 2016 restoration in the Southwest section of Keller Lake included removal of woody invasive species within the oak and mixed woods areas, and conversion of old field to oak savanna and native prairie.
  - Completed restoration work will have continued maintenance consisting of prescribed burns and foliar spraying of invasive woody vegetation targeting buckthorn.

### 8. Acquisitions

Future park land acquisition is proposed on the west side of Keller Lake for inclusion into Keller Regional Park as properties become available. Future development on the west side of the lake may include trail loops through upland areas adjacent to the lake, improved accesses, a secondary parking lot from Arcade Street, fishing access, and observation areas. When and if additional properties are acquired on the west side of Keller Lake, an amendment would be required to the existing park master plan for additional development.

## PROPOSED DEVELOPMENT

### 9. Energy & Resilience:

Several facilities within the park are conducive to rooftop solar arrays: Shelter #5 (Golfview), Shelter #3 (Lower Keller), and the west restroom at the Spoon Lake section. The Golfview section provides a good opportunity for parking lot carport solar arrays. Solar “pergolas” could be constructed at the Island, Lakeside, Spoon Lake (east restroom), and Round Lake sections. This combination of solar installations would potentially provide 52.4 MWh/year of energy to offset the site’s energy use. However, due to the capital cost of such a system, and current regulations which do not allow for on-site solar arrays to generate more energy than the site uses, the energy cost savings over the estimated life of a solar system would not offset the capital cost. From an economic standpoint, solar “retrofitting” of the current site should not be a high priority for the county, though the environmental and societal benefits of renewable energy must also be considered. Alternative solar financing structures, such as community solar, lease-to-own, or power purchasing agreements (PPAs), should also be considered.

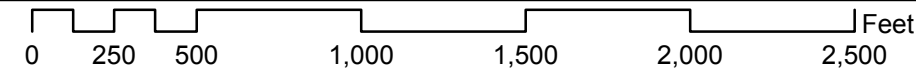
The site’s Energy Use Intensity (EUI), which measures energy use relative to physical building square footage, is 44.3, which is more than double the typical EUI for county park facilities (21.1). An energy study would identify opportunities for reducing energy consumption, thus reducing the size of the solar array necessary to offset the site’s energy use.

Master planning efforts should be coordinated with the adjacent Island Lake Golf Center. Should the Golf Center be converted to parkland, and/or if the park were to be converted to a regional park, energy use and renewable energy should be major considerations in any development plans.

Future redevelopment provides an excellent opportunity for “net-zero” energy consumption. Redevelopment projects must take into consideration building location and orientation in order to maximize solar generation. On-site battery storage should be explored as well.

Future redevelopments also provide opportunities for innovative storm water management designs, such as rain gardens, permeable pavement, storm water filtration systems (given the proximity of Keller, Spoon, and Round Lakes), incorporation of native plantings and trees, nature play areas, and universal design practices to ensure that the park and its amenities are able to be used by all residents, regardless of race, age, gender, language, and physical ability.

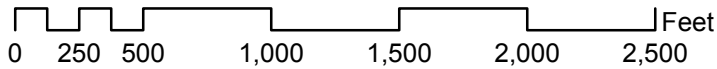
PROPOSED LAND COVER - ROUND LAKE TO HIGHWAY 61



Proposed Land Cover

- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |

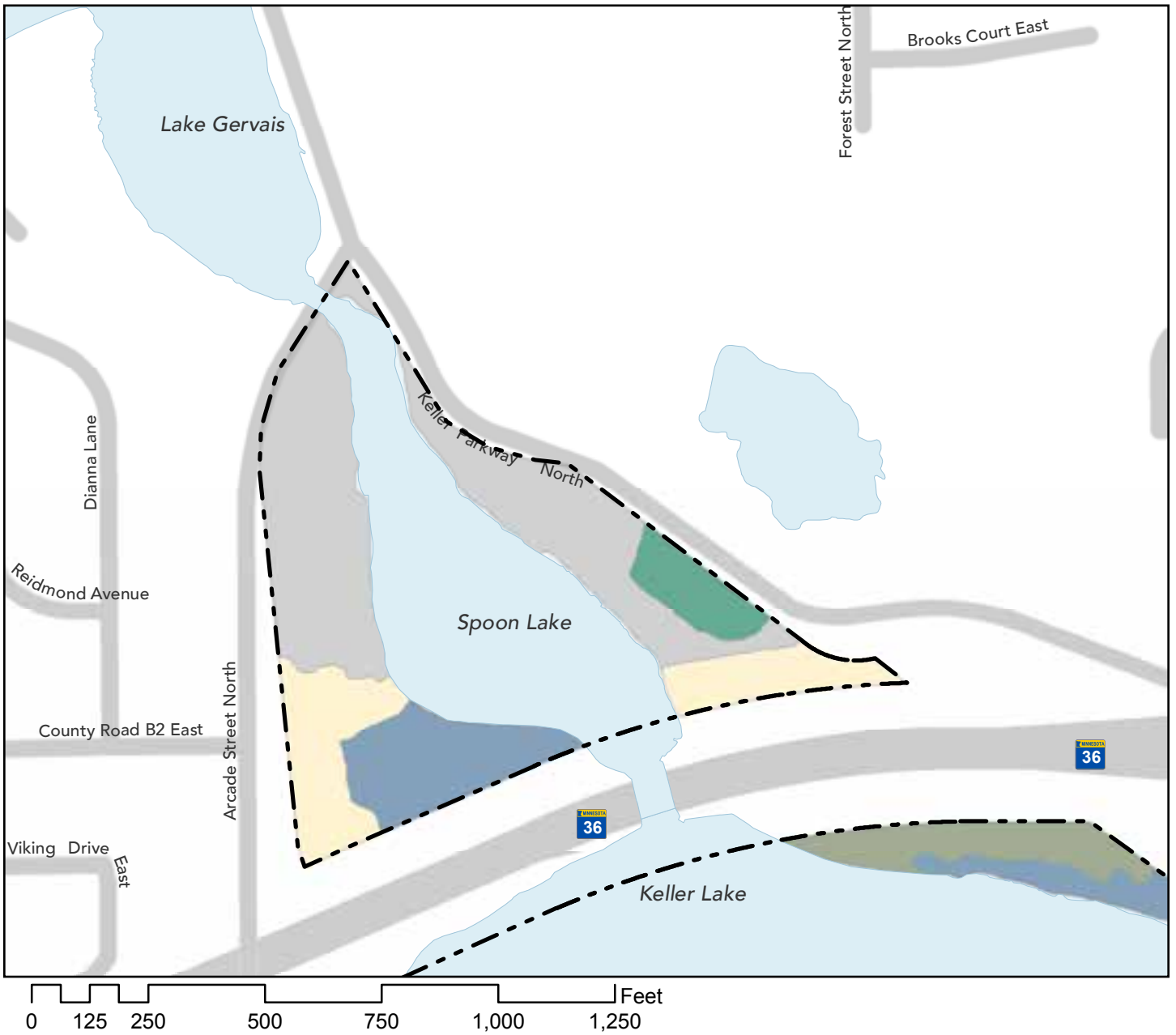
PROPOSED LAND COVER - KELLER LAKE



Proposed Land Cover

- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |

PROPOSED LAND COVER - SPOON LAKE



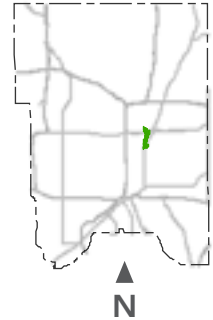
Proposed Land Cover

- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |

NATURAL RESOURCE MANAGEMENT UNIT TABLE

ACRES	CURRENT LAND COVER	PROPOSED LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIORITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
0.78	CULTIVATED CONIFERS	CULTIVATED CONIFERS	N/A	N/A	N/A	N/A	N/A
6.4	OAK WOODS	OAK WOODS	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK/BURN, RX BURN, NATIVE SEED	\$22,400.00	3	FOLIAR SPRAY OF BUCKTHORN, RX BURN	\$6,080.00
10.4	OLD FIELD	PRAIRIE 3.73 ACRES / SAVANNA 6.67 ACRES	MOW, HERBICIDE, RX BURN, DRILL SEED	\$20,800.00	3	RX BURN, FOLIAR SPRAY OF HERBACEOUS	\$10,920.00
17.26	WETLAND	WETLAND	N/A	N/A	N/A	N/A	N/A
22.37	MIXED WOODS	MIXED WOODS	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK/BURN, RX BURN	\$48,060.00	3	FOLIAR SPRAY OF BUCKTHORN	\$12,015.00
79.9	OPEN WATER	OPEN WATER	N/A	N/A	N/A	N/A	N/A
192.31	ACTIVE USE	ACTIVE USE	N/A	N/A	N/A	N/A	N/A
<b>PARK TOTAL</b>							
331.08				\$91,260.00			\$29,015.00

## LONG LAKE REGIONAL PARK



### EXISTING SITE CONDITIONS



#### LOCATION AND SIZE

Long Lake Regional Park is located in the northwestern part of Ramsey County, in the city of New Brighton, encompassing 225 acres. The park is generally bordered by I-694 on the south, Old Highway 8 on the east, County Road H on the north and Long Lake on the west.

Vehicular access to the park is from Old Highway 8, south of Highway 96. Access to the boat launch is from Long Lake Road at I-694. Trail access is provided at the north end of the park via the Rice Creek West Regional Trail Corridor (at Mississippi Street), and from the North across the grade separated crossing of the Minnesota Commercial Railroad leading to the Rice Creek North Regional Trail, west of the park pavilion. The Highway 96 Regional Trail can be access north of the park entrance road.

Lion's Park in the city of New Brighton is a collaborative project between the city of New Brighton and Ramsey County Parks & Recreation. The city of New Brighton portion of the park is located just to the south of Long Lake Regional Park and includes a softball field, lacrosse/multi-purpose field, play area, trails, and related park amenities. Ramsey County is planning park development that will complement the new park, including a shelter, nature play area, trails, restrooms, parking lot, and additional park amenities within Long Lake Regional Park adjacent to Lion's Park. Associated with the Lion's Park development project, a shared parking lot, trail connections, site grading, and utility improvements will be made to allow future amenities to be completed.



#### SITE CHARACTERISTICS

The predominant natural feature of the park is Long Lake. The park includes the entire southern and eastern shoreline of Long Lake, totaling 1½ miles. Long Lake is a 184-acre lake with a maximum depth of 25 feet, and is a good fishing lake.

The park includes Rush Lake, a 36-acre deep marsh lake which has a maximum depth of 10 feet. Rush Lake is surrounded by extensive wetland vegetation.

The remaining natural area of the park includes cattail marshes, oak woods, and an 8-acre restored prairie. The active recreation areas of the park are mainly located in former agricultural fields, now restored to turf grass, and recently planted trees.





## RECREATION DEVELOPMENT

**Swimming Beach:** The swimming beach area consists of a 150 car parking lot and a beach building which includes restrooms, changing rooms, a concession stand, and lifeguard room. A portion of the beach building was designed to be heated and used as a winter trailhead. The beach development also includes a sand and turf beach area of 4 acres. Within the beach area, there is a small children's play area, sand volleyball court, picnic tables, and a sand and water play area.

**Small Group Picnic Area:** The small group picnic area is located immediately north of the beach area. The area contains a 50 car parking lot, a picnic shelter for groups of up to 50 people, a small children's play area, and picnic tables throughout.

**Large Group Picnic Area:** The large group picnic area is located in the northern part of the park. It contains a 100 car parking lot, large children's play area, game field, sand volleyball court, and a large picnic pavilion with restrooms and kitchen facilities designed to accommodate groups of up to 300 people.

**Boat Access/Fishing Area:** The boat access and fishing area is located at the south end of Long Lake. The area includes a boat ramp, parking for 15 car/boat trailers, parking for an additional 31 cars for shore fishing, a restroom, and a fishing pier.

**Historic Depot:** The New Brighton Historical Society, under an agreement with Ramsey County, has located a historic railroad depot in the park adjacent to the railroad. The depot has been restored and is open to the public as a historical interpretive center. The depot site includes an 8 car parking lot.

**Nature Interpretive Area:** The nature interpretive area includes a 33 car parking area and an 8 acre restored prairie. The site is adjacent to Rush Lake and an oak woods. Hiking trails exist throughout these areas.

**Day Camp/Picnic Area:** The 33 car parking lot for the proposed day camp and picnic area near the entrance of the park has been constructed. Extensive tree planting has been done at the site to buffer adjacent land uses.

**Trail System:** A 3 mile network of 10 foot wide bituminous, multi-use trails connect the park and extend to the two park entrances. In addition the trail extends to the north end of the park where it bridges Rice Creek and connects to the Rice Creek West and Rice Creek North Regional Trail Corridors. The bituminous trail system is designated for all non-motorized uses including biking, walking, jogging, and in-line skating.

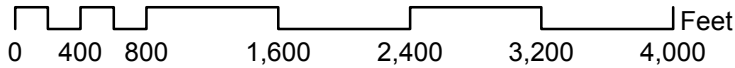
Lions Park, a city of New Brighton park, adjoins Long Lake Regional Park. The city and county have agreed to jointly develop both parcels sharing responsibility for the cost of constructing the parking lot and restroom building planned for use by visitors to both areas.

## MAINTENANCE



- Maintain access to the boat launch
- Plow internal park trails and trails leading to regional trails
- Plow part of pavilion lot for winter snow shoe event
- Preparation for The city of New Brighton's Stockyard Days includes extra mowing, trimming and cleaning of the park. Preparation starts on Wednesday and goes through the weekend. The weekend maintenance crews are responsible for emptying the trash on Saturday and Sunday at the festival
- There are prohibited areas of the park used by fisherman and boaters that require the frequent installation of signs and calls to the authorities because of complaints from residents
- The pavilion is heavily used and requires cleaning and preparation daily during the summer
- The beach building is used for Rice Creek Boat Club storage and a concessioner
- Due to vandalism and illicit activity the beach building bathrooms are only open during beach season and when the shelter is rented. A portable toilet services patron year-round when the bathrooms are closed
- The city of New Brighton has built Lions Park adjacent to Long Lake Regional Park and a parking lot was constructed to service the Lions Park and future park development
- The beach requires extra maintenance to clean the goose droppings

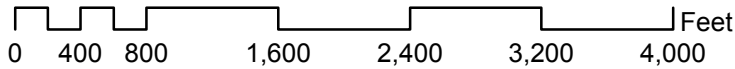
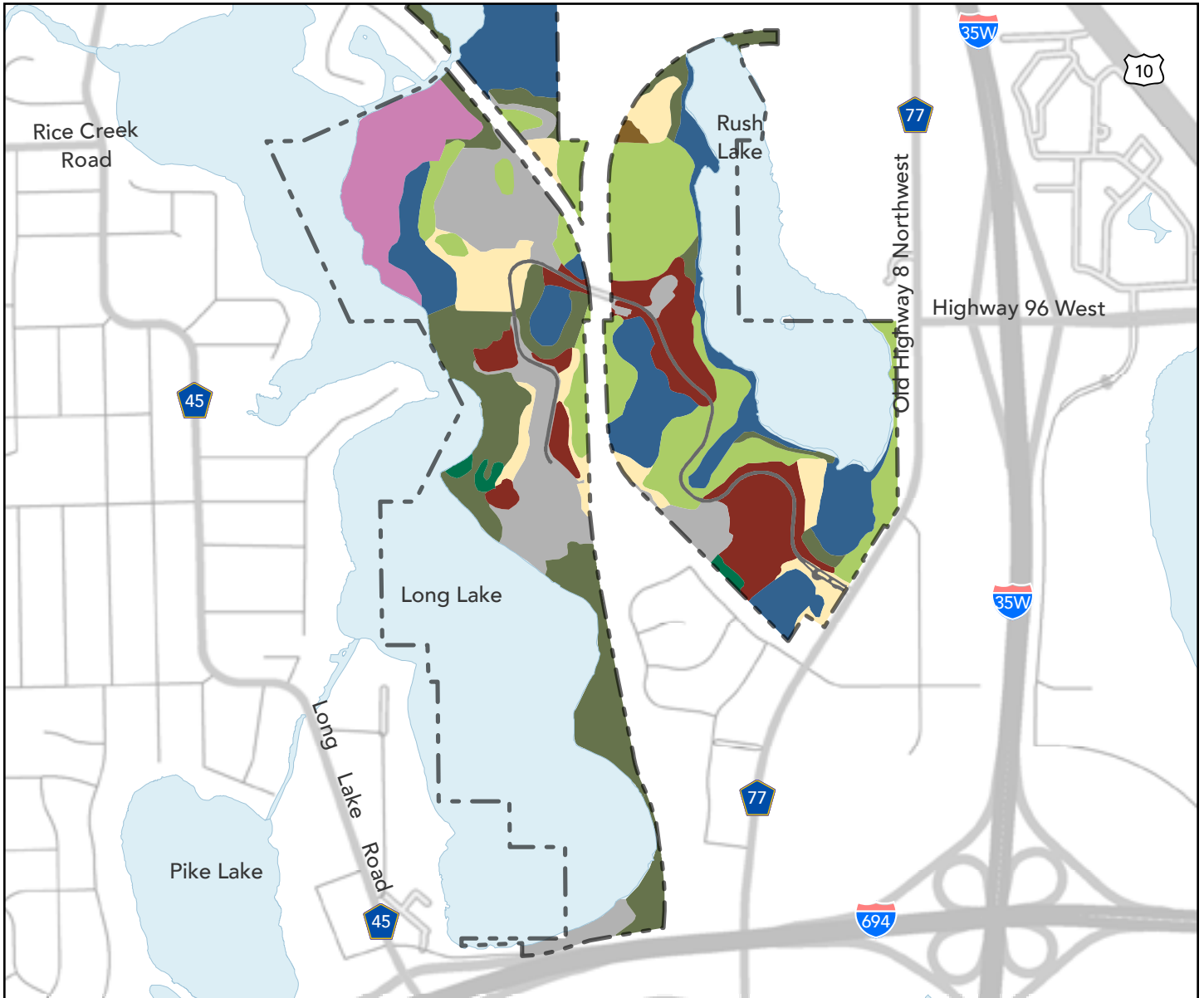
EXISTING CONDITIONS



Legend

Park Border		Park Paved Trail		Restrooms		Pavilion	
Park Entrance		Park Turf Trail		Boat Launch		Playground	
Metro Tranist Stop		Municipal Trail		Fishing Pier		Parking Lot	
Environmental Natural Area		Municipal Ped/Bike Facility		Beach		Picnic Shelter	
		Regional Trail		Carry In Access		Picnic Area	

EXISTING LAND COVER



Existing Land Cover

- |                     |                   |            |                 |
|---------------------|-------------------|------------|-----------------|
| Active Use          | Floodplain Forest | Oak Woods  | Remnant Prairie |
| Impervious          | Mesic Forest      | Old Field  | Savanna         |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp     |
| Tamarack Swamp      | Wetland           | Open Water |                 |

## LONG LAKE REGIONAL PARK

### LAND COVER AND HABITAT

The native vegetation of Long Lake Regional Park was comprised of oak woods, mixed woods, and wetlands. Much of the native vegetation has been highly degraded by past agricultural use. Current vegetation consists of old field, wetlands, mixed woods with natural habitats, including oak woods, a remnant sand prairie, and natural shoreline along Long Lake and Rush Lake. Invasive species within the park include reed canary grass, spotted knapweed, and common buckthorn which is the most widespread.

### WILDLIFE

The park hosts a diverse variety of wildlife. The park has a variety of nesting songbirds, waterfowl, raptors, and wild turkeys. Larger mammals include white-tailed deer, coyotes, red fox and raccoons.

### WILDLIFE MANAGEMENT

Deer populations in the area are surveyed annually to determine the need and location for special archery hunts. If needed the deer herd will be managed with special hunts under the Ramsey County Cooperative Deer Management Plan in partnership with city of New Brighton. Nest boxes are provided for wood ducks and eastern bluebirds throughout the park. A volunteer group monitors an active eastern bluebird box while also using their time and effort to establish new boxes and survey nests. Beaver control has occurred within the wetland complex north of Rush Lake to prevent water from backing up and causing high water levels.

### SURFACE WATER RESOURCES

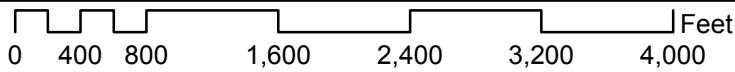
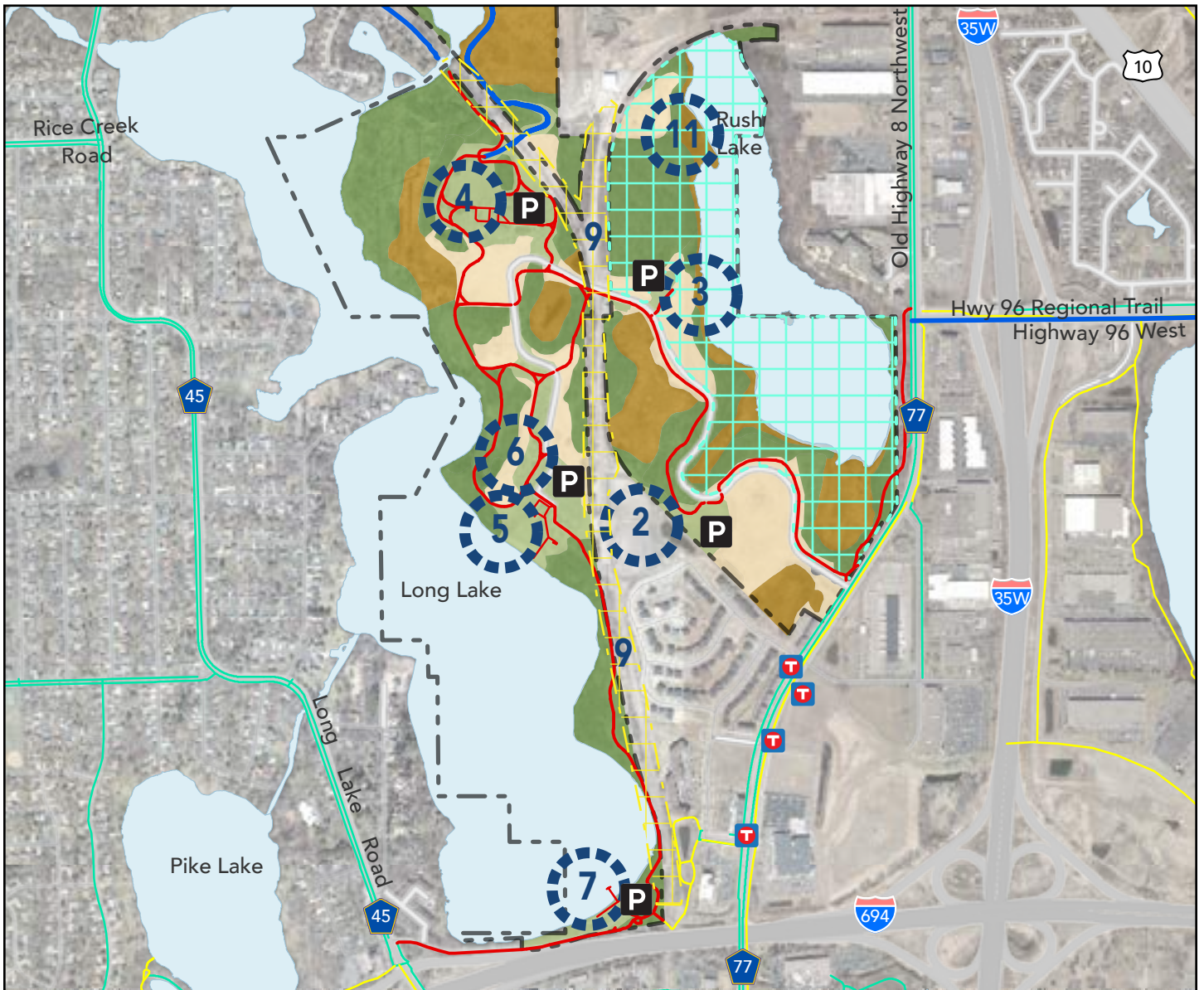
The park lies between Long Lake (186 acres) and Rush Lake (50 acres). Park property encompasses most of Rush Lake containing over 5,000 feet of natural shoreline consisting of native and invasive vegetation, with no formal access to the lake. There is an outlet structure on the north end of Rush Lake that regulates the water level, allowing high water flow through a conveyance system and into a wetland complex. Park property also includes the eastern portion of Long Lake consisting of around 8500 feet of shoreline. The Long Lake Park shoreline consists of a swimming beach, boat launch and mostly natural shoreline with wide buffers separating most of the park from the lake. Shoreline erosion along the parkland is very minimal. Rice Creek flows through the northern lobe of Long Lake, entering in the northeast corner and flowing out of the northwest corner of the lake. The Rice Creek Watershed District is currently conducting a carp management study within Long Lake to monitor the movement of carp within Rice Creek.

### SURFACE WATER RESOURCES

Long Lake Regional Park's designated Environmental Natural Area (ENA) includes the prairie and woodland along the west side of Rush Lake. This is a unique area that consists of a long undisturbed shoreline, diverse restored prairies, a sand prairie remnant, and remnant old growth oak woods.



PROPOSED DEVELOPMENT



Legend

- Park Border - - - - - Park Paved Trail — Regional Trail —
- Proposed Development [ 3 ] Park Turf Trail — Proposed Regional Trail - - - - -
- Proposed Development Node ( 1 ) Municipal Trail — Environmental Natural Area [ ]
- Metro Tranist Stop T Municipal Ped/Bike Facility —
- Parking Lot P

## PLANNING CONSIDERATIONS

Three regional trails extend to Long Lake Regional Park. The Rice Creek West and North Regional Trails connect at the north end of the park. Highway 96 Regional Trail connects to the park at Highway 96 and Old Highway 8. Planning for these trails has been coordinated with park plans.

The park area has been impacted by a variety of groundwater pollution problems. The extended and remedial action of those issues should continue to be monitored.

The northeast shoreline of Rush Lake is proposed to be acquired by easements. The easements will allow trail development and preserve the wooded slope. Easements from two of the property owners have not been acquired. Ramsey County should continue to work with the city of New Brighton to secure these easements as the properties develop.

The city of New Brighton has engaged a development team to redevelop the northwest quadrant of the I-694 and I-35 W interchange. Plans call for mixed land use of medium to high density residential, commercial, and retail real estate. The area immediately east of Long Lake Regional Park will be predominantly residential in character. Trail access into the park will be provided to encourage pedestrian and bicycle use of the park. Specific locations and designs of the trail accesses will be coordinated with the city and its development team.

## PROPOSED DEVELOPMENT

**1. Master Planning** - The master plan for Long Regional Park was last updated in March 1982 which included amendments 1 & 2. The master plan was approved by Ramsey County Board of Commissioners and the Metropolitan Council. This master plan addressed future development and potential acquisition for park improvements throughout the regional park. Due to changing trends of park and recreation facilities, demographics, and the need to provide improved recreational facilities a master plan update is proposed for Long Lake Regional Park.

- **Partnerships:** Develop partnerships with the city of New Brighton, the Minnesota Department of Transportation (MNDOT), Minnesota Commercial Railway, Rice Creek Watershed District (RCWD), the New Brighton Historical Society, other local agencies, and the private sector for funding strategies, and to increase recreational opportunities and improvements throughout the park.
- **Regional Park Master Plan:** Most of the existing park infrastructure was developed in the late 1980s and early 1990s and will need improvement due to aging, changing trends of park and recreation facilities, demographics, and the need to provide improved recreational facilities. Redevelopment of existing park infrastructure will require a future master planning process to address redevelopment of existing facilities and new development opportunities.

## 2. Prairie Picnic Area:

In the 2006 master plan this area was referred to as a Day Camp/Picnic area. A partnership was created with the city of New Brighton in 2016 for redevelopment with the addition of Lions Park. Lions Park is located adjacent to the regional park in the New Brighton Exchange Area formally called the northwest quadrant redevelopment area of I-694 and I-35W. The partnership between New Brighton and Ramsey County enabled a joint park development. In the fall of 2016 development activities began and resulted in a shared parking lot and trail system serving both parks. Additional development proposed for the Prairie Picnic Area would include a shared restroom facility, large picnic pavilion, nature playground, multi-use turf areas, observation areas, interpretive education

## PROPOSED DEVELOPMENT

programming areas, and other similar passive recreation uses.

### 3. Rush Lake Nature Interpretive Area

This area has been identified within the regional park master plan as a nature interpretation area. The only development is a small parking lot facility which currently acts as an overflow parking lot for the large pavilion and beach facility. As identified within the regional park master plan proposed improvements to this area include a parking facility, picnic area, nature interpretation and educational programming components, observation decks for the function of day camps, a restroom facility, paved trails, natural surface trails, and a boardwalk. Additional master planning activities will be required to identify additional opportunities for the Rush Lake Nature Interpretive Area.

### 4. Large Group Picnic Area:

A large group picnic pavilion is located in the northern part of the park on the East side of Long Lake. Current development includes a large picnic pavilion with restroom and kitchen facilities designed for 300-500 people, a 100-car parking lot, an accessible playground, a multi-use turf area, and volleyball courts adjacent to internal paved trails. The playground facility was redeveloped in 2014 to provide improved play equipment and access. Potential redevelopment within the large group picnic area consists of pavilion improvements, parking lot redevelopment or expansion, improved trail connections, and additional site amenities.

### 5. Beach Recreation Area

A beach recreation area is located on the east side of Long Lake. Current development within this area includes a 150-car parking lot, a lakeside beach area with water play amenities, multi-use turf, a playground, volleyball courts, and a beach building with restrooms, changing rooms, a concession stand, and life guard room all adjacent to internal paved trails and picnic tables. The playground was redeveloped in 2014 to provide improved play equipment and access. Additional master planning activities will be required for redevelopment opportunities in the beach recreation area. Potential redevelopment to the beach recreation area may consist of beach facility improvements, a parking lot redevelopment or expansion, improvements to multi-use turf areas, improved trail connections, and additional or improved site amenities. A master planning study may be required for potential reuse and programming of the beach facility. This study will help inform improvements to the building and internal uses, such as the concession area and winter use of the facility.

### 6. Small Group Picnic Facility

A small group picnic facility is located adjacent to the beach recreation area. Current development includes a 50-car parking lot, multi-use turf, and a playground all adjacent to internal paved trails and picnic tables. The playground facility was redeveloped in 2014 to provide improved play equipment and access. Additional master planning activities will be required for redevelopment opportunities within this area, as well as identify connections with the beach recreation area and beach facility. Potential redevelopment activities may consist of picnic shelter improvements, a parking lot redevelopment or expansion, improvements to turf areas, improved trail connections, and additional or improved site amenities.



## 7. South Shore Fishing Area & Boat Launch Facility

A boat access and fishing area is located on the south end of Long Lake adjacent to I-694. Current development includes a parking lot facility for approximately 15 boat trailers and 32 vehicles, multi-use turf, a fishing pier, and a restroom facility. Additional master planning activities will be required for redevelopment and recreational development opportunities. Redevelopment may include additional fishing amenities, improvements to the restroom facility, parking lot expansion, improvements to multi-use turf areas, improved trail connections, and additional or improved site amenities.

## 8. Historic Depot

The New Brighton Historical Society, under agreement with Ramsey County, has located a historic railroad depot in the park adjacent to the railway. The depot has been restored and is open to the public as a historical interpretive center. Additional planning activities should be considered for improved interpretation and educational programming with connections to existing park amenities.

**9. Railway:** Minnesota Commercial Railway owns and operates the railway lines through the regional park. Improvements along the railway corridor should be coordinated with Minnesota Commercial Railway.

- **Access:**

- Currently, there is poor access to areas of the railway near Rice Creek on the regional trail corridor and in Long Lake Regional Park. Future planning studies in coordination with Minnesota Commercial Railway should be conducted for improved access to the railway corridor from Mississippi Street.

- **At Grade Crossings:**

- Potential improvements may consist of improved at-grade crossings and safety signaling.

- **Railway Pedestrian Bridge:**

- Planning studies in coordination with Minnesota Commercial Railway and the city of New Brighton should be conducted to locate a pedestrian bridge over the railway. This would provide access from Lions Park as well as the commercial and residential area on the west side of the railway to Long Lake Regional Park.

## 10. Community Events

There is a need for improvements to accommodate community events such as Stock Yard Days. Possible improvements may consist of vehicular and pedestrian access, event areas, and recreational amenities that would be conducive for community events.

## 11. Long Term Park Expansion, Rush Lake Area

A trail loop around Rush Lake is proposed to provide additional trail opportunities and connections into the park. Development of this trail loop will require easements along the northeast and east side of Rush Lake. Easements from two property owners have not been acquired. Ramsey County should continue to work with property owners for securing the remaining easements. Additional master planning activities will be required for development of this trail loop. Potential development may consist of a paved trail, additional fishing amenities, observation areas, and interpretive education programming areas.

## PROPOSED DEVELOPMENT

### 12. Pedestrian Access

Redevelop existing access points and provide additional access points throughout the park for improved access to recreational amenities.

### 13. Trail Development

Redevelop existing internal park trails for improved use and more direct and user-friendly trail connections to park amenities. Improvements shall consist of trail repaving, re-alignment of trail sections for enhanced connections, as well as the reduction of sharp corners and steep slopes adjacent to trails.

### 14. Vehicle Access & Parking

- **Prairie Picnic Area Parking Lots:**
  - This parking lot was redeveloped in 2016. No additional development is required except maintenance of pavement and associated parking lot components.
- **Rush Lake Nature Interpretive Area Parking Lot:**
  - Pavement maintenance was last completed in 1996. A mill and overlay will be required for improved use and maintenance operations. During any parking lot redevelopment additional parking should be considered along with improved pedestrian connections, signage, storm water management best practices, and site amenities.
- **Large Group Picnic Area Parking Lot:**
  - Pavement maintenance was last completed in 1996. A mill and overlay will be required for improved use and maintenance operations. During any parking lot redevelopment additional parking should be considered along with improved pedestrian connections, signage, storm water management best practices, and site amenities.
- **Small Group Picnic Area Parking Lot:**
  - Pavement maintenance was last completed in 1996. A mill and overlay will be required for improved use and maintenance operations. During any parking lot redevelopment additional parking should be considered along with improved pedestrian connections, signage, storm water management best practices, and site amenities.
- **Beach Parking Lot:**
  - Pavement maintenance was last completed in 2011. A mill and overlay will be required for improved use and maintenance operations. During any parking lot redevelopment additional parking should be considered along with improved pedestrian connections, signage, storm water management best practices, and site amenities.
- **South Shore Fishing Area and Boat Launch Parking Lot:**
  - A mill and overlay was completed in 2013. Pavement maintenance is proposed for asphalt and concrete paving as well as associated parking lot components. Parking lot expansion is proposed along with fishing improvements to this area.
- **South Shore Fishing Area and Boat Launch Entrance Road:**
  - Pavement maintenance was last completed in 1996. A mill and overlay will be required for improved use and maintenance operations.
- **Main Park Entrance Road:**
  - Pavement maintenance was last completed in 1996. A mill and overlay will be required for improved use and maintenance operations.

## PROPOSED DEVELOPMENT

### 15. Wayfinding

- **Pedestrian:** Improve pedestrian signage for improved wayfinding to trail accesses, and other amenities. Provide interpretive signage in natural areas for increased nature education opportunities.
- **Vehicular:** Improve vehicular entrance signage for better wayfinding to park access points.
  - Main Park Entrance Road: Redevelop the main regional park entrance monument sign and adjacent components.
  - South Shore Fishing Area and Boat Launch Entrance Road: Install appropriate entrance monument signs for improved vehicular wayfinding.
  - Internal Park Areas: Install appropriate entrance monument signs for improved vehicular wayfinding.

### 16. Recreation Opportunities

- **Shelters, Restrooms & Beach Facility:** Development of existing picnic shelters, restrooms, and the beach facility occurred in the late 1980s and early 1990s. Redevelopment of these facilities will likely be required in the future to provide enhanced recreational amenities for picnic reservations, and to improve use with adjacent recreational amenities as well as comply with the Americans with Disabilities Act (ADA) and Universal Design standards.
- **Playgrounds**
  - Redevelop the existing playground for improved use and play. Replace existing playground surface materials for improved accessibility and maintenance operations.
  - Additional playground development is proposed.
- **Multi-Use Turf:** Improve large turf areas for increased recreational and community event opportunities.
- **Court Games:** Redevelop existing court areas to provide enhanced recreational opportunities for general park use. There may be a need to explore additional development of court games to correspond with changing trends, demographics, and park use.
- **Public Art:** Provide the opportunity and appropriate infrastructure to accommodate public art, this will strengthen the bond between the department and its public user base.
- **Culturally Significant Areas:** Provide connections and interpretive education for culturally significant areas within Long Lake Regional Park. Proposed improvements would consist of observation areas, interpretive educational signage, and pedestrian connections.
- **Wildlife Areas:** Provide visual and interpretive educational signage, and pedestrian connections. If federally or state listed protected plants or animals are discovered, statutes and guidelines will be followed.
- **Fishing Pier:** Provide necessary improvements to the existing fishing pier in the South Shore fishing area. A new fishing pier may be proposed to accommodate increased fishing activity.
- **Secondary Fishing Nodes:** Provide secondary fishing access points at the South Shore fishing area and along Rush Lake where conditions allow access to the lake.
- **Programming:** Increase recreational and nature based programming activities.
- **Small Watercraft Access:** Provide access for small water craft within the park near the boat launch facility and beach recreation area that is more conducive to small watercraft. Increase variety of rental amenities for potential watercraft rental.
- **Boat Launch Facility:** Provide necessary improvements to the existing boat launch facility for improved access to Long Lake.

## PROPOSED DEVELOPMENT

### 17. Habitat Restoration & Management

- In the past five years restoration efforts to combat invasive species and improve habitat within Long Lake have been extensive.
- Restored and maintained habitat includes around 48 acres of oak and mixed woods across much of the park and the conversion of 14 acres of old field to prairie in 2017.
- Woodland restoration included the removal of buckthorn and other woody invasives, prescribed burns through select areas, and casting of native herbaceous seed.
- Prairie conversion included an herbicide treatment of the area, prescribed burn, and drill seeding of native grasses and forbs.
- A maintenance plan will include foliar spraying of buckthorn and other invasives as well as periodic prescribed burns.
- Future restoration will include the removal of buckthorn from smaller oak woodland patches, continued control of spotted knapweed and continued maintenance of existing restoration sites.

### 18. Acquisitions

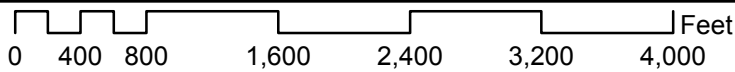
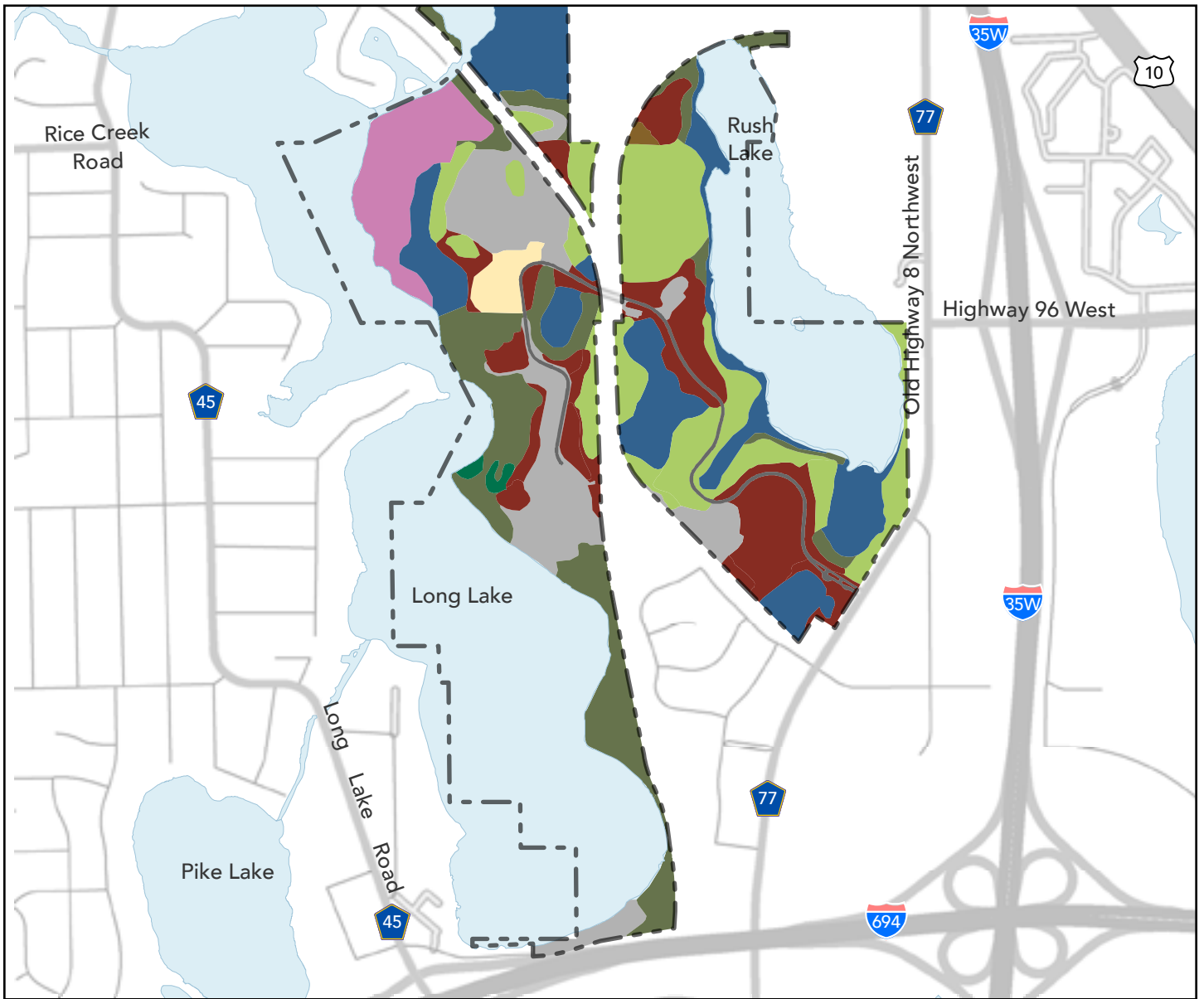
Future park easement acquisition on the east side of Rush lake are proposed for the addition of the Rush Lake Trail loop and future long-term park expansion for inclusion into Long Lake Regional Park as properties become available for acquisition. Future acquisition would allow additional park and recreation opportunities and trail development.

### 18. Energy & Resilience

Solar arrays on the pavilion would potentially provide 40.6 MWh/year of energy to offset the site's energy use. The capital cost of such a system would have a payback period of around 26 years, which would not make this location a high priority for a capital purchase.

The site's Energy Use Intensity (EUI), which measures energy use relative to physical building square footage, is 9.5, which is less than half the typical EUI for county park facilities (21.1). This makes Long Lake Regional Park one of the most energy-efficient Parks & Recreation facilities.

PROPOSED LAND COVER



Proposed Land Cover

- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |

NATURAL RESOURCE MANAGEMENT UNITS



Legend

Management Unit #

Management Unit Border

NATURAL RESOURCE MANAGEMENT UNIT TABLE

MANAGEMENT UNIT 1 - LONG LAKE REGIONAL PARK							
ACRES	CURRENT LAND COVER	FUTURE LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIORITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
4.96	PRAIRIE	PRAIRIE	N/A	N/A	2	RX BURN, FOLIAR SPRAY OF HERBACEOUS	\$3,718.32
6.44	OAK WOODS	OAK WOODS	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN, RX BURN, NATIVE SEED	\$22,554.76	2	RX BURN, FOLIAR SPRAY OF BUCKTHORN	\$6,122.01
8.11	WETLAND	WETLAND	MONITOR	N/A	N/A	N/A	N/A
8.58	OLD FIELD	OLD FIELD 3.67 ACRES	N/A	N/A	N/A	N/A	N/A
		PRAIRIE 4.91 ACRES	MOW, HERBICIDE, RX BURN, SEED DRILL	\$9,820.00	3	RX BURN, FOLIAR SPRAY OF HERBACEOUS	\$5,155.50
1.11	CULTIVATED CONIFERS	CULTIVATED CONIFERS	N/A	N/A	N/A	N/A	N/A
28.69	MIXED WOODS	MIXED WOODS	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN	\$57,385.62	3	FOLIAR SPRAY OF BUCKTHORN	\$14,346.41
15.79	SHRUB SWAMP	SHRUB SWAMP	N/A	N/A	N/A	N/A	N/A
26.31	ACTIVE USE	ACTIVE USE	N/A	N/A	N/A	N/A	N/A
1.29	IMPERVIOUS	IMPERVIOUS	N/A	N/A	N/A	N/A	N/A
91.60	OPEN WATER	OPEN WATER	N/A	N/A	N/A	N/A	N/A
<b>MANAGEMENT UNIT 1 TOTAL</b>							
192.90				\$89,760.38			\$29,342.23

NATURAL RESOURCE MANAGEMENT UNIT TABLE

MANAGEMENT UNIT 2 - LONG LAKE REGIONAL PARK							
ACRES	CURRENT LAND COVER	FUTURE LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIORITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
17.65	Prairie	Prairie	N/A	N/A	2	RX Burn, Foliar Spray of Herbaceous	\$13,238.70
29.83	Oak Woods	Oak Woods	Invasive Woody Removal, Cut, Stump Treat, Stack & Burn, RX Burn, Native Seed	\$104,391.56	2	RX Burn, Foliar Spray of Buckthorn	\$28,334.85
23.13	Wetland	Wetland	Monitor	N/A	N/A	N/A	N/A
6.77	Old Field	Oak Woods 2.65 Acres	Mow, Herbicide, RX Burn, Plant Oaks	\$3,975.00	2	RX Burn, Foliar Spray of Buckthorn	\$2,517.50
		Prairie 4.12 Acres	Mow, Herbicide, RX Burn, Drill Seed	\$13,540.00	2	RX Burn, Foliar Spray of Herbaceous	\$3,090.00
0.52	Cultivated Conifers	Prairie	Tree Removal, Mow, Herbicide, RX Burn, Drill Seed	\$1,032.56	3	RX Burn, Foliar Spray of Herbaceous	\$387.21
4.22	Mixed Woods	Mixed Woods	Invasive Woody Removal, Cut, Stump Treat, Stack & Burn, RX Burn, Native Seed	\$14,758.02	3	RX Burn, Foliar Spray of Buckthorn	\$4,005.75
4.35	Active Use	Active Use	N/A	N/A	N/A	N/A	N/A
2.27	Impervious	Impervious	N/A	N/A	N/A	N/A	N/A
39.04	Open Water	Open Water	N/A	N/A	N/A	N/A	N/A
0.56	Remnant Prairie	Remnant Prairie	N/A	N/A	1	RX Burn	\$250.86

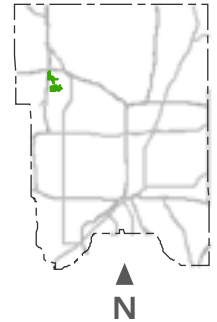


LONG LAKE REGIONAL PARK

NATURAL RESOURCE MANAGEMENT UNIT TABLE

MANAGEMENT UNIT 2 - LONG LAKE REGIONAL PARK				
MANAGEMENT UNIT 2 TOTAL				
128.32		\$137,697.14		\$51,824.87
LONG LAKE REGIONAL PARK TOTAL				
321.22		\$227,457.52		\$81,167.10

## TONY SCHMIDT REGIONAL PARK



### EXISTING SITE CONDITIONS

MASTER PLAN DATE: 1998, 2007



#### LOCATION AND SIZE

Tony Schmidt Regional Park is located in northwestern Ramsey County in the city of Arden Hills. The 217-acre park generally is bounded by Lake Johanna and County Road E on the south, Snelling Avenue on the east, County Road F on the north, and I-35W and New Brighton Road on the west.



#### SITE CHARACTERISTICS

The park includes ¼ mile of shoreline on the north side of Lake Johanna, a 230-acre lake. The park includes the wetland corridor surrounded by steep wooded hills, which follows the drainage way from Lake Johanna northwest to Long Lake. The Canadian Pacific Railroad crosses the wetland corridor and provides a significant barrier between the north and south sections of the park.



#### RECREATION DEVELOPMENT

**Lakeside Recreation Area:** The Lake Johanna shoreline has been developed for active recreational use. The area includes a 300-foot swimming beach, building, play area, general picnic area, parking for 136 cars, gazebo, boat access, parking spaces for 11 car/boat trailers, and a boat access restroom facility.

**Hillside Picnic Area:** This area of the park includes a large picnic shelter, adjacent play area, game field, a medium sized picnic shelter, general picnic area, and parking for 86 cars.

**Trails:** In 2006, the Arden Hills Parks, Trails, and Recreation Committee recommended dedicating a portion of trail in Arden Hills after former Governor Elmer L. Andersen. The Elmer L. Andersen Memorial Trail (ELAMT) segment extends northeast from the intersection of Cleveland and County Road D to the boundary of Tony Schmidt Regional Park, a gap exists between this intersection and the Regional Park Trail section. The trail heads north and connects the city of Arden Hills Perry Park and the north segments of the regional park via an underpass of the railroad right of way terminating at Rolling Hills Road north of County Rd E2, a portion of which was completed with the back to schools grant program.

## TONY SCHMIDT REGIONAL PARK

Other paved pedestrian and bicycle trails are located throughout the Lakeside Recreational Area and Hillside Picnic Area, connecting various use areas within the park. Predominantly unpaved trails are provided in the area of the park located immediately north of County Road E2. One section was paved in 2010 by the city of Arden Hills as part of a safe routes to schools grant. This section is 8ft wide leading from Co Road E2 to Rolling Hills Road. Its primary focus was providing a route from neighborhoods north of E2 to Valentine Elementary School on the South side of County Rd E2. A network of unpaved wood chip municipal trails provide neighborhood access to the park.

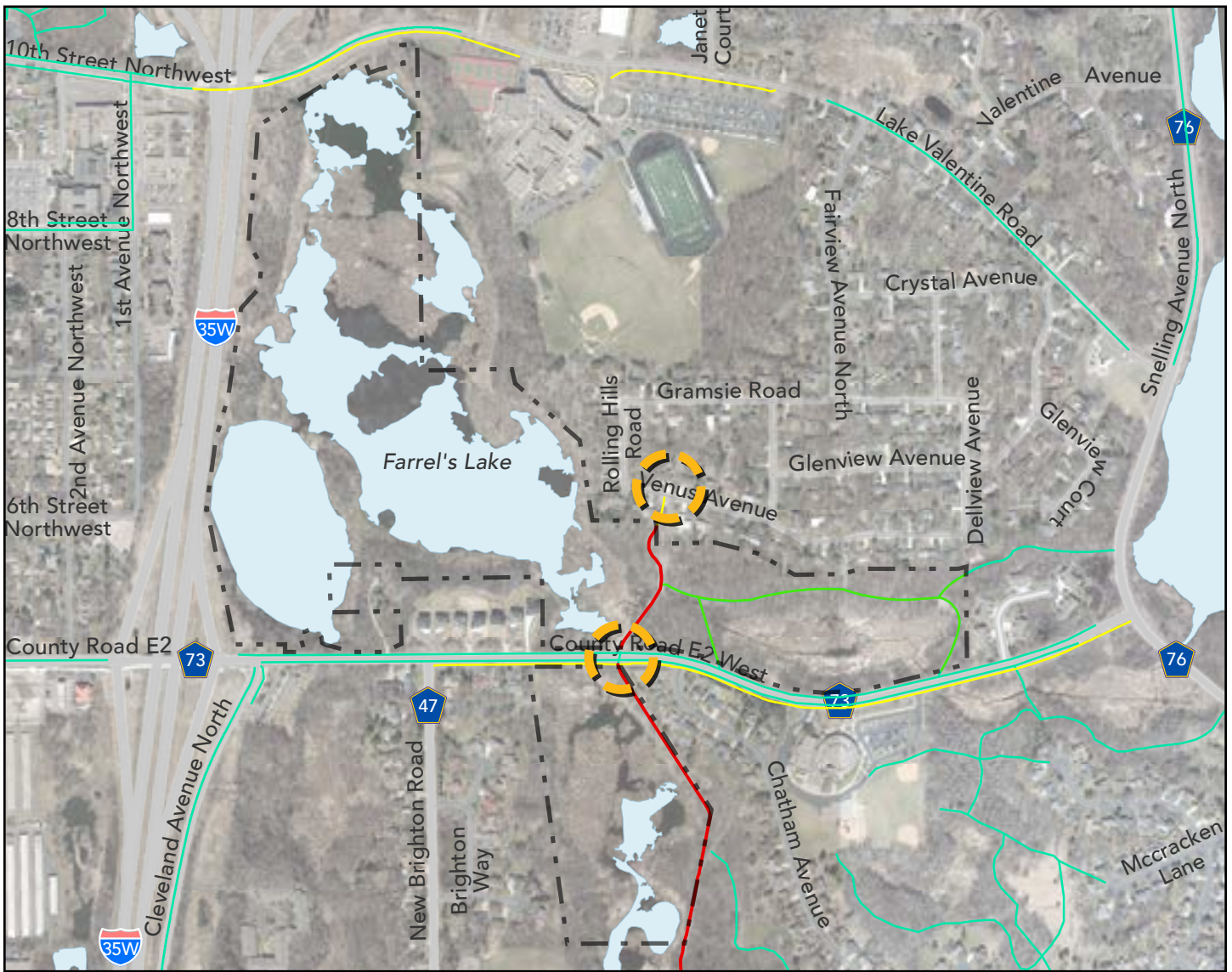
**Yard Waste Composting Site:** A Ramsey County Yard Waste Composting Site is located within the park, accessible from New Brighton Road north of County Road E. This is an interim use of the park until such time as the area is developed for recreational use.

**MAINTENANCE**

- Maintain boat launch access year-round.
- Plow trail from Lake Johanna Blvd to County Rd E2 West.
- The northern half of the park is closed for the winter.
- The beach requires extra maintenance to clean goose droppings.
- The pavilion is heavily used and requires daily cleaning and preparation.



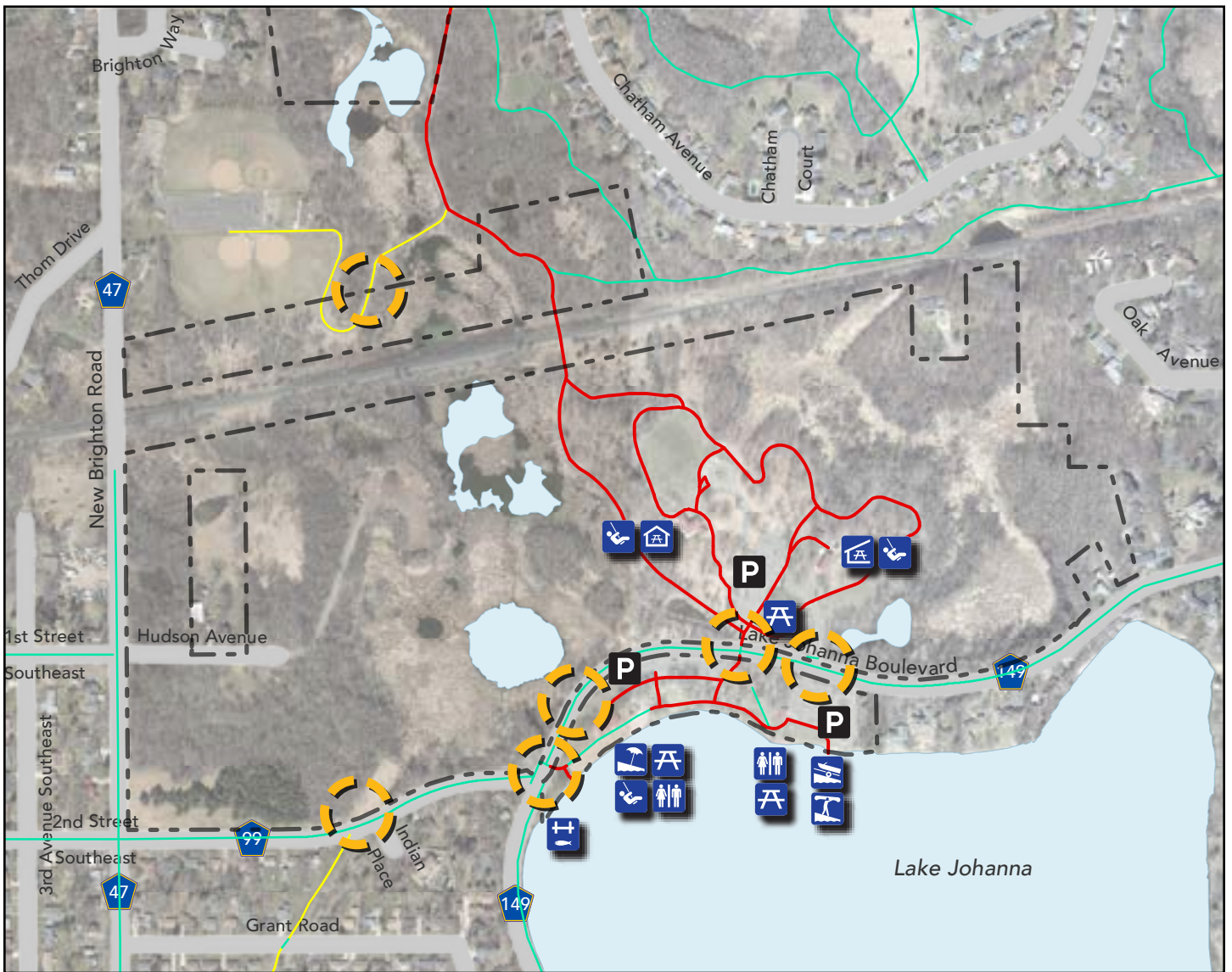
EXISTING CONDITIONS - NORTH SECTION



Legend

- |                    |  |                             |  |
|--------------------|--|-----------------------------|--|
| Park Border        |  | Park Paved Trail            |  |
| Park Entrance      |  | Park Turf Trail             |  |
| Metro Tranist Stop |  | Municipal Trail             |  |
| Regional Trail     |  | Municipal Ped/Bike Facility |  |

EXISTING CONDITIONS - SOUTH SECTION



Legend

Park Border		Park Paved Trail		Parking Lot		Picnic Shelter	
Park Entrance		Park Turf Trail		Boat Launch		Playground	
Metro Transit Stop		Municipal Trail		Carry In Access		Pavilion	
Regional Trail		Municipal Ped/Bike Facility		Restrooms		Beach	
				Picnic Area		Fishing Pier	

EXISTING LAND COVER - NORTH SECTION



Existing Land Cover

- |                     |                   |            |                 |
|---------------------|-------------------|------------|-----------------|
| Active Use          | Floodplain Forest | Oak Woods  | Remnant Prairie |
| Impervious          | Mesic Forest      | Old Field  | Savanna         |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp     |
| Tamarack Swamp      | Wetland           | Open Water |                 |

EXISTING LAND COVER - SOUTH SECTION



Existing Land Cover

- |                     |                   |            |                 |
|---------------------|-------------------|------------|-----------------|
| Active Use          | Floodplain Forest | Oak Woods  | Remnant Prairie |
| Impervious          | Mesic Forest      | Old Field  | Savanna         |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp     |
| Tamarack Swamp      | Wetland           | Open Water |                 |

## TONY SCHMIDT REGIONAL PARK

### LAND COVER AND HABITAT

The native vegetation of Tony Schmidt Regional Park was oak woods, scattered savannas, and extensive wetlands. Current habitat includes planted prairies, restored oak woods, and savanna. Other habitat includes degraded mixed woods and extensive wetland complexes. Invasive species, especially buckthorn, garlic mustard, and burdock have become widespread in locations that are currently not being maintained and continue to encroach into restored areas. Power lines, which cut across the south half of the park and the north-west portion of the park, are a continual problem because of the severe clearing of vegetation by the power company along their right of way. The east west railroad severely altered the historical wetland flow.

### WILDLIFE

The park hosts diverse wildlife including nesting songbirds, waterfowl, and raptors. Larger mammals include white-tailed deer, coyotes, red fox, and raccoons.

### WILDLIFE MANAGEMENT

Deer populations are annually surveyed. If needed the deer herd will be managed with special hunts under the Ramsey County Cooperative Deer Management Plan in partnership with Arden Hills. Nest boxes exist within the park for wood ducks and eastern bluebirds.

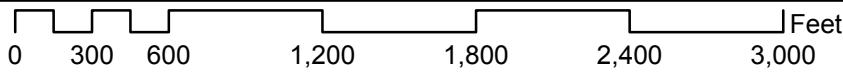
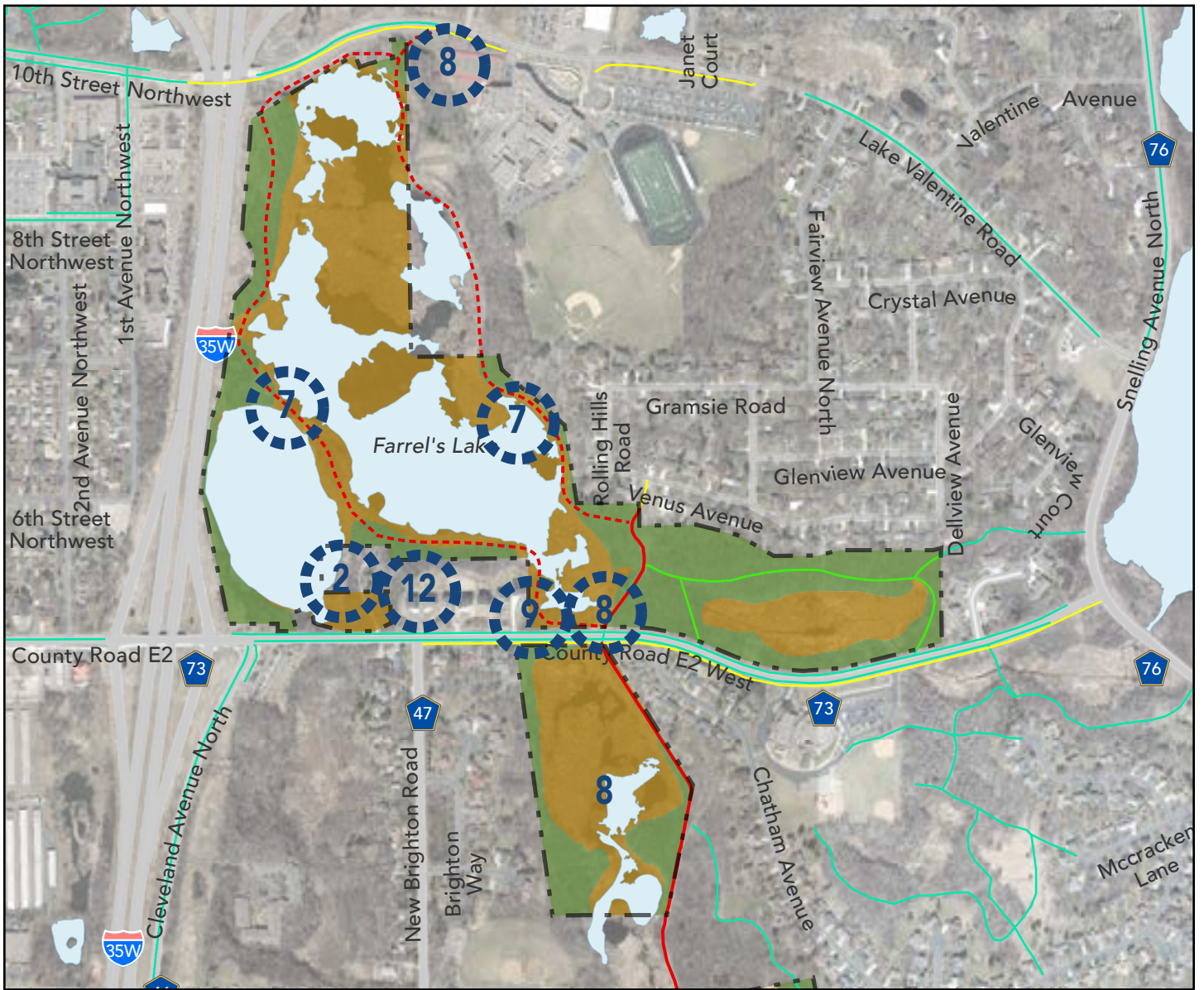
### SURFACE WATER RESOURCES

Through the middle of the park is an extensive connected wetland complex. Smaller outlying wetlands are also scattered throughout the park. The active use area on the south side of the park consists of natural shoreline, a swimming beach, a boat launch, and fishing pier along Lake Johanna. Natural shoreline buffers will be expanded where applicable to aid in the reduction of shoreline erosion and overland runoff.





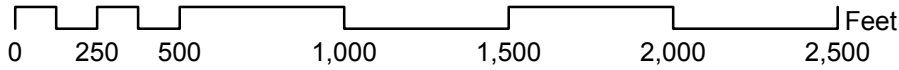
PROPOSED DEVELOPMENT - NORTH SECTION



Legend

Park Border		Park Paved Trail		Regional Trail	
Proposed Development		Park Turf Trail		Proposed Regional Trail	
Proposed Development Node		Municipal Trail		Proposed Paved Park Trail	
Metro Tranist Stop		Municipal Ped/Bike Facility		Trail	

PROPOSED DEVELOPMENT - SOUTH SECTION



Legend

- |                           |  |                             |  |                           |  |
|---------------------------|--|-----------------------------|--|---------------------------|--|
| Park Border               |  | Park Paved Trail            |  | Regional Trail            |  |
| Proposed Development      |  | Park Turf Trail             |  | Proposed Regional Trail   |  |
| Proposed Development Node |  | Municipal Trail             |  | Proposed Paved Park Trail |  |
| Metro Tranist Stop        |  | Municipal Ped/Bike Facility |  |                           |  |
| Parking Lot               |  |                             |  |                           |  |

## PLANNING CONSIDERATIONS

The trails within Tony Schmidt Regional Park are integral to the trail system identified by the city of Arden Hills. Trail development in the park will be coordinated with the city to insure appropriate connections. An arterial trail passes through a portion of the city's Perry Park. The city and county should consider a land exchange or joint powers agreement involving county land located south of Perry Park and city land located east of the athletic fields in Perry Park.

Given the topography of parkland located adjacent to the Mounds View High School, plans for the paved trail between County Road E2 and County Road F will be coordinated with the Mounds View School District. Access to school district property may be necessary in order to construct this trail segment.

## PROPOSED DEVELOPMENT

**1. Master Planning** - The master plan for Tony Schmidt Regional Park was last updated in March 2007 and was approved by the Ramsey County Board of Commissioners and the Metropolitan Council. The master plan addressed the addition of Tony Schmidt Regional Park into the regional park system and covered existing park components for Tony Schmidt Regional Park and proposed improvements throughout new sections of the regional park. Continued development of the regional park will follow items addressed within the 2007 master plan amendment until future changes are required to the park as needs arise for park improvements.

- **Partnerships:** Develop partnerships with the city of Arden Hills, Minnesota Department of Transportation (MNDOT), Minnesota Department of Natural Resources (MNDNR), and Rice Creek Watershed District (RCWD) for funding strategies, increased recreational opportunities, and proposed improvements throughout the park.
- **Regional Park Master Plan:** Redevelopment of existing park infrastructure will require a future master planning process to address proposed park and recreational opportunities according to changing trends, demographics, and amenities.

**2. West Recreational Development Area:** A Ramsey County Yard Waste Compositing Site and residential site are located in the west section of the park, accessible from New Brighton Road north of County Road E. Redevelopment of this area would include mostly passive recreation uses such as paved trails, natural surface trails, picnic facility, parking facility, playground, observation areas, interpretive education programming areas, and other similar passive uses.

- Ramsey County Yard Waste Site –The yard waste site is an interim use within the park until the park is developed for recreational purposes.
- The existing residential site is currently listed as a property of interest for acquisition for inclusion into the regional park.

## 3. Recreation Opportunities

- Redevelopment of existing picnic shelters and restrooms occurred in 2008-2013. Additional redevelopment of picnic shelters and restrooms will likely be required in the future to provide enhanced amenities for park patrons and to comply with the Americans with Disabilities Act (ADA), and Universal Design standards.
- Improve large turf areas for increased recreational opportunity and community event space.
- Redevelop existing court areas to provide enhanced recreation opportunities for general park use. There may be a need to explore additional development of court games to correspond with changing trends, demographics, and park use.

## PROPOSED DEVELOPMENT

- Provide the opportunity and appropriate infrastructure to accommodate public art, this will strengthen the bond between the department and its public user base.
- Provide connection and interpretive education for culturally significant areas within Tony Schmidt Regional Park. Proposed improvements would consist of observation and viewing areas, interpretive educational signage, and pedestrian connections.
- Provide visual and interpretive educational signage, and pedestrian connections to wildlife areas. If federally or state listed protected plants or animals are discovered, statutes and guidelines will be followed.
- Provide necessary improvements to the existing fishing pier by the beach in the northwest corner of the lake. A new fishing pier is also proposed on the north end of the lake closer to the boat launch to accommodate increased fishing activity.
- Provide secondary fishing access points on the north end of the lake in the Lakeside Recreation Area where conditions allow access to the lake for fishing activity.
- Increase recreation and nature programming activities for additional recreation opportunities.
- Provide access for small water craft within the park near the boat launch facility that is more conducive for small watercraft. Increase variety of rental amenities for potential canoe and kayak rental.
- Provide necessary improvements to the existing boat launch facility for improved access to Lake Johanna.

### **4. Trail Development:** Redevelop existing trails throughout the park for improved access to recreational amenities

- **Internal Park Trails**
  - Redevelop existing internal park trails for improved use, and more direct connections to park amenities. Improvements would consist of trail repaving, re-alignment of trail sections for improved connections, as well as the reduction of sharp corners and steep slopes adjacent to trails.

### **5. Elmer Anderson Trail Connection**

- This is a proposed extension of the Elmer Anderson Trail from County Road E to the existing north section of the Elmer Anderson Trail within the Hillside Picnic Area. This trail will complete a gap and provide improved access to the Lakeside Recreational Area and Hillside Picnic Area. The trail is anticipated to be located within the County Road E right-of-way, Lake Johanna right-of-way, and within the park boundary due to existing land and topographic conditions.

### **6. Lake Johanna Boulevard Trail**

- This is a proposed extension of trail along Lake Johanna Boulevard to the east boundary of the park to make connections into trail systems planned by the city of Arden Hills. The trail is anticipated to be located within the Lake Johanna right-of-way and within the park boundary due to existing land conditions.

## PROPOSED DEVELOPMENT

**7. Ferrel Lake Trails:** Two trail projects are planned to create a loop around Farrel Lake and make a connection to the existing trail system on Lake Valentine Road.

- **Ferrel Lake West Trail**

- This is a planned natural surface trail which will follow upland areas on the west side of the lake. The trail is anticipated to have boardwalk sections with several observation and interpretive overlooks.

- **Ferrel Lake East Trail:**

- This is a planned paved trail which will follow upland areas on the east side of the lake. The trail is anticipated to have paved trail and boardwalk sections with several observation and interpretive overlooks. This trail will also connect with the existing trail system along Valentine Road and the trail system in the southeast corner of the lake. Access to the school property may be necessary in order to construct this segment of trail.

**8. Pedestrian Access Points:** Redevelop existing access points and provide additional access points throughout the park for improved access to recreational amenities.

- **County Road E2:** Develop a new access point to the proposed west loop around Farrel Lake.
- **West Recreational Development Area:** Develop a new access point for vehicles and pedestrians during the development of the west recreation development area.
- **Adjacent Neighborhoods:** Develop additional access points from adjacent neighborhoods where appropriate in long-term expansion areas.
- **Mounds View Senior High School:** Develop additional access points to the school where appropriate.
- **County Road F/Valentine Road:** Develop an access point to the existing trail system with the development of the Farrel Lake West Trail.

## 9. Vehicular Access Points and Parking Improvements

- **Picnic Area Parking Lots (Hillside Picnic and Lakeside Recreation Area):**

- Pavement maintenance was last completed 2006. A mill and overlay will be required for improved use and maintenance operations. During any parking lot redevelopment, additional parking for boat trailers and vehicles parking should be considered along with improved pedestrian connections, signage, stormwater management best practices, and site amenities.

- **Beach Parking Lot (Beachside Recreation Area):**

- Pavement maintenance was last completed 2006. A mill and overlay will be required for improved use and maintenance operations. During any parking lot redevelopment additional parking for boat trailers and vehicles should be considered along with improved pedestrian connections, signage, storm water management best practices, and site amenities.

- **Boat Launch Parking Lot (Lakeside Recreation Area):**

- Pavement maintenance was last completed 2006. A mill and overlay will be required for improved use and maintenance operations. During any parking lot redevelopment additional parking for boat trailers and vehicles should be considered along with improved pedestrian connections, signage, storm water management best practices, and site amenities.

## PROPOSED DEVELOPMENT

- **Secondary Parking Area:**
  - Develop a trailhead parking lot along County Rd E2 for access to trail system around Farrel Lake.

### 10. Wayfinding

- **Pedestrian:** Improve pedestrian signage for improved wayfinding to trail accesses, and other amenities. Provide interpretive signage in natural areas for increased nature education opportunities.
- **Vehicular:** Improve vehicular entrance signage.
- **Hillside Picnic and Lakeside Recreation Area:** Replace existing park entrance signs.
- **Monument Signs:** Install monument signs at the intersection of County Road E and Lake Johanna (west side), and near the boat launch facility on Lake Johanna Boulevard (east side).
- **Farrel Lake Section and West Recreation Area:** Install appropriate entrance signs as development occurs.

### 11. Habitat Restoration & Management

- The highest quality habitat, and potential for improvement, lies within management unit 2 making this area a priority for further restoration. Restoration and maintenance of habitat in this area has included planted prairies, restored oak woods, and savanna. Ongoing vegetation management activities include buckthorn removal and prescribed burns.
- Oak woods and savannas are also being managed to contain and control oak wilt.
- Future priority restoration will include the conversion of mixed woods in management unit 2 to oak woods and the potential for old field to prairie conversion in management units 1 and 3.
- The removal of woody invasive species, mainly buckthorn, within the vast mixed woods throughout the park will be costly and coordination with the city of Arden Hills is required for the restoration of abutting municipal lands.

### 12. Acquisitions

Future park acquisition is proposed for inholding properties and future long-term park expansion for inclusion into Tony Schmidt Regional Park when properties become available. Future acquisition would allow additional development within the West Recreational Development Area, passive recreation opportunities, trail connections to adjacent neighborhoods, and secondary trailhead parking options. An amendment would be required to the existing park master plan for acquisition and additional development opportunities. Potential future property acquisitions are listed below:

**Park Inholdings:** Properties currently within or surrounded by regional park property

- 3540 New Brighton Rd, Arden Hills MN, 55112
- 1680 Oak Ave, Arden Hills MN, 55112-3636
- 1619 Lake Johanna Blvd, Arden Hills MN, 55112-3668
- 1963 County Road E2 W, Arden Hills MN, 55112-2846

**Future long-term park expansion:** Properties identified for future park expansion.

- 1613 Lake Johanna Blvd, Arden Hills MN, 55112-3668
- 1611 Lake Johanna Blvd, Arden Hills MN, 55112-3668
- 1609 Lake Johanna Blvd, Arden Hills MN, 55112-3668

**PROPOSED DEVELOPMENT**

- 1605 Lake Johanna Blvd, Arden Hills MN, 55112-3668
- 1580 Oak Ave, Arden Hills MN, 55112-3667
- 1578 Oak Ave, Arden Hills MN, 55112

**13. Energy & Resilience:**

The roofs of pavilion and picnic shelter are moderately conducive to solar arrays, which would potentially provide 16.3 MWh/year of energy to offset the site's energy use. However, due to the capital cost of such a system, and current regulations which do not allow for on-site solar arrays to generate more energy than the site uses, the energy cost savings over the estimated life of a solar system would not offset the capital cost. From an economic standpoint, solar "retrofitting" of the current site should not be a high priority for the county, though the environmental and societal benefits of renewable energy must also be considered. Alternative solar financing structures, such as community solar, lease-to-own, or power purchasing agreements (PPAs), should also be considered.

Future redevelopment provides an excellent opportunity for "net-zero" energy consumption. Redevelopment projects must take into consideration building location and orientation in order to maximize solar generation. On-site battery storage should be explored as well.

Future redevelopment also provides opportunities for innovative storm water management designs such as rain gardens, permeable pavement, and storm water filtration systems (given the proximity of Lake Johanna), incorporation of native plantings and trees, nature play areas, and universal design practices to ensure that the park and its amenities are able to be used by all residents, irrespective of race, age, gender, language, and physical ability.

PROPOSED LAND COVER - NORTH SECTION



Proposed Land Cover

- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |



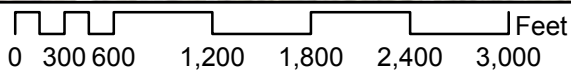
PROPOSED LAND COVER - SOUTH SECTION



Proposed Land Cover

- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |

NATURAL RESOURCE MANAGEMENT UNITS



Legend

Management Unit



Management Unit Border



NATURAL RESOURCE MANAGEMENT UNIT TABLE

MANAGEMENT UNIT 1 - TONY SCHMIDT REGIONAL PARK							
ACRES	CURRENT LAND COVER	FUTURE LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIOR-ITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
1.86	CULTIVATED CONIFERS	PRAIRIE	INVASIVE WOODY REMOVAL AND HAUL OFF SITE, MOW, HERBICIDE, RX BURN, DRILL SEED	\$5,952.00	3	RX BURN, FOLIAR SPRAY OF HERBACEOUS	\$1,953.00
3.08	OLD FIELD	PRAIRIE 1.29 ACRES	MOW, HERBICIDE, RX BURN, DRILL SEED	\$2,580.00	3	RX BURN, FOLIAR SPRAY OF HERBACEOUS	\$1,354.50
		MIXED WOODS 1.79 ACRES	PLANT OAKS AND OTHER TREES	\$500.00	3	FOLIAR SPRAY OF HERBACEOUS	\$1,074.00
6.24	ACTIVE USE	ACTIVE USE	N/A	N/A	N/A	N/A	N/A
20.22	WETLAND	WETLAND	MONITOR	N/A	N/A	N/A	N/A
26.8	MIXED WOODS	MIXED WOODS	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN	\$53,600.00	3	FOLIAR SPRAY OF BUCKTHORN	\$13,400.00
<b>MANAGEMENT UNIT 1 TOTAL</b>							
58.2				\$62,632.00			\$17,781.50

TONY SCHMIDT REGIONAL PARK

NATURAL RESOURCE MANAGEMENT UNIT TABLE

MANAGEMENT UNIT 2 - TONY SCHMIDT REGIONAL PARK							
ACRES	CURRENT LAND COVER	FUTURE LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIORITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
2.60	SHRUB SWAMP	SHRUB SWAMP	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN	\$5,195.40	2	FOLIAR SPRAY OF BUCKTHORN	\$1,558.62
2.96	SAVANNA	SAVANNA	CONTINUE WITH MAINTENANCE	N/A	2	RX BURN, FOLIAR SPRAY OF BUCKTHORN	\$2,813.05
5.30	MIXED WOODS	MIXED WOODS	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN	\$10,600.00	2	RX BURN, FOLIAR SPRAY OF BUCKTHORN	\$5,073.00
5.34	OAK WOODS	OAK WOODS	CONTINUE WITH MAINTENANCE	N/A	2	RX BURN, FOLIAR SPRAY OF BUCKTHORN	\$5,073.00
6.44	ACTIVE USE	ACTIVE USE	N/A	N/A	N/A	N/A	N/A
10.25	WETLAND	WETLAND	MONITOR	N/A	N/A	N/A	N/A
13.11	MIXED WOODS	OAK WOODS	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN, RX BURN, NATIVE SEED	\$45,892.00	2	RX BURN, FOLIAR SPRAY OF BUCKTHORN	\$12,551.07
MANAGEMENT UNIT 2 TOTAL							
46.00				\$61,687.40			\$24,551.07

MANAGEMENT UNIT 3 - TONY SCHMIDT REGIONAL PARK							
ACRES	CURRENT LAND COVER	FUTURE LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIORITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
2.60	SHRUB SWAMP	SHRUB SWAMP	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN	\$5,195.40	2	FOLIAR SPRAY OF BUCKTHORN	\$1,558.62

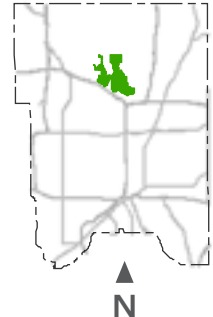
TONY SCHMIDT REGIONAL PARK

NATURAL RESOURCE MANAGEMENT UNIT TABLE

MANAGEMENT UNIT 3 - TONY SCHMIDT REGIONAL PARK							
2.96	SAVANNA	SAVANNA	CONTINUE WITH MAINTENANCE	N/A	2	RX BURN, FOLIAR SPRAY OF BUCK-THORN	\$2,813.05
5.30	MIXED WOODS	MIXED WOODS	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN	\$10,600.00	2	RX BURN, FOLIAR SPRAY OF BUCK-THORN	\$5,073.00
5.34	OAK WOODS	OAK WOODS	CONTINUE WITH MAINTENANCE	N/A	2	RX BURN, FOLIAR SPRAY OF BUCK-THORN	\$5,073.00
6.44	ACTIVE USE	ACTIVE USE	N/A	N/A	N/A	N/A	N/A
10.25	WETLAND	WETLAND	MONITOR	N/A	N/A	N/A	N/A
13.11	MIXED WOODS	OAK WOODS	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN, RX BURN, NATIVE SEED	\$45,892.00	2	RX BURN, FOLIAR SPRAY OF BUCK-THORN	\$12,551.07
MANAGEMENT UNIT 3 TOTAL							
58.2				\$62,632.00			\$17,781.50

MANAGEMENT UNIT 4 - TONY SCHMIDT REGIONAL PARK							
ACRES	CURRENT LAND COVER	FUTURE LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIORITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
24.07	MIXED WOODS	MIXED WOODS	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN	\$48,140.00	3	FOLIAR SPRAY OF BUCK-THORN	\$12,035.00
62.39	WETLAND	WETLAND	MONITOR	N/A	N/A	N/A	N/A
MANAGEMENT UNIT 4 TOTAL							
86.46				\$48,140.00			\$12,035.00
TONY SCHMIDT REGIONAL PARK TOTAL							
219.79				\$198,126.00			

## VADNAIS - SNAIL LAKES REGIONAL PARK



### EXISTING SITE CONDITIONS

MASTER PLAN DATE: 1992, 1995, 1996, 2015



#### LOCATION AND SIZE

Vadnais-Snail Lakes Regional Park is located in the north-central part of Ramsey County, in the cities of Vadnais Heights and Shoreview, totaling 1,019 acres. The park is comprised of five segments: Sucker Lake (273 acres), Vadnais Lake (303 acres), Grass Lake (271 acres), Snail Lake Corridor (142 acres) and Snail Lake (30 acres). The park is generally bounded by I-694 on the south, McMenemy Street on the east, Highway 96 on the north and Victoria Street on the west.



#### SITE CHARACTERISTICS

The park's primary characteristics are the five lakes and wetlands surrounded by wooded hills and ridges. The largest wetland is Grass Lake. A 1-mile long wetland corridor extends north from Grass Lake to Highway 96.

The park includes ½ mile of shoreline along the south end of Snail Lake. Snail Lake is a shallow lake well suited for swimming, with very good water quality. Snail Lake is also a good fishing lake. Due to extensive seepage, Snail Lake requires augmentation to maintain a consistent level, an augmentation system pumps water from Sucker Lake in Vadnais Heights.

Sucker Lake and the East Arm of Vadnais Lake are active parts of the Saint Paul Regional Water Services (SPRWS) system. Water from the Mississippi River is pumped through these lakes, picked up at the south end of Vadnais Lake, moved by pipe to the Lake McCarrons Water Filtration Plant, and from there distributed to SPRWS customers.



#### RECREATION DEVELOPMENT

##### Vadnais Lake Segment:

A multi-use trail between the east and west arms of Vadnais Lake provides access to a number of shoreline fishing areas. The paved trail extends from Vadnais Boulevard in the south to County Road F on the North end. Parking lots highlight north and south trailheads, with portable toilets, and wayfinding signage. The South parking lot has 28 parking stalls and the north has 20 parking stalls. A permeable asphalt trail, offset from the corridor centerline allows off-trail walking, jogging, and cross country skiing, extends across the north and east sides of Vadnais Lake between County Road F and Koehler Road. The trail is gravel from Koehler Road to Edgerton Street. A 4.5 mile trail loop around the east arm of Vadnais Lake is identified utilizing the trail segments mentioned above coupled with paved shoulders and separated trails on Edgerton Street and Vadnais Boulevard. A 2-acre picnic area is provided in the southeast part of the park at the intersection of Vadnais Boulevard and Edgerton Street.

## VADNAIS - SNAIL LAKES REGIONAL PARK

Redevelopment in 2013 removed the one-way road between East and West Lake Vadnais for the development of a paved trail and several fishing nodes. Development of parking lots on the North and South ends of Lake Vadnais also occurred at this time.

### **Sucker Lake Segment:**

A 4-acre picnic area is located south of Highway 96 on the west side of the inlet channel to Sucker Lake. The area includes parking for 115 cars, a general picnic area, shoreline fishing, restrooms, two picnic shelters, a playground, an internal paved trail system, and cross-country ski trails. A paved pedestrian and bicycle trail extends from County Road F on the south to Highway 96. The trail is offset to the west to allow for off-trail walking, jogging, and cross country skiing. A trailhead parking lot for 30 cars is located on the north side of County Road F. A 1.9 mile unpaved pedestrian/cross-country ski trails encircles Sucker Lake. The shoreline adjacent to the channel inlet to Sucker Lake has a paved walkway defined by a railing to enhance the shore fishing experience, increase safety, and improve accessibility.

### **Snail Lake Segment:**

A 20-acre picnic area, swimming beach, and boat access is located on the south shore of Snail Lake. This is the most intensely developed area within the park.

Facilities include an 8 car/boat trailer and 6 car-top boat parking lot, lower beach/picnic area parking lot for 99 cars, and an upper picnic area parking lot for 166 cars. Development also includes a beach building, small picnic shelter, picnic pavilion, two play areas, two sand volleyball courts, and general picnic areas. Amenities within the segment are connected by paved pedestrian trails. The upper picnic area parking lot functions as a winter cross-country ski trailhead. The hill between the upper and lower picnic areas is available for sledding.

### **Snail Lake Corridor Segment:**

A 3-mile paved trail system extends south of Snail Lake road to Gramsie Road forming a loop around a natural wetland. A 4-mile cross-country ski loop is also provided in this section.

Due to recent flooding of the wetland additional master planning activities are proposed for storm water management best practices and trail redevelopment.

### **Grass Lake Segment:**

This segment of the park includes a trailhead parking lot for 33 cars and 3 buses, as well as a 2-mile paved trail system that provides connection to the Snail Lake corridor on the north and a trail overpass at I-694 on the south. Cross-country ski trails are provided through this section of the park. Connection between the Snail Lake corridor and Grass Lake areas is through a trail underpass of Gramsie Road. During times of flooding, the Gramsie Road underpass is flooded and not available for use.

Due to recent flooding of the wetland and Grass Lake, additional master planning activities are proposed for storm water management best practices and trail redevelopment.

## MAINTENANCE

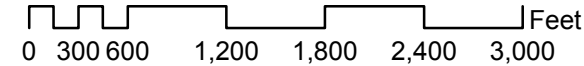
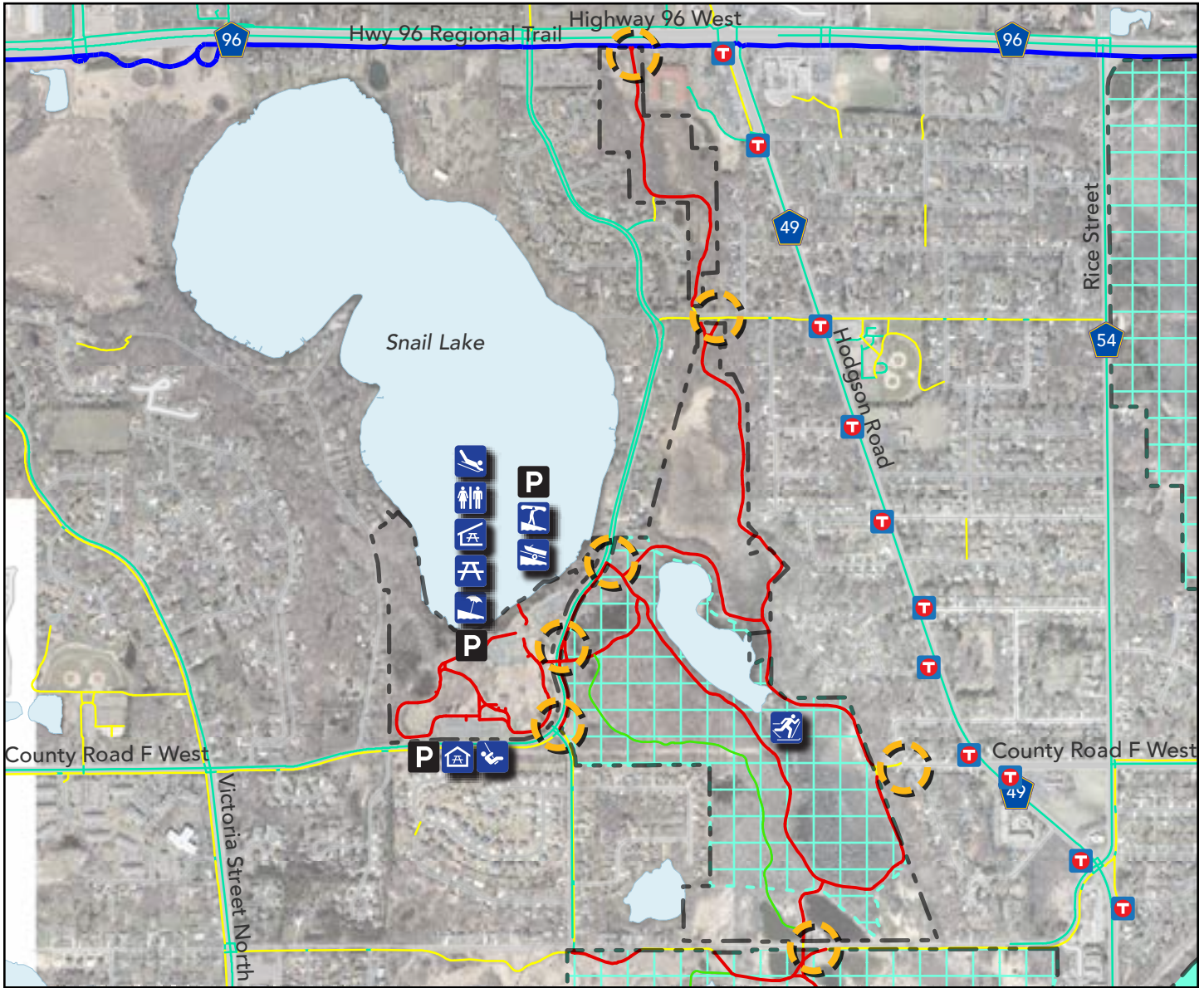
## VADNAIS - SNAIL LAKES REGIONAL PARK

- Maintain access to the boat launch at Snail Lake.
- Groom foot path around the Snail Lake wetland area.
- Groom cross country ski paths at Grass Lake, East Vadnais Lake, and Sucker Lake.
- Plow trail from Hwy 96 to County Road F.
- Plow parking lots at Snail Lake, Grass Lake, Sucker Lake south, and East Vadnais north.
- The trail system east and south of Snail Lake is a wetland and prone to flooding making portions of the trail unusable and difficult to maintain.
- The Snail Lake pavilion is heavily used and requires daily cleaning and preparation.
- The water level of Snail Lake fluctuates and makes the beach area unusable when water levels are too high or low.
- The beach needs extra maintenance to remove goose droppings.
- Use of Sucker Lake and East Vadnais Lake is limited to shore fishing in the summer. There is no surface use of the lake allowed.





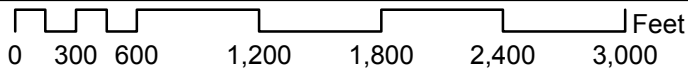
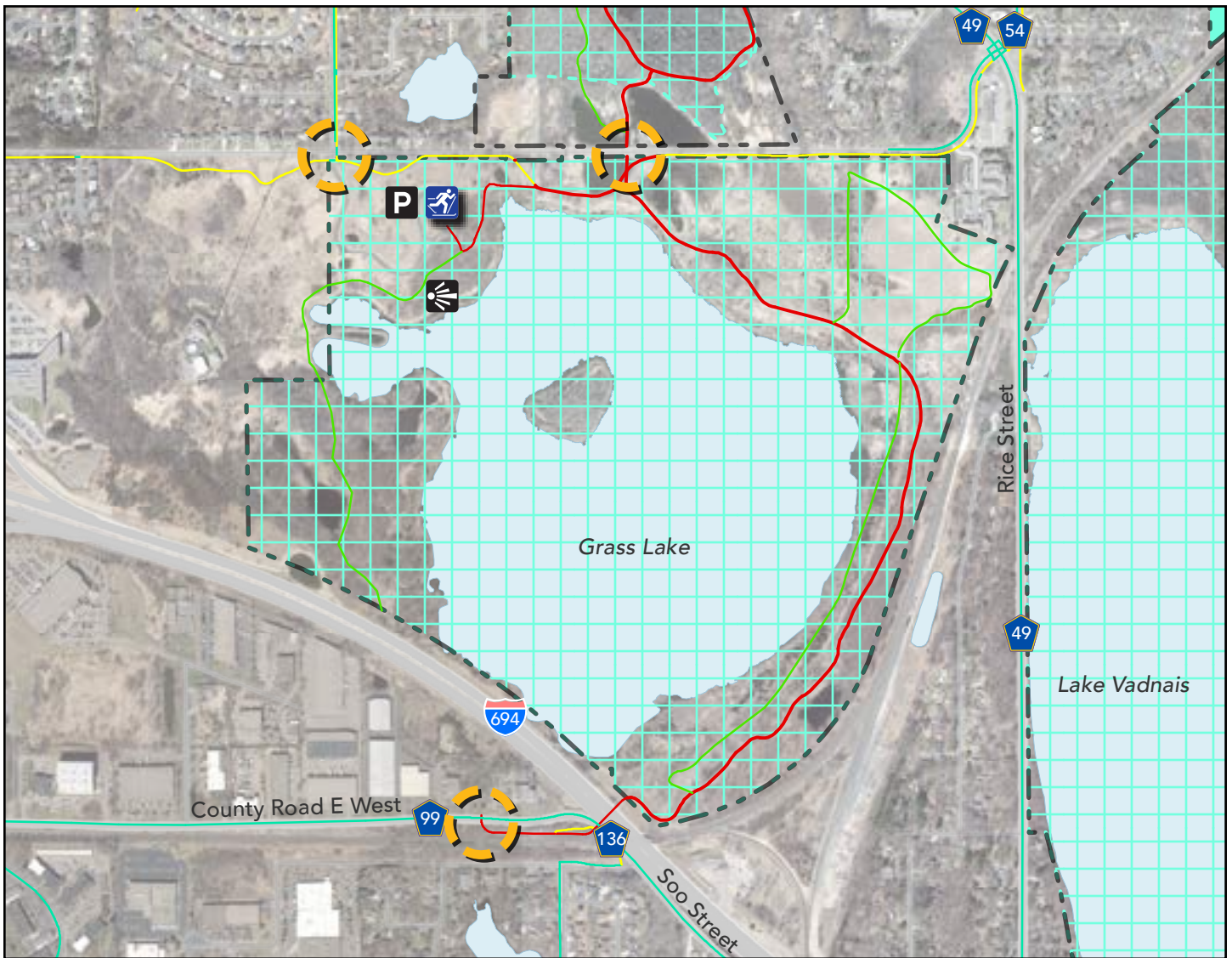
EXISTING CONDITIONS - SNAIL LAKE



Legend

Park Border		Park Paved Trail		Parking Lot		Picnic Shelter	
Park Entrance		Park Turf Trail		Boat Launch		Playground	
Metro Transit Stop		Municipal Trail		Carry In Access		Pavilion	
Environmental Natural Area		Municipal Ped/Bike Facility		Restrooms		XC Ski	
		Regional Trail		Picnic Area		Sledding Hill	
				Beach			

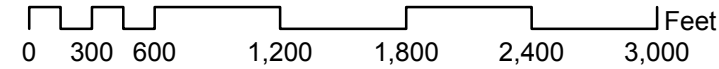
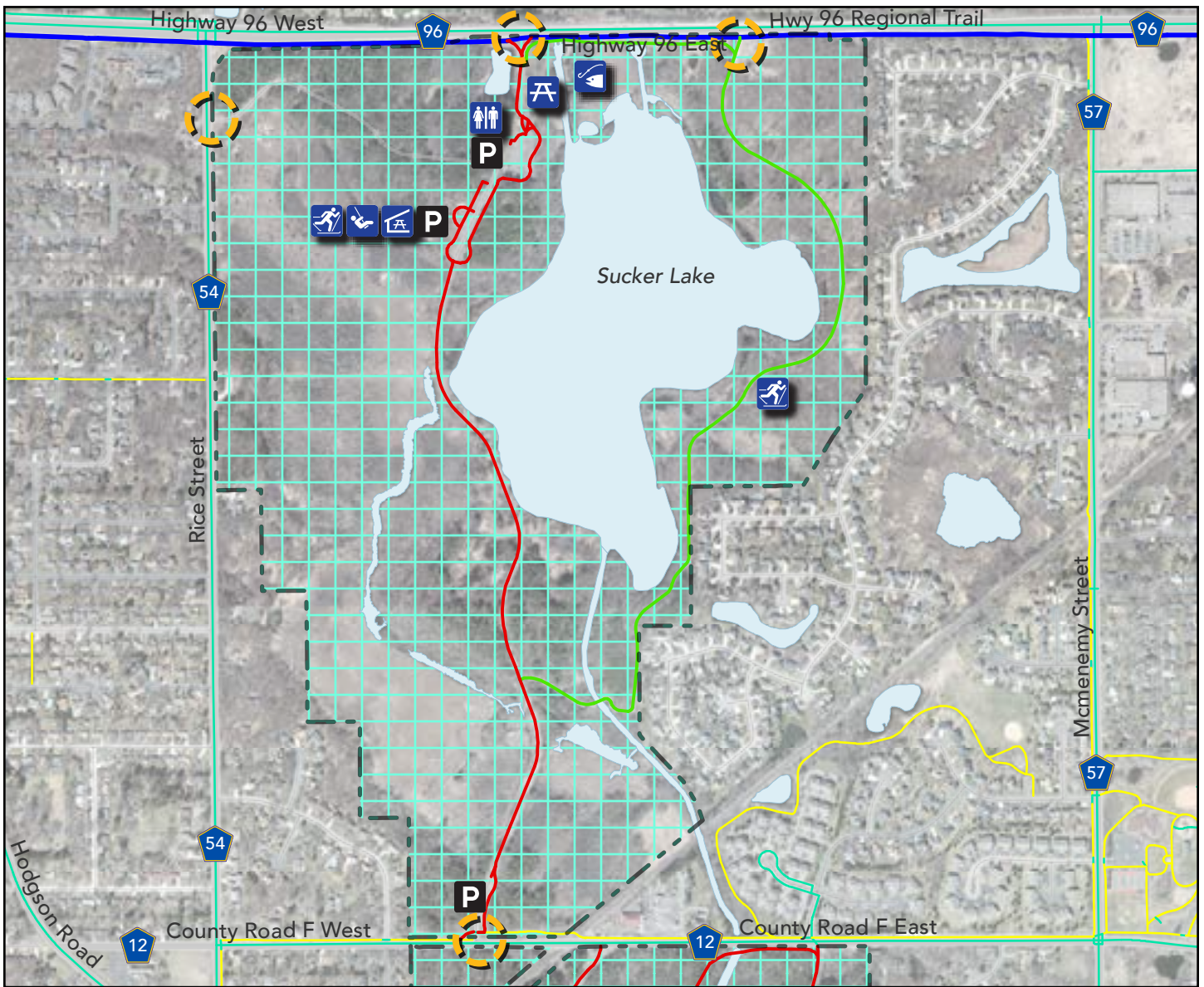
EXISTING CONDITIONS - GRASS LAKE



Legend

Park Border		Park Paved Trail		Parking Lot	
Park Entrance		Park Turf Trail		Scenic Viewpoint	
Metro Tranist Stop		Municipal Trail		XC Ski	
Regional Trail		Municipal Ped/Bike Facility		Environmental Natural Area	

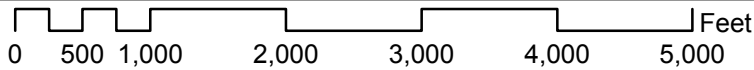
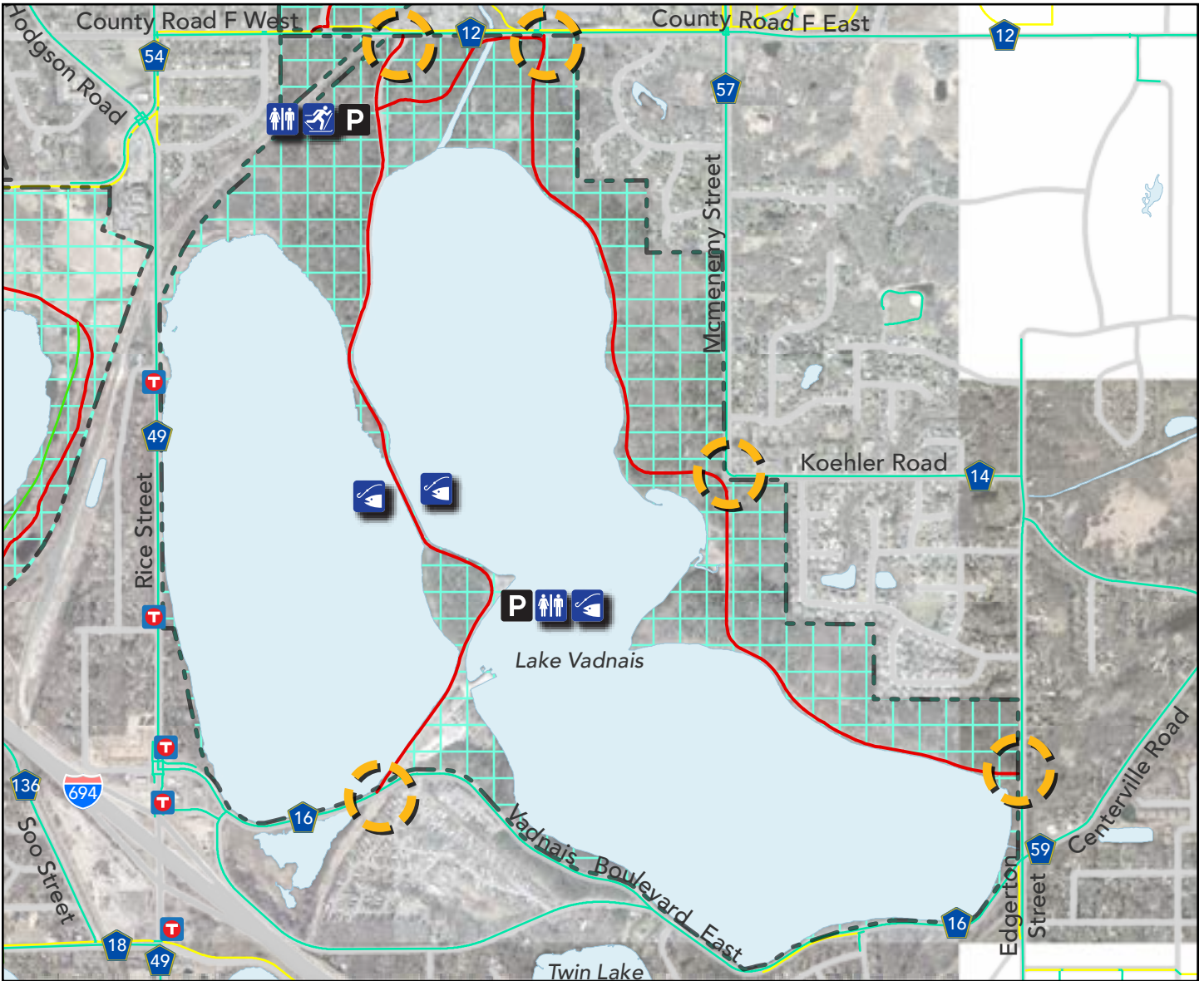
EXISTING CONDITIONS - SUCKER LAKE



Legend

Park Border		Park Paved Trail		Parking Lot		Picnic Area	
Park Entrance		Park Turf Trail		Playground		Restrooms	
Metro Tranist Stop		Municipal Trail		XC Ski		Shore Fishing	
Regional Trail		Municipal Ped/Bike Facility		Picnic Shelter		Environmental Natural Area	

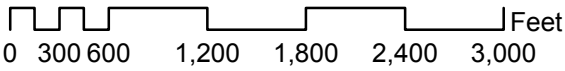
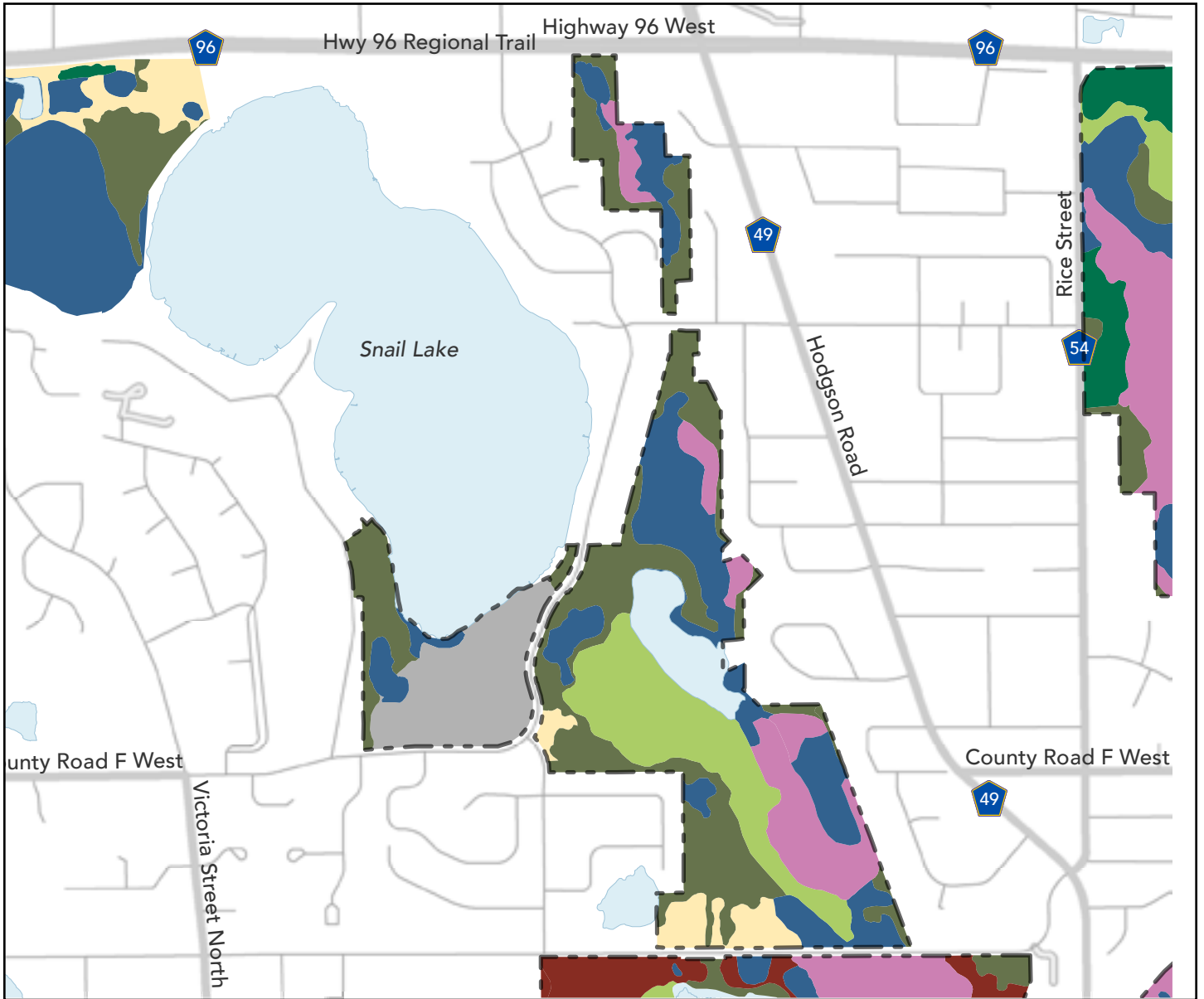
EXISTING CONDITIONS - LAKE VADNAIS



Legend

Park Border		Park Paved Trail		Parking Lot	
Park Entrance		Park Turf Trail		Restrooms	
Metro Tranist Stop		Municipal Trail		XC Ski	
Regional Trail		Municipal Ped/Bike Facility		Shore Fishing	
				Environmental Natural Area	

EXISTING LAND COVER - SNAIL LAKE



Existing Land Cover

- |                     |                   |            |                 |
|---------------------|-------------------|------------|-----------------|
| Active Use          | Floodplain Forest | Oak Woods  | Remnant Prairie |
| Impervious          | Mesic Forest      | Old Field  | Savanna         |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp     |
| Tamarack Swamp      | Wetland           | Open Water |                 |

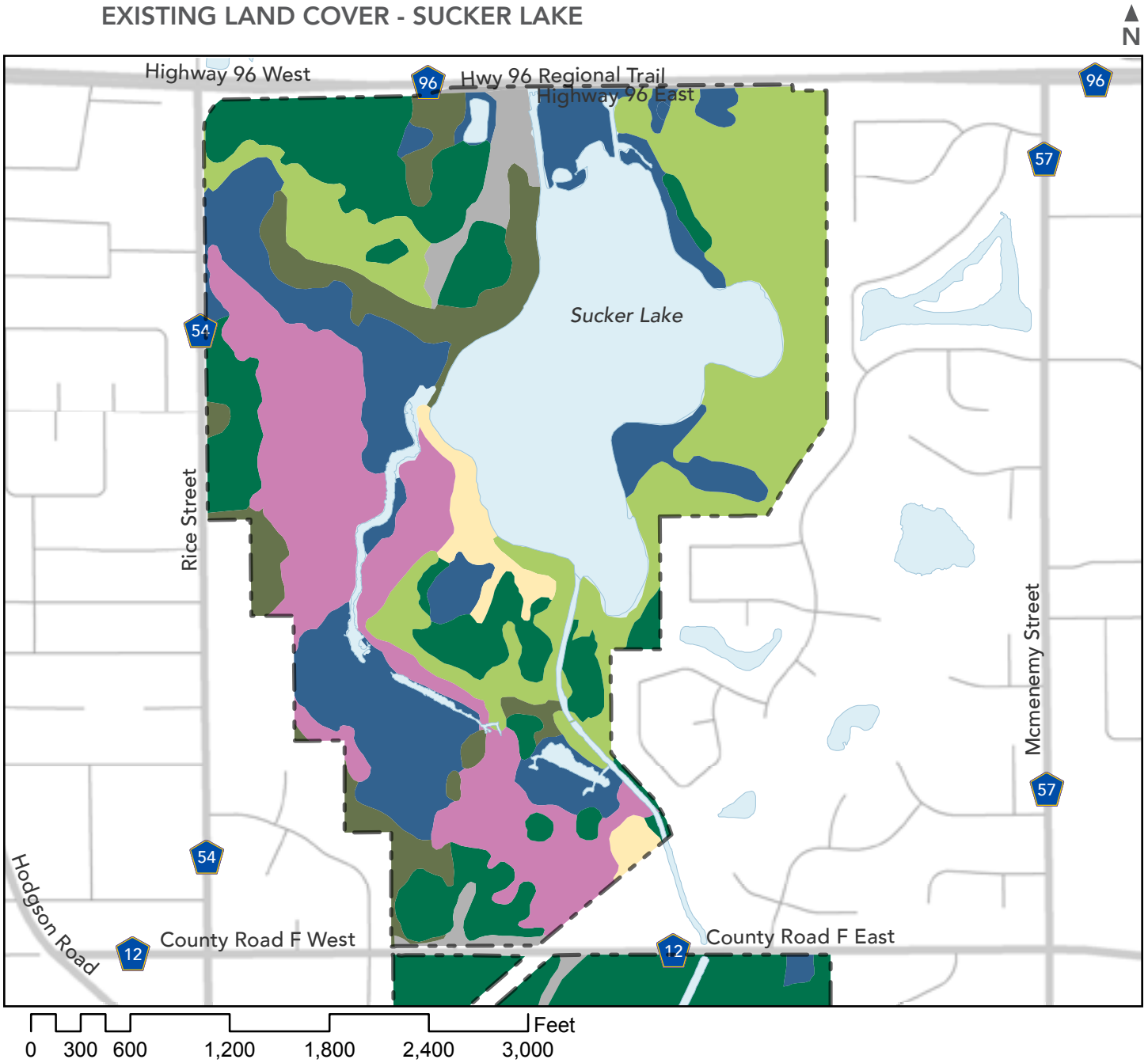
EXISTING LAND COVER - GRASS LAKE



Existing Land Cover

- |                     |                   |            |                 |
|---------------------|-------------------|------------|-----------------|
| Active Use          | Floodplain Forest | Oak Woods  | Remnant Prairie |
| Impervious          | Mesic Forest      | Old Field  | Savanna         |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp     |
| Tamarack Swamp      | Wetland           | Open Water |                 |

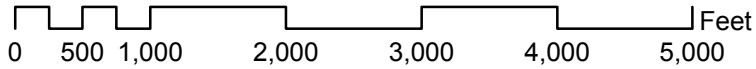
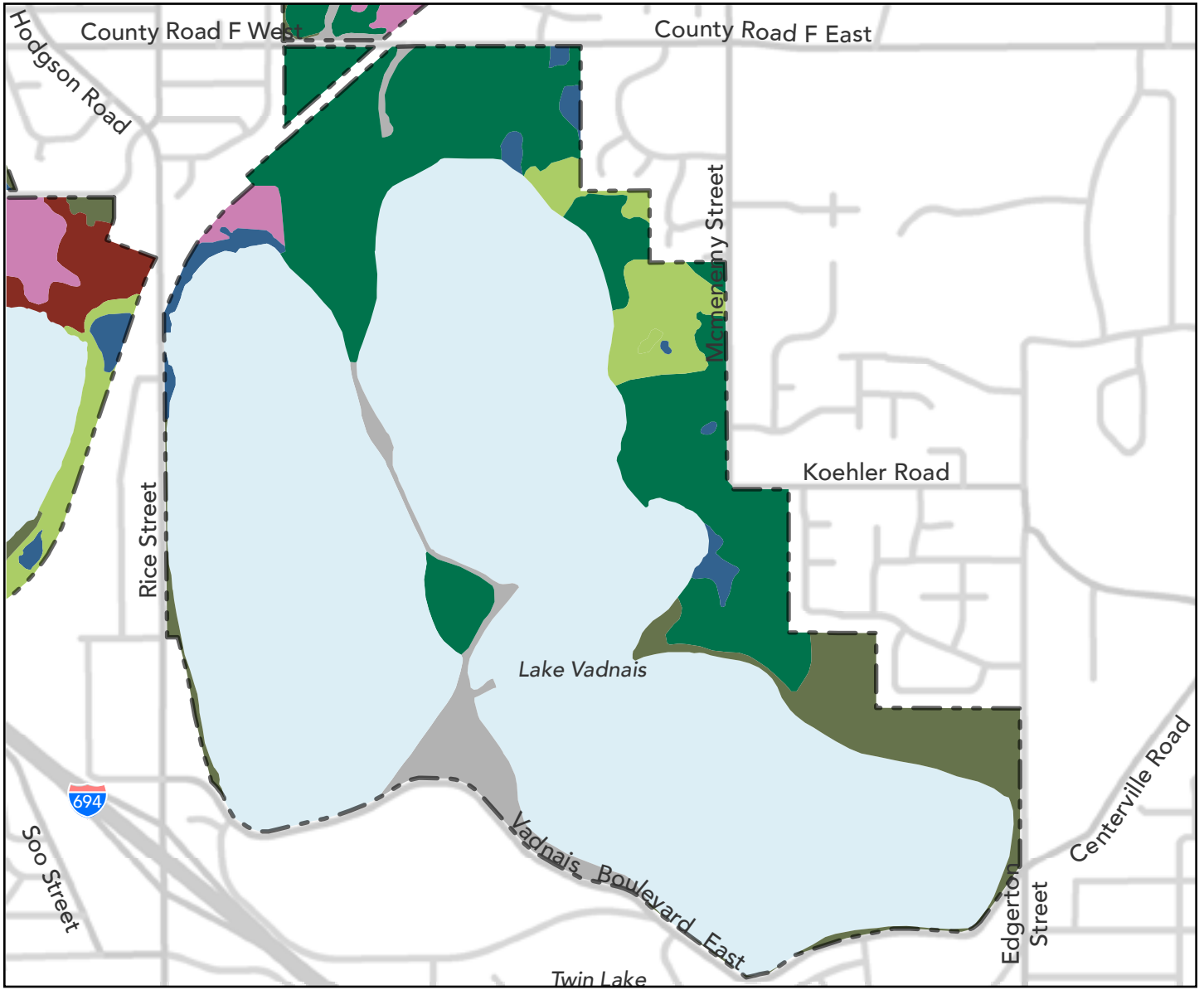
EXISTING LAND COVER - SUCKER LAKE



Existing Land Cover

- |                     |                   |            |                 |
|---------------------|-------------------|------------|-----------------|
| Active Use          | Floodplain Forest | Oak Woods  | Remnant Prairie |
| Impervious          | Mesic Forest      | Old Field  | Savanna         |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp     |
| Tamarack Swamp      | Wetland           | Open Water |                 |

EXISTING LAND COVER - LAKE VADNAIS



Existing Land Cover

- |                     |                   |            |                 |
|---------------------|-------------------|------------|-----------------|
| Active Use          | Floodplain Forest | Oak Woods  | Remnant Prairie |
| Impervious          | Mesic Forest      | Old Field  | Savanna         |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp     |
| Tamarack Swamp      | Wetland           | Open Water |                 |



## VADNAIS - SNAIL LAKES REGIONAL PARK

### LAND COVER AND HABITAT

The native vegetation of Vadnais-Snail Lakes Regional Park was a mixture of oak woods, oak savannas, and extensive wetlands. Current vegetation includes portions of these native habitats plus old fields, mixed woods, and extensive conifer plantations. There are high quality habitats that exist in the park that are unique and require ongoing preservation. These habitats include the Sucker Lake fen, which contains several species of orchids, and the Grass Lake wetlands and woodlands, which are recognized by the Minnesota Department of Natural Resources as high-quality wetland surrounded by oak savanna remnants. Invasive species have become widespread across the park and the most common species found are buckthorn and garlic mustard.

### WILDLIFE

The park hosts diverse wildlife. The Vadnais Lake section and Grass Lake wetlands are important waterfowl nesting and migration areas. Other wildlife includes nesting songbirds, waterfowl, raptors, and wild turkeys. Larger mammals include white-tailed deer, coyotes, red fox, and raccoons. Blanding's turtles have been found in the Grass Lake section of the park.

### WILDLIFE MANAGEMENT

Wildlife management in the park involves the control of white-tailed deer populations, in the Vadnais Lake section, through special hunts under the Ramsey County Cooperative Deer Plan in partnership with the cities of Shoreview and Vadnais Heights. Nest boxes are provided for wood ducks and eastern bluebirds, and an active osprey nesting pole is in the south west corner of Grass Lake.

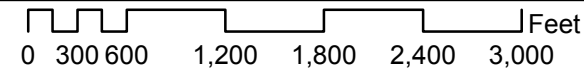
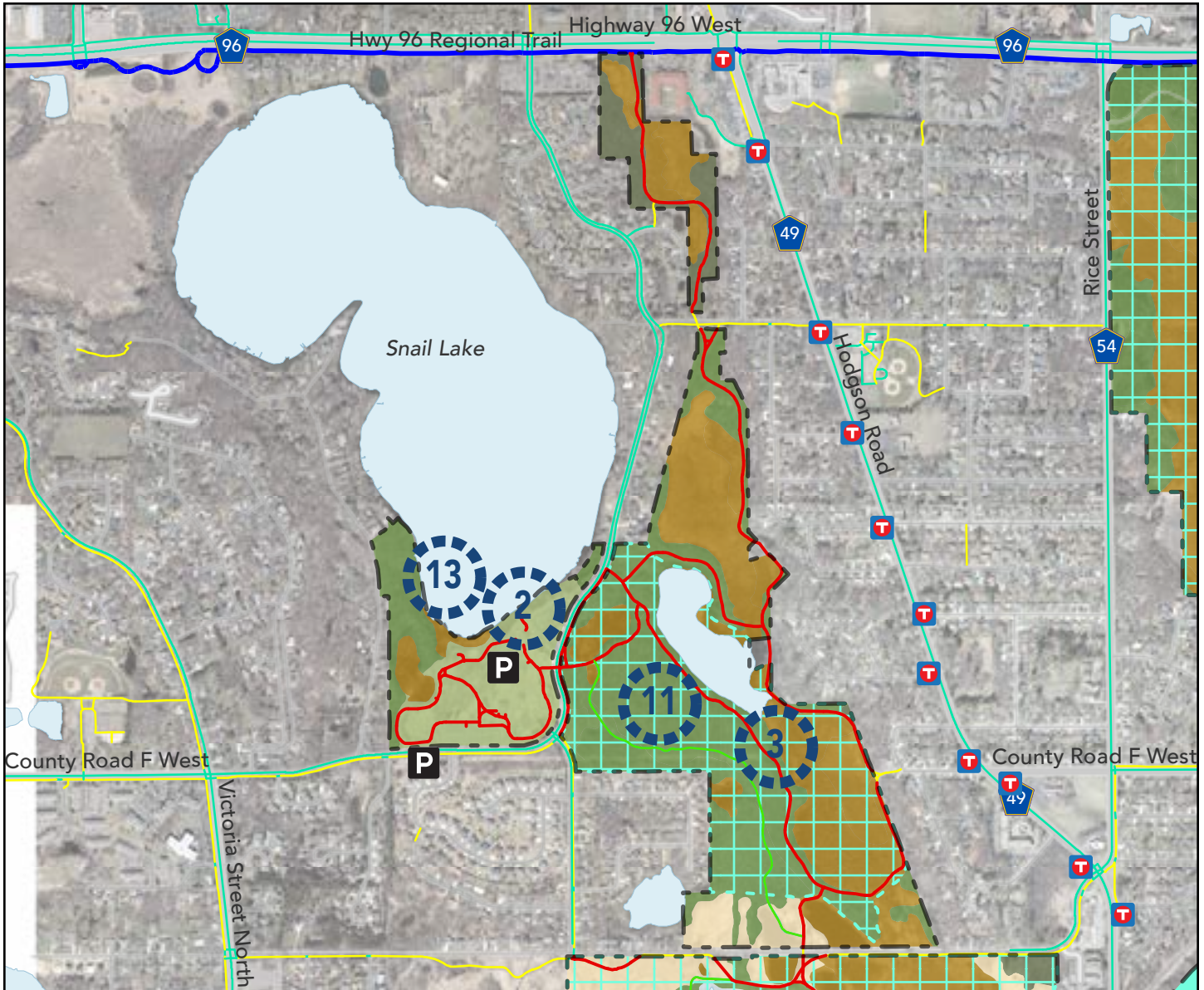
### SURFACE WATER RESOURCES

The Vadnais-Snail Lakes Regional Park encompasses Sucker Lake, East Vadnais Lake, West Vadnais Lake, and Grass Lake. The park abuts a portion of Snail Lake and includes 2,300 feet of shoreline which includes a boat launch, swimming beach, mostly natural shoreline, and a storm water pond in the southwest corner. There are extensive wetland complexes and lowland throughout all sections of the park which receive runoff from the greater urban watershed surrounding the park. Recently, high amounts of precipitation and elevated levels of watershed runoff have caused the surface and groundwater within the Grass and Snail Lake wetland complexes to rise, causing flooding of parkland and trails. The Ramsey Washington Metro Watershed District has acted to complete surface and groundwater analysis of the area, and are completing planning efforts to implement flood reduction best management practices.

### ENVIRONMENTAL NATURAL AREAS

Vadnais-Snail Lakes Regional Park has designated Environmental Natural Areas (ENA) including the entire Grass Lake section, a portion of the Snail Lake Park section, the entire Vadnais Lake and Sucker Lake segments, excluding the current active use areas within the park. The Grass Lake section has been identified by the Minnesota Department of Natural Resources as a high-quality wetland surrounded by oak savanna remnants and diverse restored native prairie. The section of the Snail Lake ENA consists of high -quality oak, mesic woods, and a large wetland complex. The Vadnais and Sucker Lakes segments are designated to protect the Saint Paul Regional Water Services reservoirs and watershed. The Sucker Lake segment contains high-quality fens, which provide habitat for several species of unique orchids.

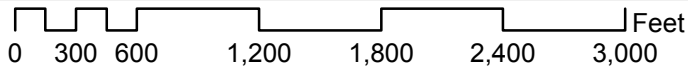
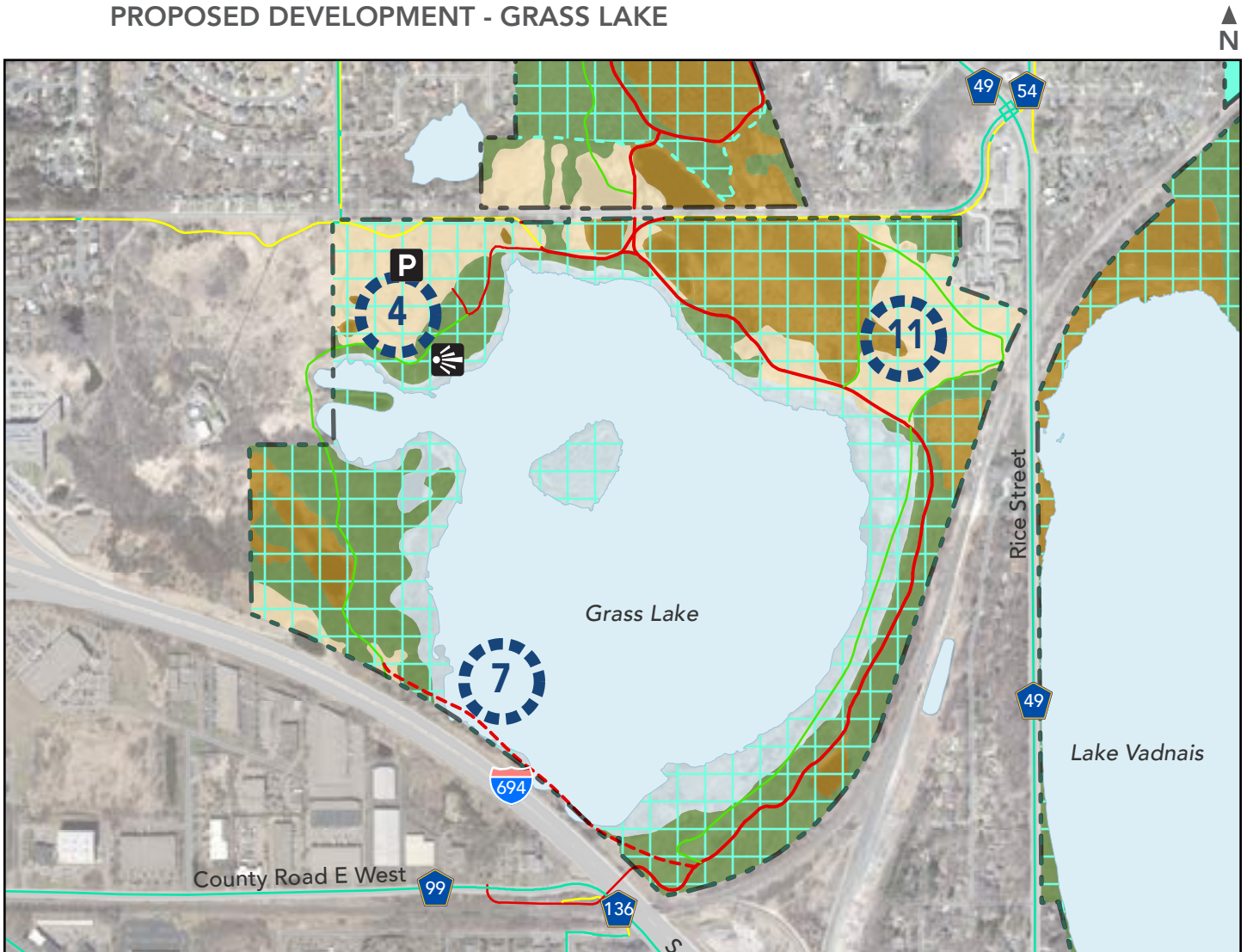
PROPOSED DEVELOPMENT - SNAIL LAKE



Legend

Park Border		Park Paved Trail		Regional Trail	
Proposed Development		Park Turf Trail		Proposed Regional Trail	
Proposed Development Node		Municipal Trail		Proposed Paved Park Trail	
Metro Transit Stop		Municipal Ped/Bike Facility		Trail	
Environmental Natural Area					

PROPOSED DEVELOPMENT - GRASS LAKE

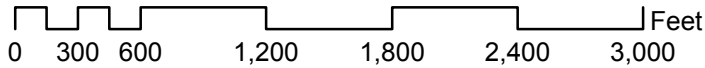
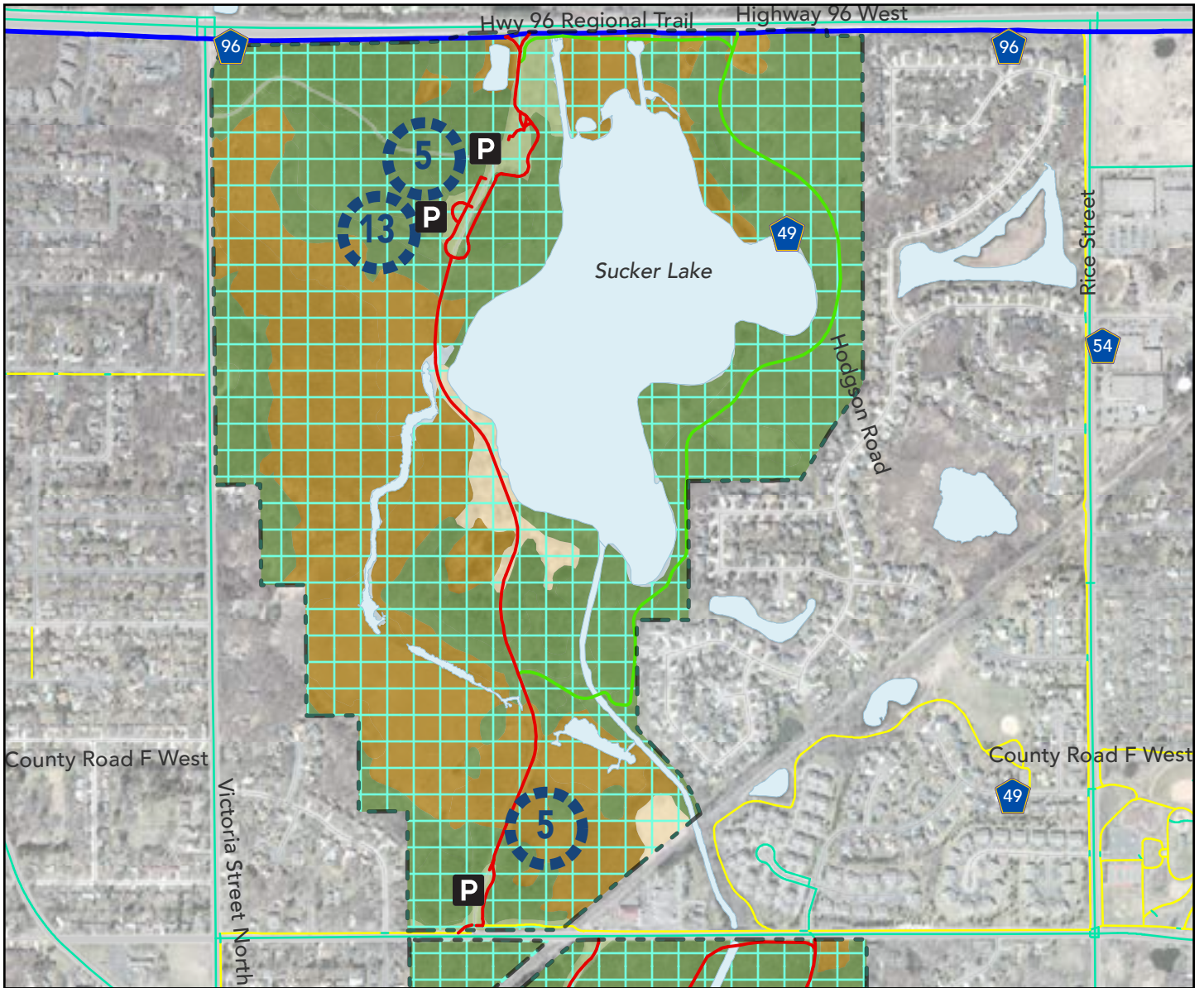


Legend

- Park Border  Park Paved Trail  Regional Trail
- Proposed Development  Park Turf Trail  Proposed Regional Trail
- Proposed Development Node  Municipal Trail  Proposed Paved Park Trail
- Metro Transit Stop P Municipal Ped/Bike Facility  Trail

Environmental Natural Area

PROPOSED DEVELOPMENT - SUCKER LAKE

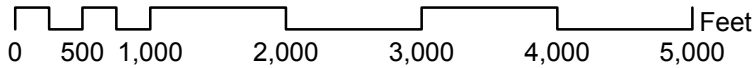
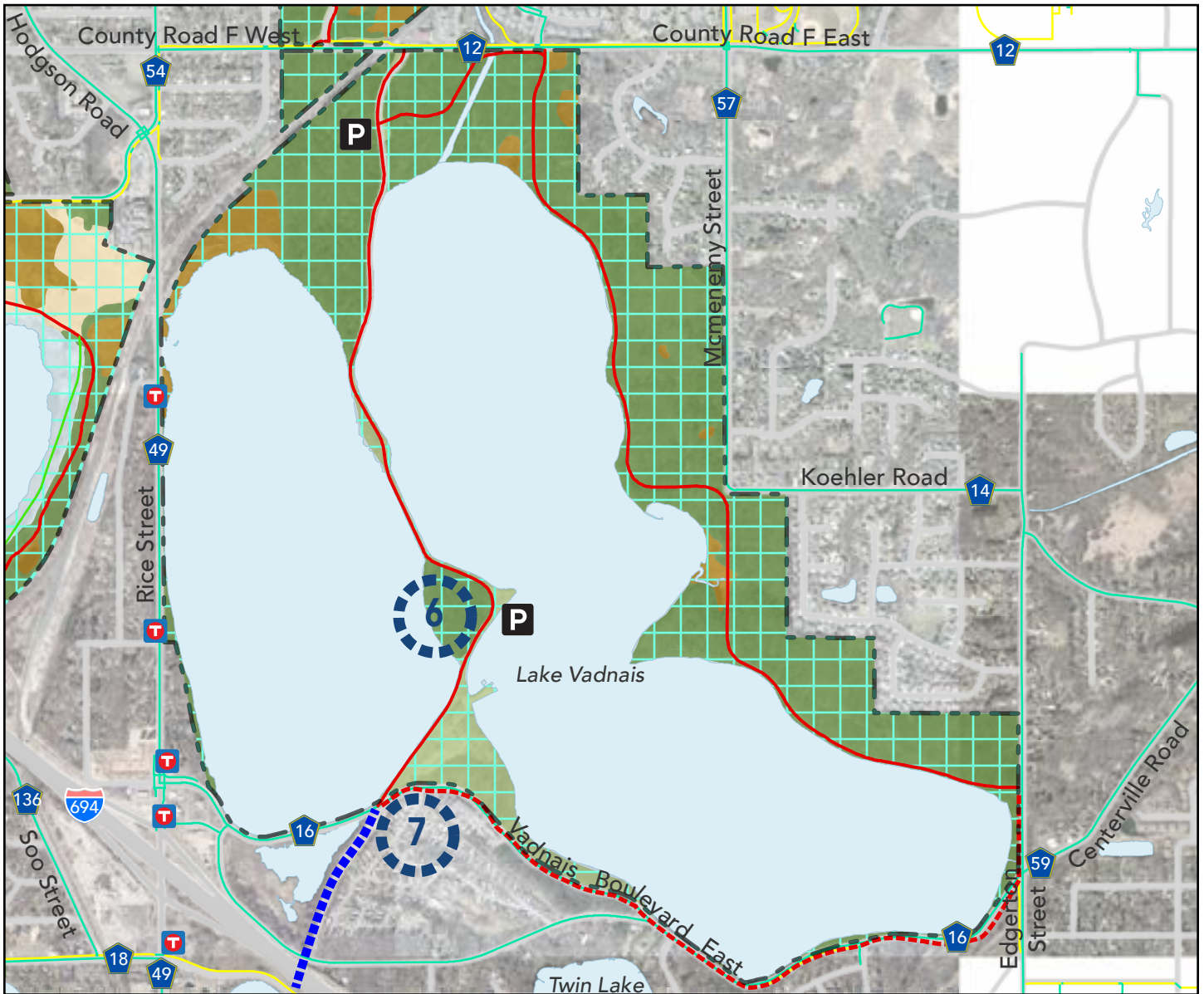


Legend

- Park Border - - - - - Park Paved Trail — Regional Trail —
- Proposed Development [ 3 ] Park Turf Trail — Proposed Regional Trail - - - - -
- Proposed Development Node ( 1 ) Municipal Trail — Proposed Paved Park Trail - . . . -
- Metro Tranist Stop T Municipal Ped/Bike Facility — Trail

Environmental Natural Area [ ]

PROPOSED DEVELOPMENT - LAKE VADNAIS



Legend

Park Border		Park Paved Trail		Regional Trail	
Proposed Development		Park Turf Trail		Proposed Regional Trail	
Proposed Development Node		Municipal Trail		Proposed Paved Park Trail	
Metro Tranist Stop		Municipal Ped/Bike Facility			
Environmental Natural Area					

## PLANNING CONSIDERATIONS

The Vadnais and Sucker Lake segments of the regional park are located on property owned by the Saint Paul Regional Water Services. Ramsey County has the right to develop and operate these segments of the park under a Joint Powers Agreement, which was approved by the Ramsey County Board of Commissioners and the Board of Water Commissioners. Future developments in the park will be coordinated with the Saint Paul Regional Water Services. All issues that could impact the integrity of the water supply are critical to the Saint Paul Regional Water Services. Under the Joint Powers Agreement, Ramsey County has acknowledged that maintenance of water quality is a shared value, taking precedent over public use decisions.

It would be highly desirable to connect the Vadnais Lake segment and the Grass Lake segment via a trail that would parallel I-694. Design and construction of this trail segment would require coordination with the Minnesota Department of Transportation and the Canadian Pacific Railroad Company.

### Regional Flood Management

In response to high-water conditions around Grass Lake, Snail Lake, and nearby wetlands the Ramsey-Washington Metro Watershed District (RWMWD) is coordinating a large-scale flood study, which is currently underway. The goal is to identify strategies that will stabilize the system to withstand increasingly heavy precipitation and rebounding groundwater levels, ultimately protecting homes, property, and public infrastructure. The following outlines short term measures that will inform future redevelopment of flooded infrastructure.

#### Snail Lake – North of Snail Lake Blvd.

Snail Lake is currently landlocked without a managed outlet. High water has forced closure of the swimming beach and some park trails. RWMWD is evaluating options for constructing a managed outlet system that could allow water out of Snail Lake if it were to reach a maximum level. Once a maximum level is understood, Ramsey County Parks will be developing a plan to redevelop the beach area of the park to cope with both high and low water conditions.

#### Grass Lake

While Grass Lake's water level fluctuates seasonally, its annual low point has been steadily rising since 2009. During periods of heavy rain in 2016 and 2017, the lake topped its banks on the north end flooding trails and raising the water levels of nearby ponds and wetlands. Two temporary sandbag berms have been installed along the north and northeast sides of Grass Lake. A design and elevation for permanent earthen berms is currently being implemented by RWMWD, as well as rerouting trails to work with the new flood control infrastructure. West Vadnais Lake contains two outlet structures, one from Grass Lake and another leading to the Gervais chain of lakes. Both of these structures will undergo cleaning to encourage proper drainage.

#### Vadnais-Snail Lakes Regional Park – South and East of Snail Lake Blvd.

Flooding from Grass Lake into adjacent ponds and wetlands, accompanied by seepage from high groundwater levels, has forced closure of several trail sections. Wetland A, bordering the nearby Crestview Addition neighborhood, has been especially impacted as it is the lowest elevation point of the area and has no natural outlet. In response, RWMWD installed groundwater monitoring wells, along with surface water level gauges at key points around Grass, Snail, and West Vadnais

## PLANNING CONSIDERATIONS

lakes so checking inlet/outlet pipes to ensure they are functioning as designed. Once a peak flood level is established for Grass Lake and Wetland A, RWMWD will advise Ramsey County on options for restoring trail access in low-lying areas of the regional park so the new trails will be operational during high water conditions.

### Long Term Solutions

RWMWD is committed to finding long-term solutions to the flood risk in this area, including replacing and/or adding outlet pipes to increase drainage. However, this is a complex system with flood considerations downstream through the Phalen Chain of Lakes, so any projects designed to move water from one area to another will require further thoughtful consideration and multiple agency coordination.

## PROPOSED DEVELOPMENT

**1. Master Planning** - The master plan for Vadnais Regional Park was completed in January 1992. In September 1996, a master plan amendment was completed to include the Sucker and Vadnais Lakes section. The Sucker and Vadnais Lake section of the park is owned by SPRWS, and Ramsey County executed a Joint Powers Agreement (JPA) for the development and operation of park and recreation facilities within this. The master plan was approved by SPRWS, Ramsey County Board of Commissioners, and the Metropolitan Council. The 1996 master plan combined all four sections of the park and addressed future development and potential acquisition for proposed park improvements throughout Snail Lake, Grass Lake, Sucker Lake, and Vadnais Lake sections. Due to changing trends of park and recreation facilities, demographics, and the need to provide improved recreational facilities, a master plan update is proposed for the regional park.

- Most of the existing park infrastructure was developed in the mid 1990s to early 2000s and will need improvement due to aging infrastructure, changing trends of park and recreation facilities, demographics, and the need to provide improved recreational facilities. Redevelopment of the park will require a future master planning process to address existing facilities, storm water management best practices, and new development opportunities.
- Develop partnerships with Saint Paul Regional Water Services (SPRWS), the city of Shoreview, the city of Vadnais Heights, Vadnais Lake Area Watershed Management Organization (VLAWMO), Ramsey Washington Metro Watershed District (RWMWD), other local agencies, and private parties for funding strategies, increased recreational opportunities, and improvements throughout the park.

**2. Snail Lake** - Due to aging infrastructure and recent flooding issues, the beach area is proposed to be redeveloped. Potential redevelopment to the beach recreation area and boat launch facility may consist of beach facility improvements, parking lot redevelopment or expansion, improvements to multi-use turf areas, trail connections, and updated site amenities. A master planning study may be required to identify potential reuse and programming in the beach facility and other adjacent park amenities. This study will help inform improvements to the building and internal uses such as the concession area, potential winter use of the facility, and other recreational development opportunities for this area.

**3. Snail Lake Corridor** - Master planning activities are proposed with RWMWD for flood management improvements. Connection to the Snail Lake Beach and Grass Lake areas is through trail underpasses of Snail Lake and Gramsie Roads. When flooded both underpasses are not available for use. Redevelopment may include new sections of paved trail, improvements to trail underpasses, boardwalks, and interpretive or educational observation areas.

## PROPOSED DEVELOPMENT

### 4. Grass Lake

Additional master planning activities will be required for redevelopment and potential recreation development opportunities in this area. Redevelopment of the trail may include sections of paved trail, improvements to underpasses, cross-country ski trails, an interpretive or educational facility, restrooms, and interpretive or educational observation areas.

### 5. Sucker Lake

Additional master planning activities will be required for redevelopment and recreational development opportunities of the picnic area and trail system to County Road F. The plan will address redevelopment and improvement activities to the picnic shelters, restroom, parking lot redevelopment and or expansion, to multi-use turf areas, trail connections, site amenities, cross-country ski trails, interpretive/educational observation areas, fishing opportunities, and playground.

### 6. Lake Vadnais

Master planning activities will be required for recreational development opportunities in this section of the park. There has been a demand for increased trail development on the east side of the Lake Vadnais section, a mountain bike trail system in the northern section, and a paved trail along Edgerton and Vadnais Blvd. Redevelopment and improvement activities are proposed for additional trails, the picnic area by the intersection of Vadnais Blvd and Edgerton Street, a mountain bike trail system, additional water sources, trail connections, site amenities, cross-country ski trails, fishing opportunities, and interpretive or educational observation areas.

### 7. Trails

- **Trail Access Points** - Redevelop existing access points and provide additional access points throughout the park for improved access to recreational amenities.
  - Snail Lake: Proposed trail access points for connection to the Snail Lake Picnic and Beach Area from Snail Lake Road.
  - Snail Lake Trail Corridor: Proposed trail access points for improved connection to the Snail Lake trail system from Floral Drive W and Dennison Ave. Additional at-grade access point improvements are proposed from Snail Lake Road and Gramsie Road for use while pedestrian underpass tunnels are closed due to flooding or other events.
  - Grass Lake: Proposed trail access points for improved connection from Gramsie Road into the existing Grass Lake trail system and Grass Lake interpretive/educational area parking lot. Additional at-grade access point improvements are proposed from Snail Lake Road and Gramsie Road for use while pedestrian underpass tunnels are closed due to flooding or other events.
  - Sucker Lake: Proposed trail access points for improved connection from Rice Street into the Sucker Lake Picnic Area.
  - Vadnais Lake: Proposed trail access points from the neighborhood located on the east side of Vadnais Lake to the existing trail system. Additional access points may be proposed along Edgerton and Vadnais Blvd for improved connection to the park.
- **Trail Development**
  - Internal Park Trails: Redevelop existing internal park trails for improved use as well as more direct a trail connections to park amenities. Improvements shall consist of trail repaving, re-alignment of trails, the reduction of sharp corners and steep slopes adjacent to trails, and trail redevelopment through wet areas.
  - Snail lake: Proposed trails for access from Snail Lake Road to the Picnic and Beach Areas. Trail development would likely occur with redevelopment of the picnic and beach area.



## PROPOSED DEVELOPMENT

-Snail Lake Corridor: Redevelop existing sections of trail through wet areas for use during flooding with interpretive and education programming areas, observation areas, boardwalks and other passive recreation amenities.

-Grass Lake: Proposed trail development for improved connection from Gramsie Road into the existing Grass Lake trail system and Grass Lake interpretive/educational area parking lot. Redevelop existing sections of trail through wet areas for use during flooding with interpretive/education programming areas, observation areas, boardwalks, and other passive recreation amenities.

-Sucker Lake: Proposed trail development from Rice Street to the Sucker Lake Picnic Area. Additional trail development may be proposed within the Sucker Lake area for improved access to Sucker Lake and surrounding natural areas with interpretive and education programming areas, observation areas, boardwalks, and other passive recreation amenities.

## 8. Parking Lot Improvements

- **Snail Lake Beach & Boat Launch**

- Pavement maintenance was last completed in 2003. A mill and overlay will be required for improved use and maintenance operations. During any parking lot redevelopment additional parking should be considered along with improved pedestrian connections, signage, storm water management best practices, and site amenities.

- **Grass Lake Parking Lot**

- Pavement maintenance was last completed in 2003. A mill and overlay will be required for improved use and maintenance operations. During any parking lot redevelopment additional parking should be considered along with improved pedestrian connections, signage, storm water management best practices, and site amenities.

- **Sucker Lake Picnic Area Parking Lot**

- Pavement maintenance was last completed in 2008. A mill and overlay will be required for improved use and maintenance operations. During any parking lot redevelopment additional parking should be considered along with improved pedestrian connections, signage, storm water management best practices, and site amenities.

- **Sucker Lake Parking Lot (County Road F)**

- Pavement maintenance was last completed in 2008. A mill and overlay will be required for improved use and maintenance operations. During any parking lot redevelopment additional parking should be considered along with improved pedestrian connections, signage, storm water management best practices, and site amenities.

- **Lake Vadnais Picnic Area**

- It is unknown when pavement maintenance was last completed for this lot. Redevelopment will be required for improved use and maintenance operations, and would likely occur during redevelopment of the picnic area. During any parking lot redevelopment additional parking should be considered along with improved pedestrian connections, signage, storm water management best practices, and site amenities.

## 9. Wayfinding

- **Pedestrian**

- Improve pedestrian signage for enhanced wayfinding to trail accesses and other amenities. Provide interpretive signage in natural areas for nature education opportunities.

## PROPOSED DEVELOPMENT

- **Vehicular:** Improve vehicular entrance signage for enhanced wayfinding to access the park.
  - Main Park Entrance Road: Redevelop the main regional park entrance monument sign and adjacent components.
  - South Shore Fishing Area & Boat Launch Entrance Road: Install appropriate entrance identification signs for improved vehicular wayfinding.
  - Internal Park Areas: Install appropriate entrance identification signs for improved vehicular wayfinding.

## 10. Recreation Opportunities

- **Shelter, Restrooms, Beach Facility**  
Development of existing picnic shelters, restrooms, and the beach facility occurred in the mid 1990s to early 2000s and will need improvement due to aging infrastructure. Additional redevelopment of these facilities will likely be required to provide enhanced recreational amenities for picnic reservations, beach facilities, improve use with adjacent recreational amenities, and to comply with the Americans with Disabilities Act (ADA) and Universal Design standards.
- **Playgrounds**
  - Existing Playgrounds:** Redevelop the existing playgrounds for improved use and play. Replace existing playground surface materials to improve accessibility and maintenance operations.
  - New Playground Development:** Additional playground development may be proposed in the Vadnais Picnic area. Master planning activities will be required for playground development and will likely occur during future planning.
- **Multi-Use Turf**  
Improve turf areas for recreational and community event opportunities.
- **Court Games**  
Redevelop existing court areas to provide enhanced recreation for general park use. There may be a need to explore additional development of court games to correspond with changing trends, demographics, and park use.
- **Culturally Significant Areas**  
Provide connection and interpretive education for culturally significant areas within Vadnais-Snail Lakes Regional Park. Proposed improvements would consist of observation areas, interpretive educational signage, and pedestrian connections.
- **Public Art**  
Provide the opportunity and appropriate infrastructure to accommodate public art to improve connections with community groups.
- **Wildlife Areas**  
Provide visual and interpretive educational signage and pedestrian connections. If federally or state listed protected plants or animals are discovered statutes and guidelines will be followed.
- **Fishing:** Increase fishing opportunities within the park and provide secondary fishing nodes.
  - Snail Lake:** Currently there are no fishing piers or secondary fishing areas provided for Snail Lake. Most fishing activity occurs from shore, but heavy weed activity averts a majority of fishing activities. A fishing pier could be located west of the beach area to provide additional fishing opportunities at Snail Lake. Master planning activities are required to determine appropriate locations for fishing piers and secondary fishing access points.
  - **Grass Lake:** No fishing opportunities are proposed for Grass Lake due to existing conditions and shallow water depths.

## PROPOSED DEVELOPMENT

-**Sucker Lake:** Currently there are no fishing piers located on Sucker Lake per the requirements of Saint Paul Regional Water Services, however there are several secondary and shore fishing access points along the west side of the lake and in Sucker Lake Channel. Fishing structures such as piers would need to be approved by SPRWS. Master planning activities are required to determine appropriate locations for fishing access points.

-**Lake Vadnais:** No fishing opportunities are proposed for the west section of Lake Vadnais due to existing conditions and shallow water depths. Master planning activities are required to determine if additional fishing opportunities should be located on this section of the lake. There are no fishing piers located on Lake Vadnais per requirements of Saint Paul Regional Water Services, however there are several secondary shore fishing access points along the west side of the east section of Lake Vadnais. There is a demand for additional fishing opportunities on the eastern side of the lake. Fishing structures such as piers would need to be approved by SPRWS. Master planning activities are required to determine appropriate locations for proposed fishing access points.

- **Programming**

Increase recreation and nature programming activities.

- **Water Access**

-**Small Watercraft Access:** Provide access for small water craft within the park near the boat launch facility and beach recreation area that is conducive for small watercraft on Snail Lake only. Explore rental amenities for potential small watercraft rental on Snail Lake.

-**Boat Launch Facility:** Provide necessary improvements to the boat launch facility on Snail Lake for improved access.

-**Sucker Lake & Lake Vadnais:** Watercraft are prohibited from use on these lakes due to water protection requirements by SPRWS.

## 11. Habitat Restoration & Management

- Vegetation management provided by Ramsey County Parks & Recreation department is limited to the Grass and Snail Lake units.
- Saint Paul Regional Water Services manages the natural resources of the Sucker and Vadnais Lakes units, which includes limited logging and buckthorn removal.
- Current restored and maintained habitat within the Grass and Snail lake units includes oak woodland restoration north and east of Grass Lake and maintenance of existing prairies through prescribed burns.
- Future restoration will include a 64-acre woodland and wetland buffer restoration project within management unit 2. The project will include buckthorn removal throughout the oak and mixed woods, prescribed burns of select areas, installation of native herbaceous seed, and a wetland buffer installation of native vegetation along the south end of the wetland.
- Future priority restoration will include the oak woodlands west of Grass Lake in management unit 3, channel erosion from storm water conveyance in the northern portion of management unit 2, and natural resource related impacts from recent flooding within the Snail-Grass Lake section.

## 12. Acquisitions

Future park easements or acquisition is proposed when properties or easement needs become available. Future acquisition would allow additional park and recreation opportunities, as well as trail development.

## PROPOSED DEVELOPMENT

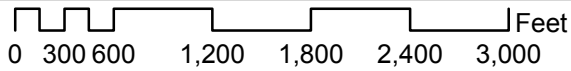
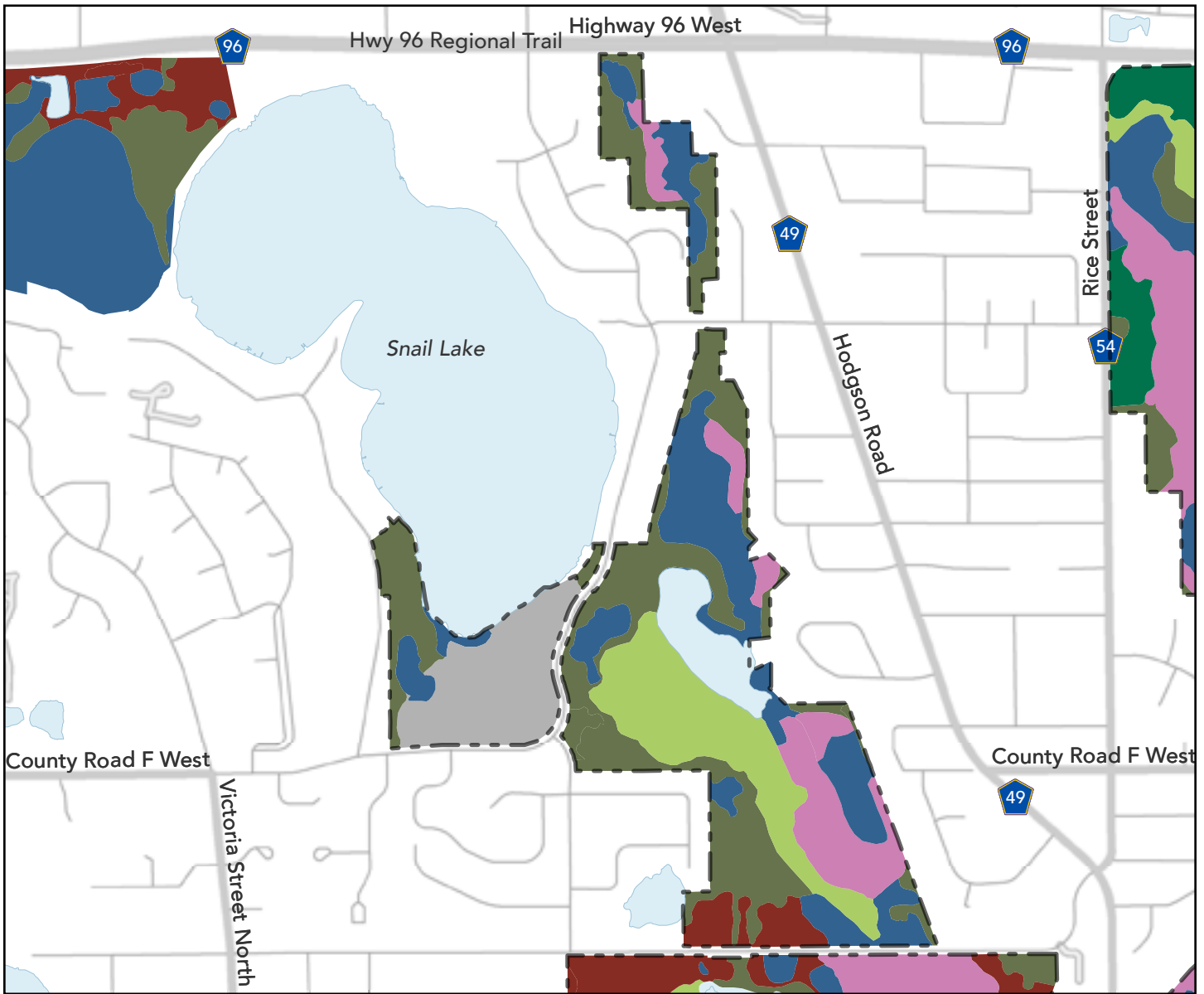
### 13. Energy & Resilience

Solar arrays on the Snail Lake pavilion would potentially provide 19.8 MWh/year of energy to offset the site's energy use. At Vadnais-Sucker section the restroom building near Shelter #1 would provide 12.9 MWh/year to offset that site's energy use. However, due to the capital cost of such a system, and current regulations which do not allow for on-site solar arrays to generate more energy than the site uses, the energy cost savings over the estimated life of a solar system would not offset the capital cost.

The site's Energy Use Intensity (EUI), which measures energy use relative to physical building square footage, is 6.4, which is less than one third the typical EUI for county park facilities (21.1). This makes Vadnais-Snail Lake Regional Park one of the most energy-efficient Parks & Recreation facilities.

Recent flooding at the Snail Lake section of this park has significantly affected park usability. Parks & Recreation has been working with other stakeholders to determine a long-term solution. Future park redevelopment projects must account for this scenario and plan accordingly.

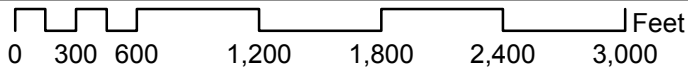
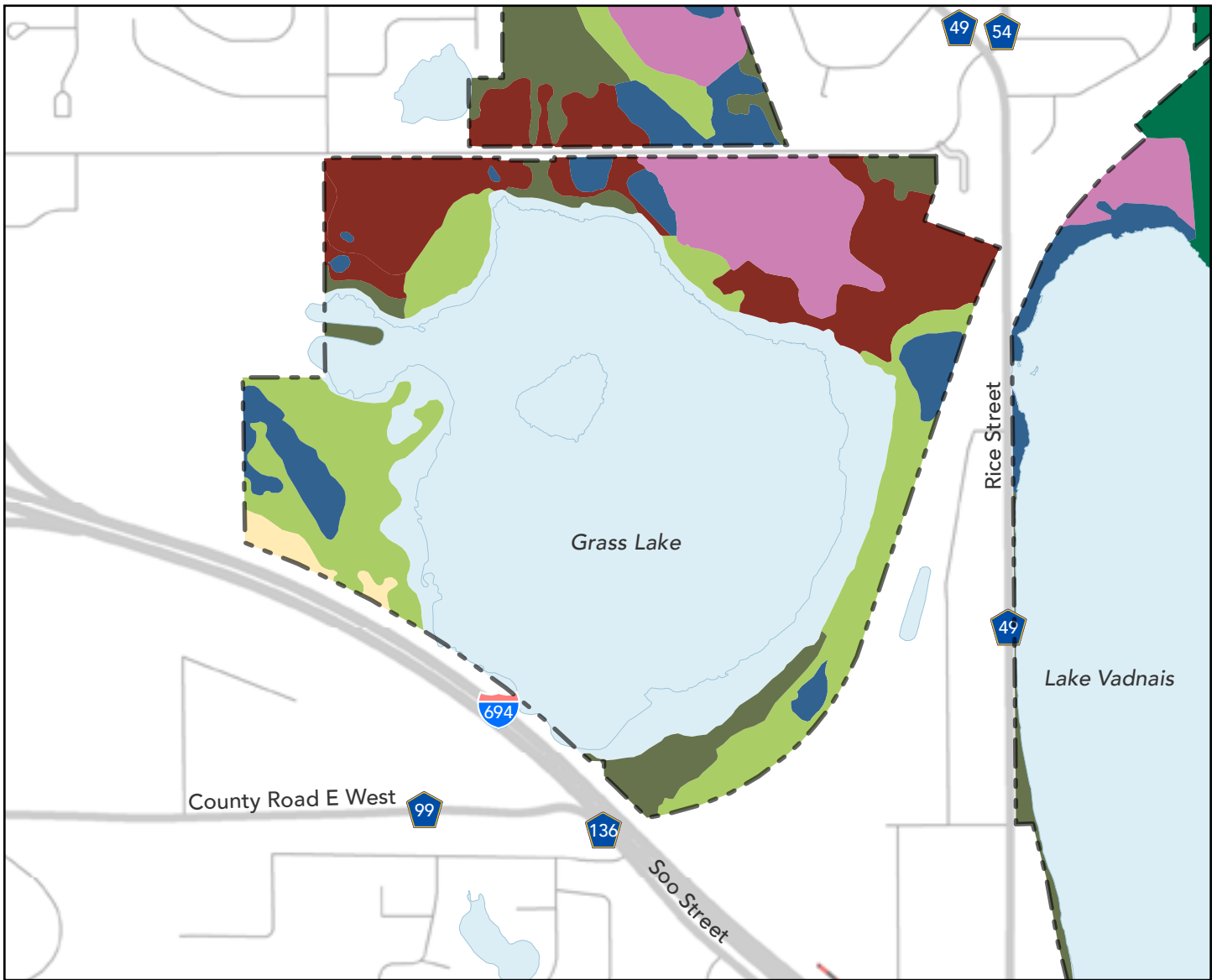
PROPOSED LAND COVER - SNAIL LAKE



Proposed Land Cover

- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |

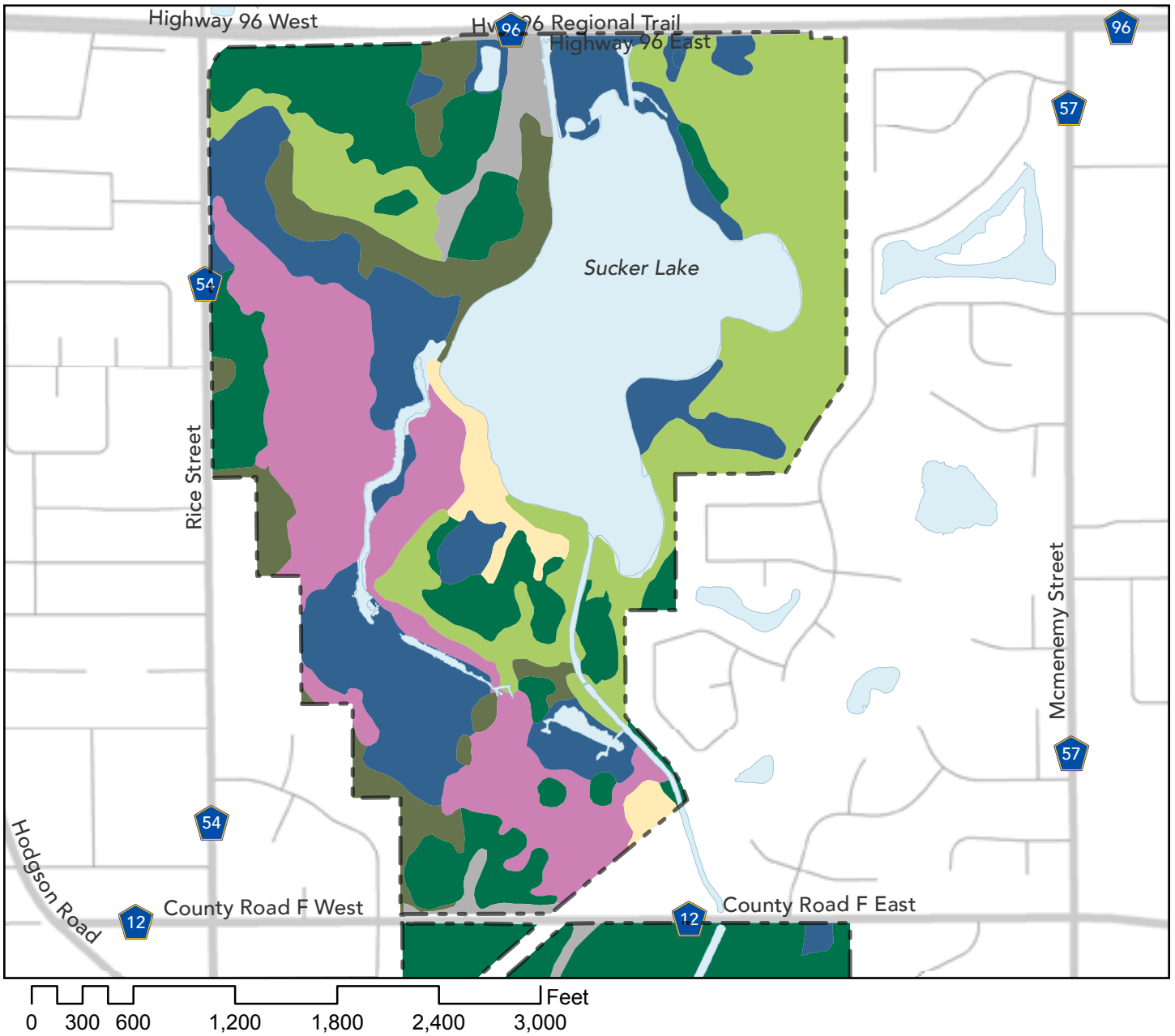
PROPOSED LAND COVER - GRASS LAKE



Proposed Land Cover

- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |

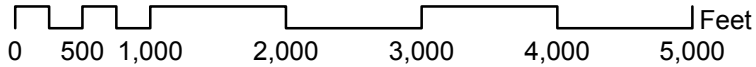
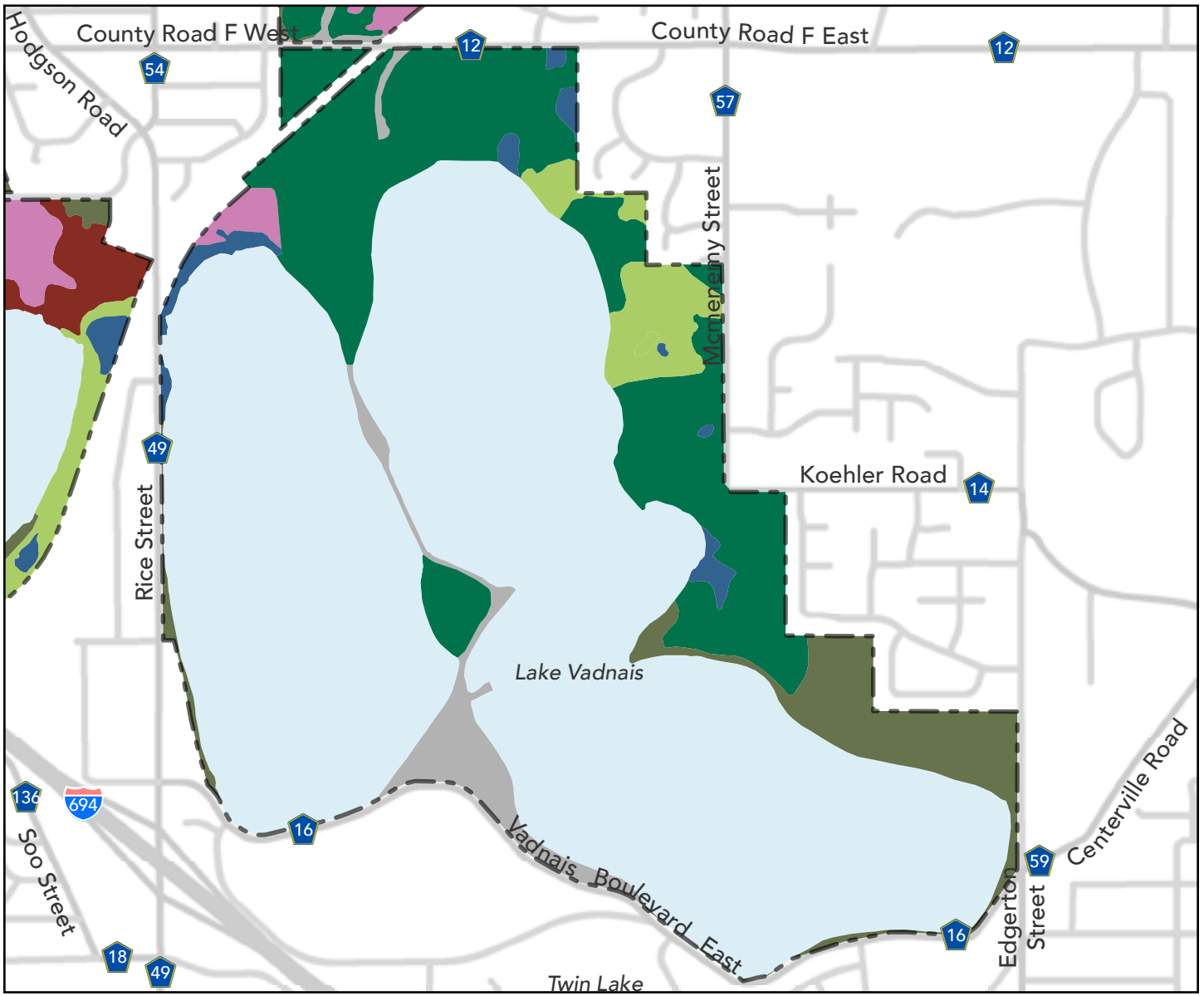
PROPOSED LAND COVER - SUCKER LAKE



Proposed Land Cover

- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |

PROPOSED LAND COVER - LAKE VADNAIS

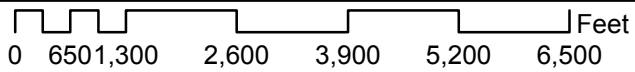
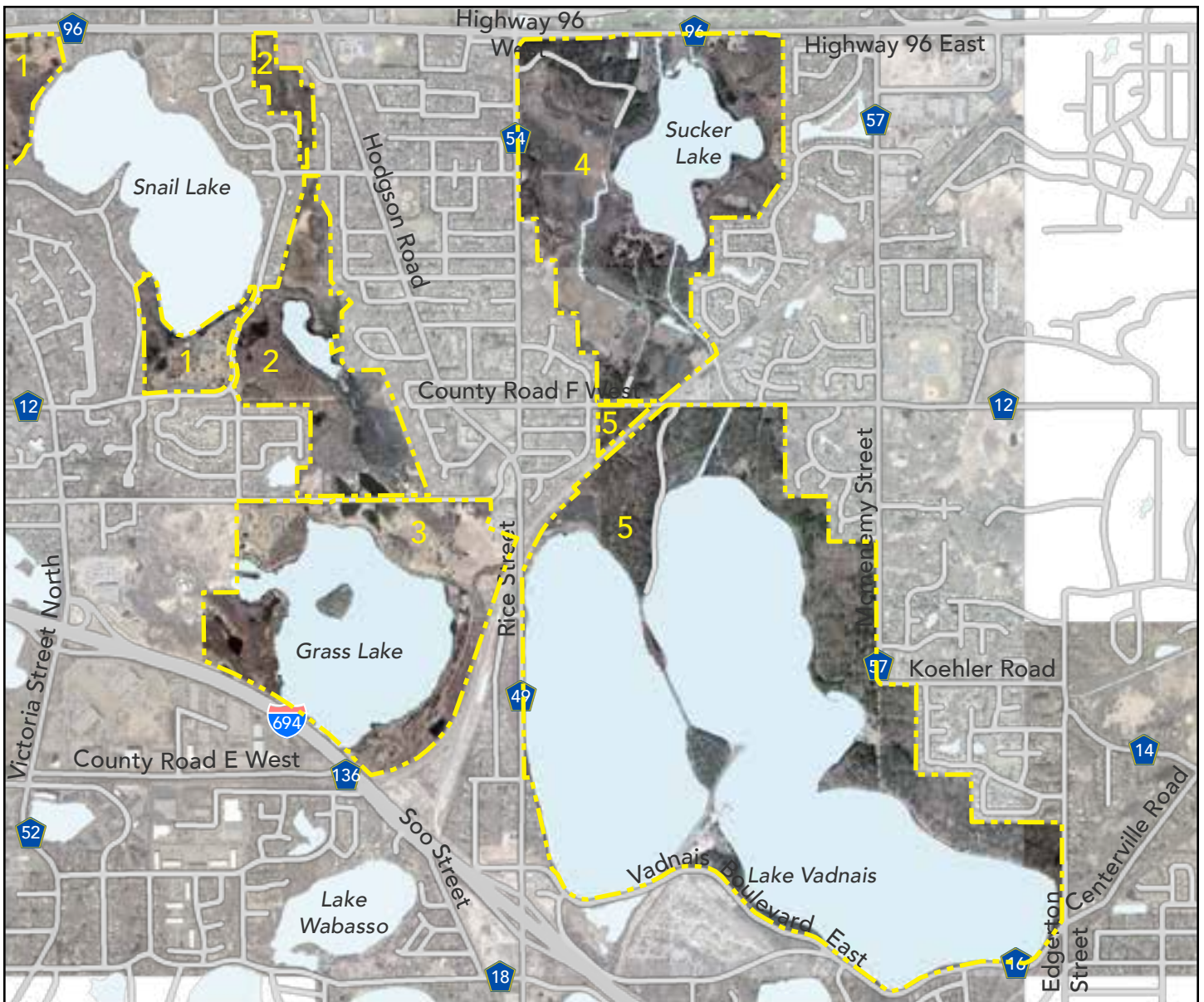


Proposed Land Cover

- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |



NATURAL RESOURCE MANAGEMENT UNITS



Legend

Management Unit #

Management Unit Border

VADNAIS - SNAIL LAKES REGIONAL PARK

NATURAL RESOURCE MANAGEMENT UNIT TABLE

MANAGEMENT UNIT 1 - VADNAIS REGIONAL PARK							
ACRES	CURRENT LAND COVER	FUTURE LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIORITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
3.05	WETLAND	WETLAND	MONITOR	N/A	N/A	N/A	N/A
8.24	MIXED WOODS	MIXED WOODS	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN	\$16,480.00	3	FOLIAR SPRAY OF BUCKTHORN	\$4,944.00
20.96	ACTIVE USE	ACTIVE USE	N/A	N/A	N/A	N/A	N/A
32.25				\$16,480.00			\$4,944.00

MANAGEMENT UNIT 2 - VADNAIS REGIONAL PARK							
ACRES	CURRENT LAND COVER	FUTURE LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIORITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
25.97	OAK WOODS	OAK WOODS	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN, RX BURN, NATIVE SEED	\$90,906.11	2	FOLIAR SPRAY OF BUCKTHORN	\$12,986.59
43.11	WETLAND	WETLAND	MONITOR	N/A	N/A	N/A	N/A
7.40	OLD FIELD	MIXED WOODS 1.18 ACRES	PLANT TREES	\$590.00	3	FOLIAR SPRAY OF BUCKTHORN	\$590.00
		PRAIRIE 6.22 ACRES	MOW, HERBICIDE, RX BURN, DRILL SEED	\$12,440.00	3	RX BURN, FOLIAR SPRAY OF HERBACEOUS	\$4,665.00
43.78	MIXED WOODS	MIXED WOODS	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN	\$87,565.26	2	FOLIAR SPRAY OF BUCKTHORN	\$10,945.66

VADNAIS - SNAIL LAKES REGIONAL PARK

NATURAL RESOURCE MANAGEMENT UNIT TABLE

MANAGEMENT UNIT 2 - VADNAIS REGIONAL PARK							
ACRES	CURRENT LAND COVER	FUTURE LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIOR-ITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
18.91	SHRUB SWAMP	SHRUB SWAMP	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN	\$37,812.93	3	FOLIAR SPRAY OF BUCKTHORN	\$4,726.62
MANAGEMENT UNIT 2 TOTAL							
139.18				\$229,314.30			\$33,913.86

MANAGEMENT UNIT 3 - VADNAIS REGIONAL PARK							
ACRES	CURRENT LAND COVER	FUTURE LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIOR-ITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
2.35	OLD FIELD	OLD FIELD	N/A	N/A	N/A	N/A	N/A
11.12	WETLAND	WETLAND	MONITOR	N/A	N/A	N/A	N/A
11.44	MIXED WOODS	MIXED WOODS	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN	\$22,886.51	3	FOLIAR SPRAY OF BUCKTHORN	\$5,721.63
17.75	SHRUB SWAMP	SHRUB SWAMP	MONITOR	N/A	N/A	N/A	N/A
30.81	PRAIRIE	PRAIRIE	N/A	N/A	2	RX BURN, FOLIAR SPRAY OF HERBACEOUS	\$15,402.52
39.26	OAK WOODS	OAK WOODS, EAST 22.25 ACRES	N/A	N/A	2	RX BURN, FOLIAR SPRAY OF HERBACEOUS	\$19,628.54
		OAK WOODS, WEST 17.01 ACRES	FORESTRY MOW, FOLIAR SPRAY	\$25,515.00	1	RX BURN, FOLIAR SPRAY OF BUCKTHORN	\$12,757.50
161.24	OPEN WATER	OPEN WATER	N/A	N/A	N/A	N/A	N/A

## VADNAIS - SNAIL LAKES REGIONAL PARK

NATURAL RESOURCE MANAGEMENT UNIT TABLE

MANAGEMENT UNIT 3 - VADNAIS REGIONAL PARK							
ACRES	CURRENT LAND COVER	FUTURE LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIORITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
MANAGEMENT UNIT 3 TOTAL							
273.97				\$48,401.51			\$53,510.19

MANAGEMENT UNIT 4 - VADNAIS REGIONAL PARK							
ACRES	CURRENT LAND COVER	FUTURE LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIORITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
7.28	OLD FIELD	OLD FIELD	MANAGED BY SAINT PAUL REGIONAL WATER SERVICE	N/A	N/A	N/A	N/A
8.14	ACTIVE USE	ACTIVE USE	N/A	N/A	N/A	N/A	N/A
23.77	MIXED WOODS	MIXED WOODS	MANAGED BY SAINT PAUL REGIONAL WATER SERVICE	N/A	N/A	N/A	N/A
48.66	CULTIVATED CONIFERS	CULTIVATED CONIFERS	MANAGED BY SAINT PAUL REGIONAL WATER SERVICE	N/A	N/A	N/A	N/A
51.52	SHRUB SWAMP	SHRUB SWAMP	MANAGED BY SAINT PAUL REGIONAL WATER SERVICE	N/A	N/A	N/A	N/A
57.37	WETLAND	WETLAND	MANAGED BY SAINT PAUL REGIONAL WATER SERVICE	N/A	N/A	N/A	N/A
66.32	OAK WOODS	OAK WOODS	MANAGED BY SAINT PAUL REGIONAL WATER SERVICE	N/A	N/A	N/A	N/A
66.80	OPEN WATER	OPEN WATER	N/A	N/A	N/A	N/A	N/A
MANAGEMENT UNIT 4 TOTAL							
329.86				\$0.00			\$0.00

NATURAL RESOURCE MANAGEMENT UNIT TABLE

MANAGEMENT UNIT 5 - VADNAIS REGIONAL PARK							
ACRES	CURRENT LAND COVER	FUTURE LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIOR-ITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
4.99	SHRUB SWAMP	SHRUB SWAMP	MANAGED BY SAINT PAUL REGIONAL WATER SERVICE	N/A	N/A	N/A	N/A
11.23	WETLAND	WETLAND	MANAGED BY SAINT PAUL REGIONAL WATER SERVICE	N/A	N/A	N/A	N/A
23.64	OAK WOODS	OAK WOODS	MANAGED BY SAINT PAUL REGIONAL WATER SERVICE	N/A	N/A	N/A	N/A
25.19	ACTIVE USE	ACTIVE USE	N/A	N/A	N/A	N/A	N/A
42.20	MIXED WOODS	MIXED WOODS	MANAGED BY SAINT PAUL REGIONAL WATER SERVICE	N/A	N/A	N/A	N/A
157.32	CULTIVATED CONIFERS	CULTIVATED CONIFERS	MANAGED BY SAINT PAUL REGIONAL WATER SERVICE	N/A	N/A	N/A	N/A
606.60	OPEN WATER	OPEN WATER	N/A	N/A	N/A	N/A	N/A
MANAGEMENT UNIT 5 TOTAL							
871.16				\$0.00			\$0.00
VADNAIS REGIONAL PARK TOTAL							
1,646.42				\$294,195.81			\$92,368.05

## REGIONAL TRAILS

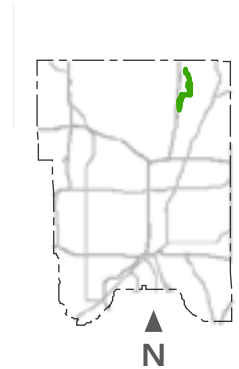
Regional trails are linear corridors that provide safe and enjoyable routes and support facilities primarily for recreational travel that pass through or provide access to elements of the regional parks system. They have become major routes to all community assets including jobs, retail, schools and neighborhoods. Some regional trails are greenways and along waterways that provide corridors for wildlife to travel. The network of trails is becoming the major system for bicycling throughout the metropolitan area. Coordination among the 10 agencies is important for connections to the greater system.

### Regional Trail Objectives:

- To provide alignments that accommodate unimpeded passages with a minimum disruption of the resource base.
- To provide alignments that parallel or traverse areas having scenic, historic, scientific or cultural qualities.
- To encourage multiple use when concurrent uses are compatible and multi-seasonal use when practical.
- To provide alignments that are of sufficient length for a meaningful experience and of sufficient width for safe passage, maximum capacity and minimal negative influence on adjacent community.
- To provide alignments that connect regional recreational open space sites.
- To provide alignments that utilize natural system corridors and man-made corridors.
- To function as arterial trail routes that intersect and complement local trail networks.

There are currently eight regional trails within the Metropolitan Council's Regional Recreation Open Space System under the jurisdiction of Ramsey County. These regional trail corridors include 880.54 acres and total 35.64 miles.

## BIRCH LAKE REGIONAL TRAIL



### EXISTING SITE CONDITIONS

MASTER PLAN DATE: 1993



#### LOCATION AND SIZE

Birch Lake Regional Trail is located in the northeast part of Ramsey County in the city of White Bear Lake and White Bear Township. The trail is 1-mile in length and goes around a portion of the city of White Bear Lake's Birch Lake Park connecting the Highway 96 Regional Trail on the south with the Tamarack Lake segment of Bald Eagle-Otter Lakes Regional Park on the north.



#### SITE CHARACTERISTICS

The trail follows street rights of way through mixed residential and commercial real estate.



#### RECREATION DEVELOPMENT

The proposed trail was identified as a regional trail in 1993 by the Metropolitan Council. Subsequently, the city of White Bear Lake constructed the trail with a State grant administered through the Metropolitan Council. Ramsey County is the designated Implementing Agency and the city maintains the trail.

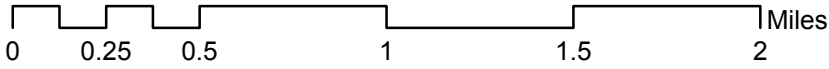
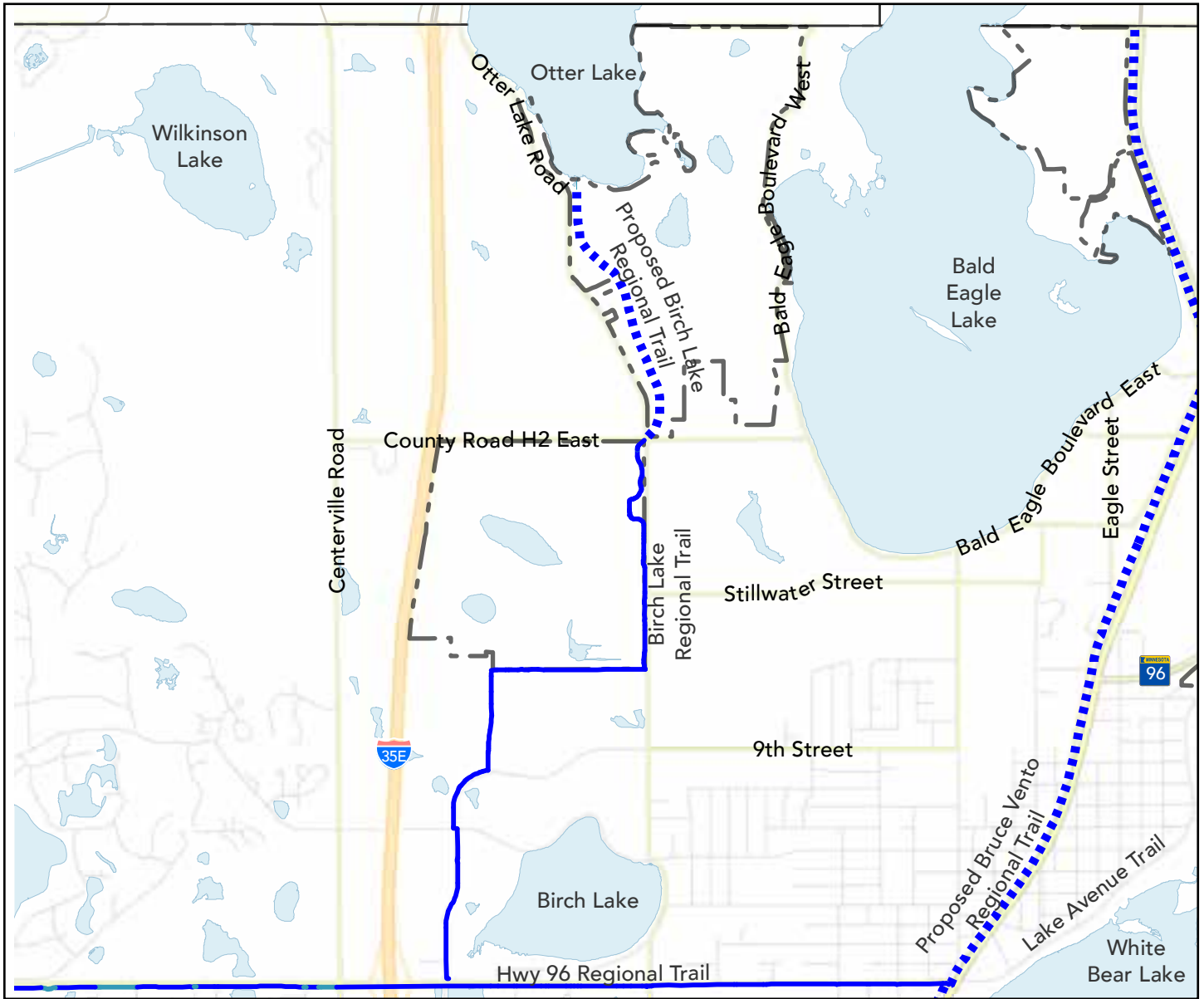


#### MAINTENANCE

##### Winter Maintenance:

- Plow trail from Lake McCarron's County Park to Arlington Ave E.

EXISTING CONDITIONS



Legend

Park Border	- - - - -	Park Paved Trail	— (red)	Regional Trail	— (blue)
Proposed Development	[ 3 ]	Park Turf Trail	— (green)	Proposed Regional Trail	- - - - - (blue)
Proposed Development Node	( 1 )	Municipal Trail	— (yellow)	Proposed Paved Park Trail	- - - - - (red)
Metro Tranist Stop	T	Municipal Ped/Bike Facility	— (green)	Trail	



## PLANNING CONSIDERATIONS

Birch Lake Regional Trail is proposed to be extended north to the Otter Lake boat launch and trailhead, eventually extending the trail to the west side of I-35E. Ramsey County Parks & Recreation completed a planning study in 2017 exploring options to complete this section of trail.

### PROPOSED DEVELOPMENT

#### 1. Master Planning

The master plan for Birch Lake Regional Trail was last updated in 1993 and approved by Ramsey County Board of Commissioners and the Metropolitan Council. The regional trail provides access to the Highway 96 Regional Trail and Tamarack Nature Center in Bald Eagle Otter Lake Regional Park. The trail was constructed by the city of White Bear Lake, and Ramsey County is designated as the regional implementing agency. The regional trail is currently maintained by the city of White Bear Lake and provides trail connections to the city owned Rotary Nature Preserve located north of Birch Lake. A master plan update would address improvements throughout the corridor for recreational needs due to changing trends, demographics, recreational amenities, and access to city owned property. Coordination with multiple local and state agencies will be required for long-term master planning.

- Develop partnerships with the city of White Bear Lake, White Bear Township, Canadian Pacific Railway, and the Vadnais Lakes Area Water Management Organization (VLAWMO) for funding strategies, increased recreational opportunities, and proposed improvements.
- Proposed improvements may consist of vehicular and pedestrian access points as well as trail redevelopment in the trail corridor.

#### 2. Access Points

Most of the corridor has adjacent commercial use so there are limited access points to the regional trail corridor. Trail access points to the corridor are provided from the Highway 96 Regional Trail, city of White Bear Lake trail at White Bear Blvd North, and Rotary Nature Preserve. Additional access points may be proposed for increased connectivity.

-Additional access points may be proposed with the partnership of adjacent property owners.

#### 3. Trail Development

Redevelop existing sections of trail for improved use as well as more direct trail connections at roadway corridors and access points. Improvements shall consist of trail repaving, the re-alignment of trail sections for improved connection, the reduction of sharp corners and steep slopes adjacent to trail sections, at-grade improvements over railway tracks, and improvement to access points on roadway corridors.

#### 4. Trailhead Parking Lots

There are no vehicular parking lots along the regional trail corridor. Potential parking areas could be provided through partnerships with adjacent property owners.

## PROPOSED DEVELOPMENT

### 5. Wayfinding

Improve pedestrian signage for improved wayfinding to trail accesses and other amenities. Provide interpretive signage in natural areas for increased nature education opportunities.

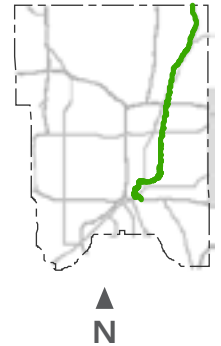
### 6. Recreation Opportunities

- **Public Art:** Provide the opportunity and appropriate infrastructure to accommodate public art to improve community connections.
- **Culturally Significant Areas:** Provide connections and interpretive education for culturally significant areas along the railway corridor. Proposed improvements would consist of interpretive educational signage and pedestrian connections for viewing opportunities.
- **Programming:** Increase recreation and nature programming activities. This may be accomplished through interpretive and educational signage.

### 7. Acquisitions

Identify proposed properties for future regional trail acquisition when properties become available.

## BRUCE VENTO REGIONAL TRAIL



### EXISTING SITE CONDITIONS

MASTER PLAN DATE: 1989



#### LOCATION AND SIZE

The Bruce Vento Regional Trail is 13 miles in length and extends from the east side of downtown Saint Paul northwest to the north county line in White Bear Township. The trail is located on the former right of way of the Burlington Northern Santa Fe (BNSF) Railroad. The trail passes through the cities of Saint Paul, Maplewood, Vadnais Heights, Gem Lake, White Bear Lake, and White Bear Township. Although the designated trail extends the entire length of the BNSF Railroad right of way, only the southern 7 miles have been acquired for public use. The Ramsey County Regional Rail Authority has acquired the abandoned sections of the right of way for future light rail and transit use. A joint powers agreement between the Ramsey County Regional Rail Authority, Ramsey County, and the city of Saint Paul provides for continued use of a portion of the right of way for regional trail.



#### SITE CHARACTERISTICS

The BNSF Railroad right of way varies in width from 60 to 150 feet. It passes through a variety of areas, each with a different character depending on the land use of adjacent property. It varies from a narrow industrial corridor on the east side of Saint Paul to a wider, more natural corridor in suburban sections.



#### RECREATION DEVELOPMENT

The trail has been developed from East Seventh Street in the city of Saint Paul to Buerkle Road in the city of White Bear Lake, a distance of 7 miles. The section south of Phalen Regional Park was constructed by the city of Saint Paul, while sections north of Phalen Regional Park were constructed by Ramsey County. Larpenteur Ave is identified in the Joint Powers Agreement as the separation of maintenance responsibilities between Ramsey County and the city of Saint Paul. The completed section of the Bruce Vento Regional Trail intersects the Gateway Section of the Willard Munger State Trail and other local trails.

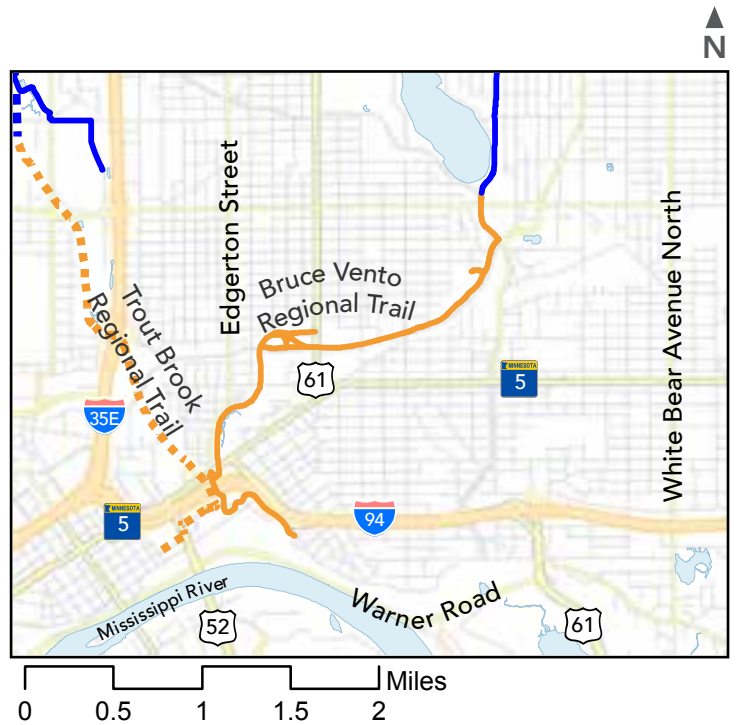
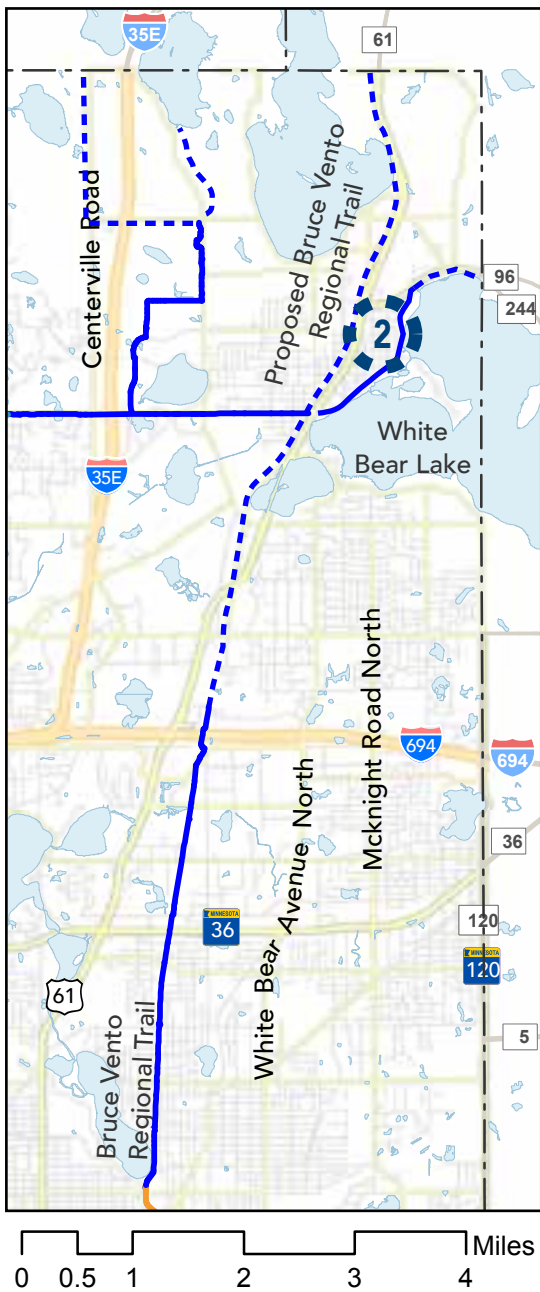


#### MAINTENANCE

##### Winter Maintenance:

- Plow trail from Lake McCarron's County Park to Arlington Ave E.

EXISTING CONDITIONS



Legend

- |                           |           |                             |            |                           |                  |
|---------------------------|-----------|-----------------------------|------------|---------------------------|------------------|
| Park Border               | - - - - - | Park Paved Trail            | — (red)    | Regional Trail            | — (blue)         |
| Proposed Development      | [ 3 ]     | Park Turf Trail             | — (green)  | Proposed Regional Trail   | - - - - - (blue) |
| Proposed Development Node | ( 1 )     | Municipal Trail             | — (yellow) | Proposed Paved Park Trail | - - - - - (red)  |
| Metro Tranist Stop        | T         | Municipal Ped/Bike Facility | — (cyan)   |                           |                  |

## PLANNING CONSIDERATIONS

The BNSF Railroad right of way north of Buerkle Road is currently licensed to the Minnesota Commercial Railroad for operations and maintenance. The Minnesota Commercial Railroad provides delivery and transloading service to a limited number of customers. Consolidation of the delivery and transloading at the M and D junction located in the city of White Bear Lake would enable the BNSF Railroad to abandon the railroad right of way south of that point. Once abandoned, the Ramsey County Regional Rail Authority would be in a position to purchase the right of way and provide easement access for trail purposes. North of that point, the railroad right of way is immediately adjacent to the Highway 61 right of way. With the anticipated return of Highway 61 from the State of Minnesota to Ramsey County, it is possible that a future trail north of the M and D junction could be located within the right of way of Highway 61. Redevelopment of Highway 61 should incorporate the regional trail extension to the north county line.

The abandoned railroad right of way was acquired by the Ramsey County Regional Rail Authority for future light rail or transit use. The majority of the trail constructed to date was placed in the center of the right of way in the former track bed. The trail utilizes former railroad bridge crossings on major roadways including Highway 36, Beam Avenue, and Interstate 694. Future transit improvements will likely require that the trail be relocated within the corridor. The specific design of the future transit improvements should incorporate the trail including accommodation for grade separated crossing at major roadway intersections.

Segments of the BNSF Railroad right of way have been abandoned in Washington and Chisago counties. Washington County has constructed the Hardwood Creek Trail and Chisago County has constructed the Sunrise River Trail on this right of way. Collectively, these trails extend from the city of Hugo to the city of North Branch, a total distance of 25 miles. The connection between the Bruce Vento Regional Trail and these trail segments will be coordinated with Washington County.

There is also a proposed connection from the Bruce Vento Regional Trail to the Trillium Trail and Trout Brook Regional Trail as well as Lake McCarron's County Park. As the county has participated in the Trillium Trail procurement, the Parks & Recreation department will work with the city of Saint Paul, community groups, and the Minnesota Department of Transportation to complete this connection.

## PROPOSED DEVELOPMENT

### 1. Master Planning

The master plan for the Bruce Vento Regional Trail is a joint regional trail master plan between Ramsey County and the city of Saint Paul and was approved in 1989 by the Ramsey County Board of Commissioners, city of Saint Paul, and the Metropolitan Council. Several changes to the existing regional trail and additional development is proposed throughout the regional trail corridor which will require additional master planning activities.

- A master plan amendment is planned for 2019 due to proposed changes within the regional corridor and recreational development opportunities. Currently the railway lines north of Buerkle Road in the city of White Bear Lake to Hugo are active. It is undetermined how long this section of railway will stay active. As a result the master plan will address trail realignment for areas north of Buerkle Road to County Road J in the Cities of White Bear Lake, Vadnais Heights, and White Bear Township to County Road J. Improvements throughout the corridor for recreational needs due changing trends, demographics, and recreational amenities will also be addressed. Continued development of the regional trail corridor will follow items addressed in the 2019

## PROPOSED DEVELOPMENT

master plan amendment until future changes are required.

- Develop partnerships with Ramsey County Regional Rail, the Cities of Saint Paul, Maplewood, Vadnais Heights, Gem Lake, White Bear Lake, and White Bear Township, the Minnesota Department of Transportation (MNDOT), Washington County Park & Recreation department, local schools adjacent to the corridor, Burlington Northern Santa Fe (BNSF) and Minnesota Commercial Railway, Rice Creek Watershed District (RCWD), Ramsey Washington Metro Watershed District (RWMWD), and private properties adjacent to the corridor for funding strategies, increased recreational opportunities, and proposed improvements.

### 2. Rush Line Bus Rapid Transit (BRT)

Ramsey County Regional Rail started master planning activities in 2014 for development of the Rush Line BRT from downtown Saint Paul to the downtown area of White Bear Lake. The majority of the Rush Line BRT is proposed to be located within the existing former BNSF right-of-way from downtown Saint Paul to Buerkle Road in the city of White Bear Lake. The north extension of the Rush Line BRT is planned to follow Buerkle Road and Highway 61 to the downtown area within the city of White Bear Lake. Dependent on the outcome of the Rush Line BRT master planning process, realignment of the existing trail will likely be required within the former railway corridor. Connections to bus terminals, parking areas, and other recreational development opportunities will need to be planned in conjunction with the Rush Line BRT.

### 3. Trail Development

- **Pedestrian Trail Connections:** increase pedestrian access points to the regional trail corridor for improved connectivity to adjacent residential and commercial real estate.
- **Access points at Roadway Corridors:** Several access points to the regional trail are in existing roadway corridors. There has been a demand to redevelop many of these access points for improved access and safety while crossing roads. Proposed improvements may consist of the redevelopment of existing at-grade crossings, realignment of access points, safety signaling, and trail transition areas. A planning study may be required to identify necessary improvements for these crossings.
- **New Access Points:** There has been a demand to increase access points to adjacent residential neighbors and commercial real estate. Additional access points will be proposed for undeveloped trail sections as development occurs. A planning study may be required to identify additional trail connections to the corridor.

**Existing Regional Trail:** Redevelop existing sections of regional trail for more direct connections to amenities. Redevelopment of the existing trail will be required during implementation of the Rush Line BRT within the regional trail corridor. The regional trail is proposed to be shifted to allow construction of the Rush Line BRT, bus line terminals, and parking areas. Improvements shall consist of trail repaving and the re-alignment of trail sections to reduce sharp corners and steep slopes adjacent to trail sections.

## PROPOSED DEVELOPMENT

**New Trail Sections:** Trail development is proposed for undeveloped sections of the Bruce Vento Regional Trail. A preliminary design study was completed in 2016 to identify the proposed trail alignment, preliminary design and engineering, impacts, cost, and site amenities for additional recreation opportunities of the trail extension from Buerkle Road to Highway 96 West in the city of White Bear Lake. Additional planning activities started in 2016 for possible trail alignment corridors for the extension of trail from Highway 96 West to County Road J. Additional planning activities will be required to determine the location of the regional trail corridor and will require a master plan amendment for proposed trail locations and improvements.

### 4. Trailhead Parking Lots

There are no trailhead parking lots. There has been a demand to increase parking for access to the regional trail corridor. Additional trailheads are proposed for new sections of trail from Buerkle Road to County Rd J. Additional planning studies may be required to determine parking opportunities for existing sections of trail, partnerships, and new trailhead locations.

### 5. Wayfinding

Improve pedestrian signage for improved wayfinding to trail accesses, trail crossings and other amenities. Provide interpretive signage in natural areas for increased nature education opportunities.

### 6. Recreation Opportunities

**Public Art:** Provide the opportunity and appropriate infrastructure to accommodate public art to improve community connections.

**Culturally Significant Areas:** Provide connections and interpretive education to culturally significant areas along the railway corridor. Proposed improvements would consist of interpretive educational signage and pedestrian connections for viewing opportunities.

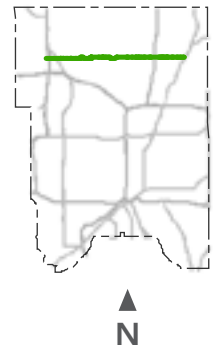
**Programming:** Increase recreation and nature programming activities. This may be accomplished through interpretive and educational signage.

**Wildlife Areas:** Provide visual and interpretive educational signage and pedestrian connections to wildlife areas. If federally or state listed protected plants or animals are discovered statutes and guidelines will be followed.

### 7. Acquisitions

Identify properties for future regional trail acquisition when properties become available.

## HIGHWAY 96 REGIONAL TRAIL



### EXISTING SITE CONDITIONS

MASTER PLAN DATE: 1996, 2015



#### LOCATION AND SIZE

The 8.5-mile long Highway 96 Regional Trail Corridor is located in the northern part of Ramsey County, following the Highway 96 right of way from Old Highway 8 in New Brighton on the west, to Highway 61 in White Bear Lake on the east. It passes through, or is adjacent to the cities of New Brighton, Arden Hills, Shoreview, Vadnais Heights, North Oaks, White Bear Lake, and White Bear Township. The regional trail incorporates the Snail Lake Marsh Area, which is 47-acres including 1,000 feet of shoreline on the northwest shore of Snail Lake. The area also includes a large marsh, which is part of the Snail Lake basin.



#### SITE CHARACTERISTICS

The trail is located within the right of way of Highway 96 or adjacent regional trail property (Snail Lake Marsh Area). A mix of land uses (residential, commercial and park) on adjacent property provide the character for the trail.



#### RECREATION DEVELOPMENT

The Regional Trail has been constructed on the south side of Highway 96. The trail has been built in segments corresponding with redevelopment of Highway 96. The trail provides connections to the Bruce Vento Regional Trail, Birch Lake Regional Trail, and multiple accesses to Vadnais-Snail Lakes Regional Park.



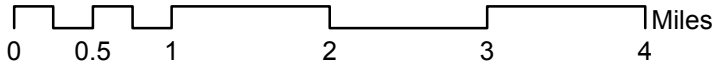
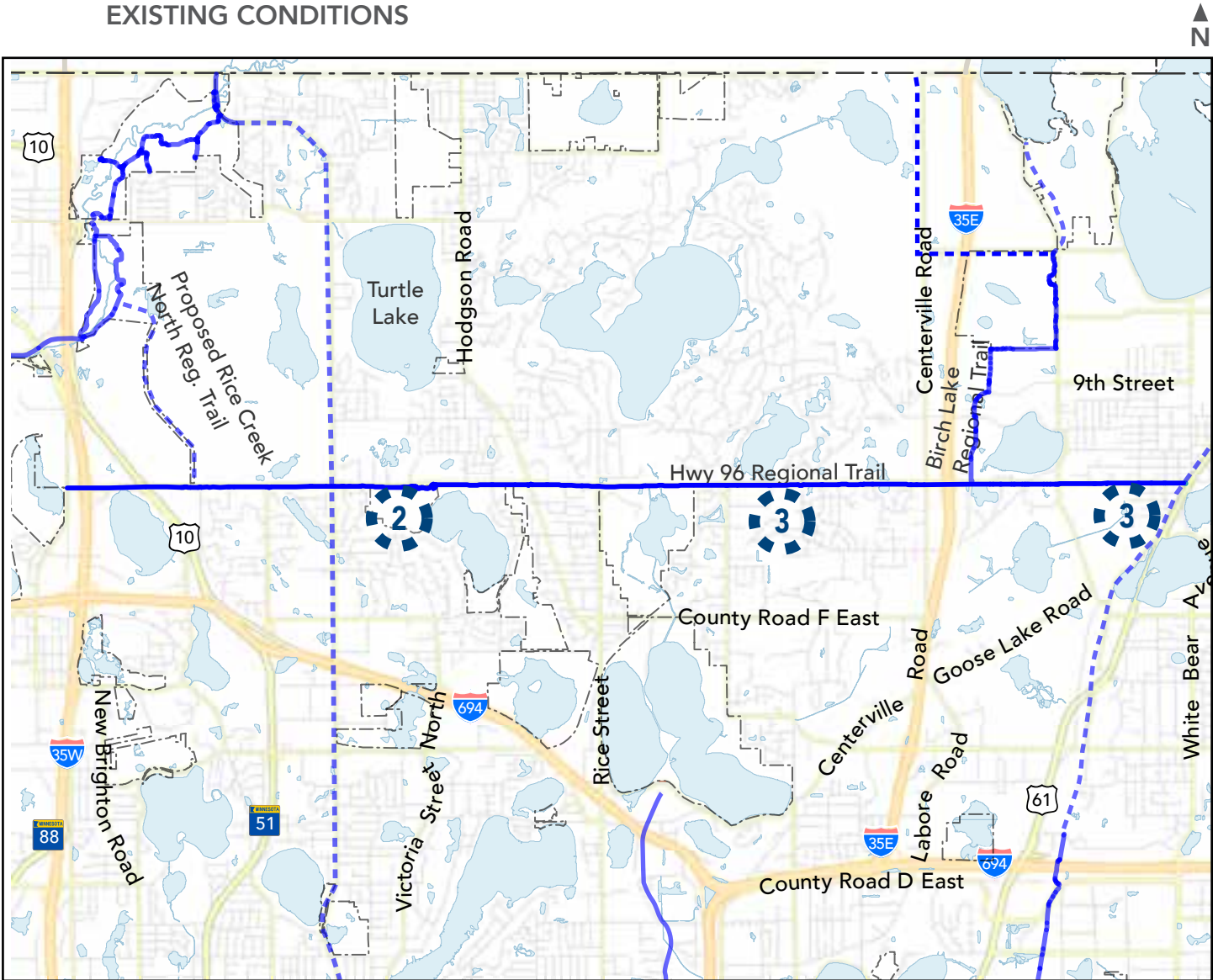
#### MAINTENANCE

Winter Maintenance:

- Plow trail from Hwy 61 to Old Hwy 8



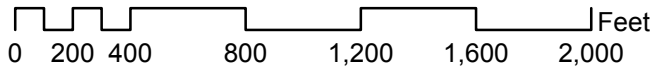
EXISTING CONDITIONS



Legend

Park Border	- - - - -	Park Paved Trail	— (red)	Regional Trail	— (blue)
Proposed Development	[ 3 ]	Park Turf Trail	— (green)	Proposed Regional Trail	- - - - - (blue)
Proposed Development Node	( 1 )	Municipal Trail	— (yellow)	Proposed Paved Park Trail	- - - - - (red)
Metro Tranist Stop	T	Municipal Ped/Bike Facility	— (green)		

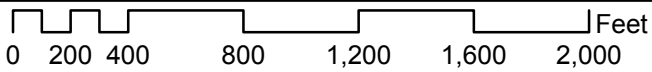
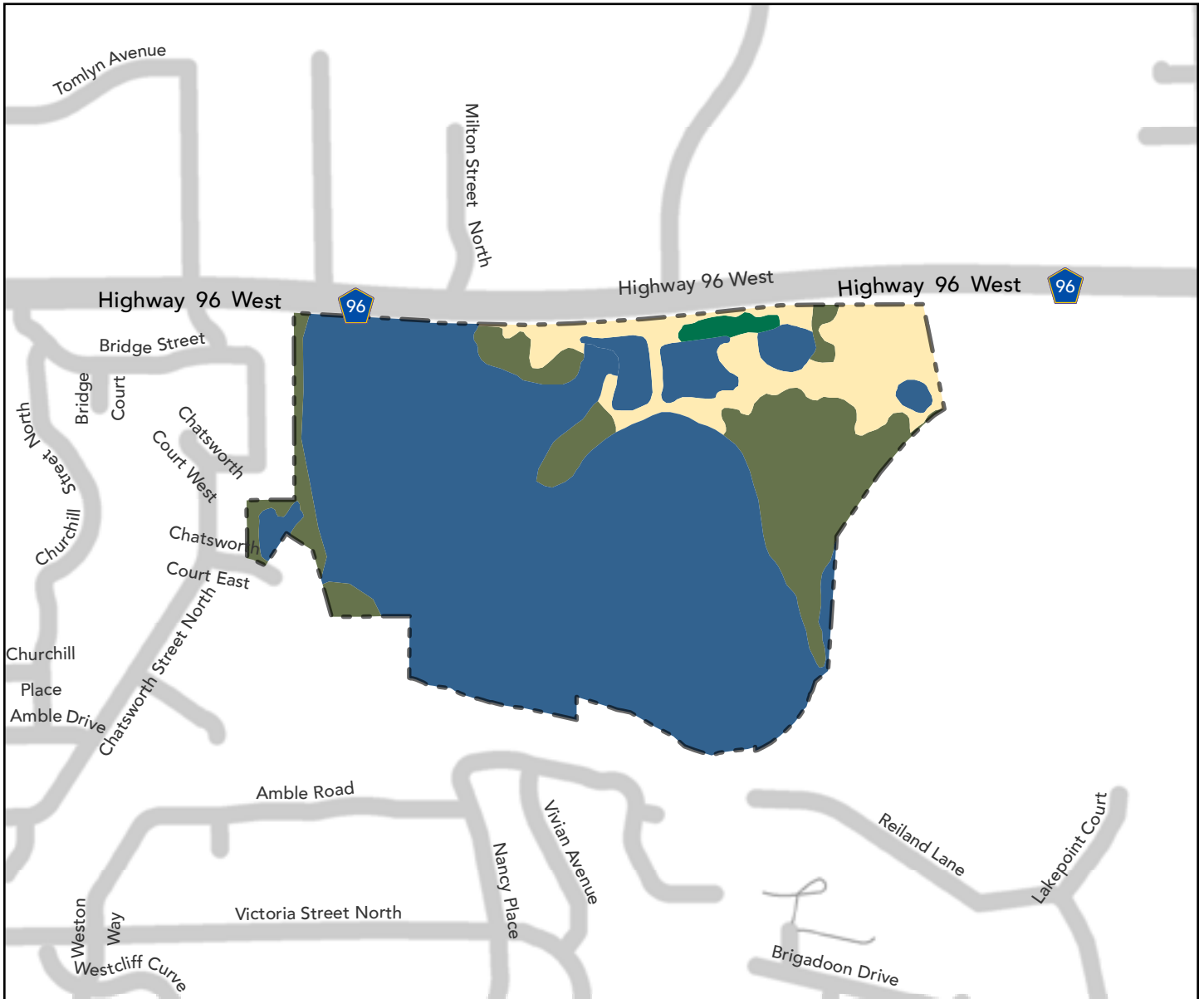
EXISTING CONDITIONS - SNAIL LAKE MARSH



Legend

- |               |  |                  |  |                             |  |
|---------------|--|------------------|--|-----------------------------|--|
| Park Border   |  | Park Paved Trail |  | Metro Transit Stop          |  |
| Park Entrance |  | Park Turf Trail  |  | Regional Trail              |  |
|               |  | Municipal Trail  |  | Municipal Ped/Bike Facility |  |

EXISTING LAND COVER - SNAIL LAKE MARSH



Proposed Land Cover

- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |

## HIGHWAY 96 REGIONAL TRAIL

### LAND COVER AND HABITAT

Highway 96 Regional Trail habitat is found within the Snail Lake Marsh section of the trail. The habitat consists of old field, cultivated conifers, and mixed woods surrounding a cattail wetland that adjoins Snail Lake. There are pockets of significant oak trees within the woods. Most of the upland is infested with buckthorn.

### WILDLIFE

The park hosts a variety of common wildlife including nesting songbirds and waterfowl. Mammals include white-tailed deer, red fox, beaver, and raccoons.



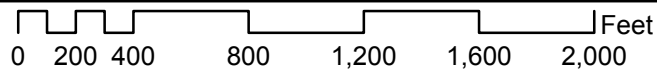
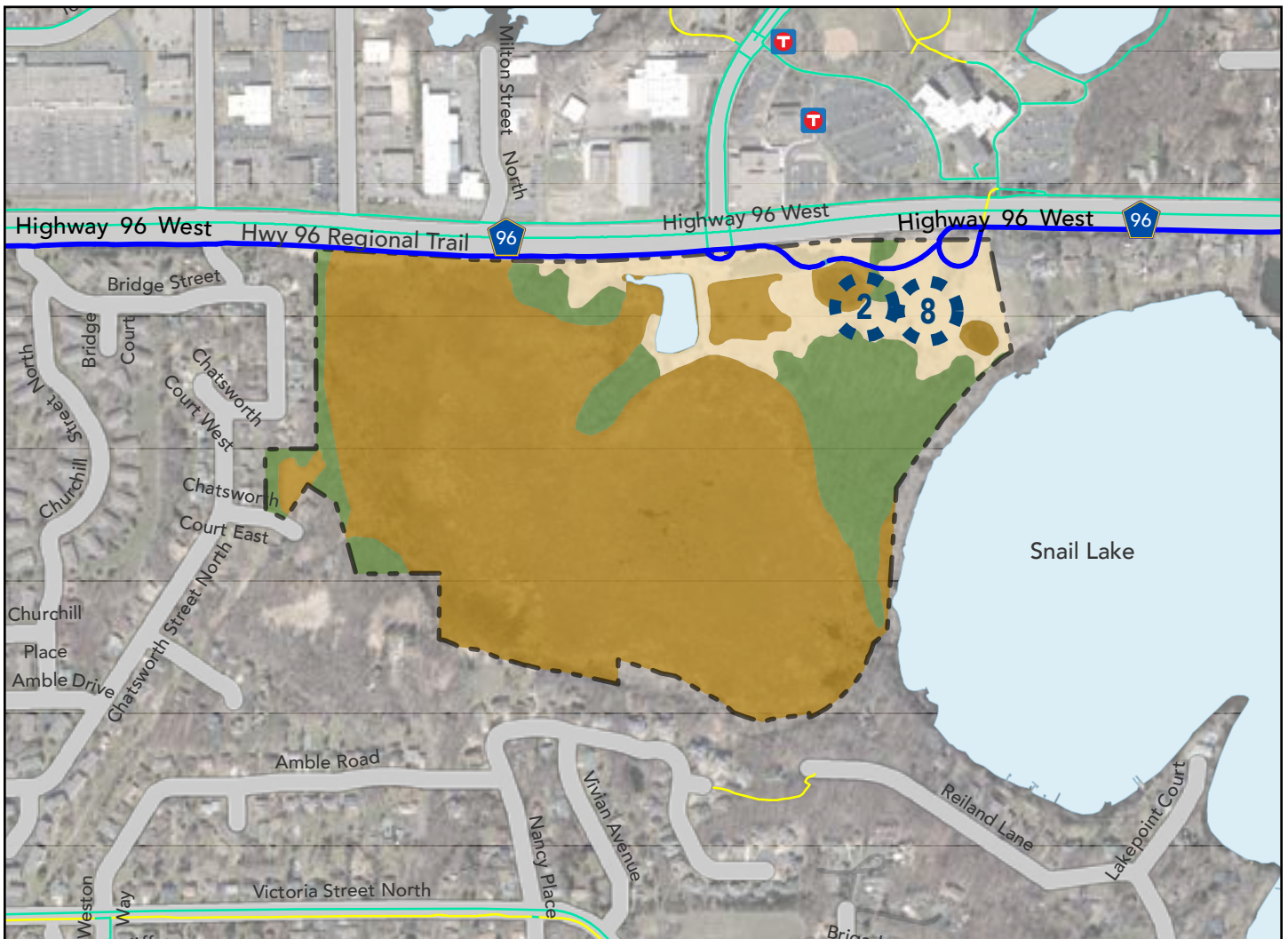
### WILDLIFE MANAGEMENT

Deer populations in the area are surveyed annually to determine the need and location for special archery hunts. Deer management has been occurring in the park through special archery hunts under the Ramsey County Cooperative Deer Management Plan in partnership with the city of Shoreview. In the past, biological control beetles have been released for leafy spurge control and future plans include re-assessing the need for further biological control.

### SURFACE WATER RESOURCES

The Snail Lake Marsh wetland historically contained a large area of open water. The wetland receives storm water flow through storm water conveyance systems from the surrounding watershed, particularly runoff from a section of Highway 96.

PROPOSED DEVELOPMENT - SNAIL LAKE MARSH



Legend

Park Border		Park Paved Trail		Regional Trail	
Proposed Development		Park Turf Trail		Proposed Regional Trail	
Proposed Development Node		Municipal Trail			
Metro Tranist Stop		Municipal Ped/Bike Facility			

## PLANNING CONSIDERATIONS

The master plan for the Highway 96 Regional Trail was originally completed in September 1996 and last updated in June 2105 to include the Snail Lake Marsh area in the regional trail corridor. The 1996 master plan and 2015 master plan amendment was approved by the Ramsey County Board of Commissioners and the Metropolitan Council. The Highway 96 Regional Trail provides an arterial trail connection in the northern one-third of Ramsey County. The trail provides connection to Long Lake Regional Park, Vadnais-Snail Lakes Regional Park, Birch Lake Regional Trail, and the Bruce Vento Regional Trail. Redevelopment of the Twin Cities Army Ammunitions Plant for residential and commercial use provides opportunities for additional municipal trail connections to the regional trail. Municipal connections along the regional trail corridor should be encouraged and accommodated.

## PROPOSED DEVELOPMENT

### 1. Master Planning

Continued development of the regional trail corridor will follow items addressed in the 2015 master plan amendment until future changes are required to the regional trail as needs arise. Potential improvements to the corridor include redevelopment of existing trail sections, improved pedestrian access points throughout the corridor, Snail Lake Marsh development, and improved connections to parks and trails. Future improvement within the corridor that is not addressed in the 2015 master plan amendment will require additional master planning activities for recreation development opportunities and partnerships.

- Develop partnerships with the Cities of New Brighton, Arden Hills, Shoreview, North Oaks, Vadnais Heights, White Bear Lake, White Bear Township, Saint Paul Regional Water Service (SPRWS), Ramsey County Regional Rail, the Minnesota Department of Transportation (MNDOT), local schools along the corridor, Burlington Northern Santa Fe (BNSF) and Minnesota Commercial Railway, Rice Creek Watershed District (RCWD), Ramsey Washington Metro Watershed District (RWMWD), Vadnais Lake Area Water Management Organization (VLAWMO), and private parties adjacent to the corridor for funding strategies, increased recreational opportunities, and proposed improvements.

### 2. Snail Lake Marsh

Proposed improvements to Snail Lake Marsh will follow items addressed in the 2015 master plan amendment for recreational development.

### 3. Railway

Two railway corridors are located within the regional trail corridor. Canadian Pacific and BNSF own the active railway lines. Minnesota Commercial Railway operates and maintains the BNSF railway lines. Proposed development of the regional trail within the corridor should be coordinated with Canadian Pacific, BNSF, and Minnesota Commercial Railway.

-Potential improvements may be identified for existing at-grade railway crossings consisting of improved at-grade crossings and safety signaling.

## PROPOSED DEVELOPMENT

### 4. Trail Development

- Several access points to the regional trail are in existing roadway corridors. There has been a demand to redevelop many of these for improved access and safety while crossing roads. Proposed improvements may consist of redevelopment of existing at-grade crossings, realignment of access points, safety signaling, and trail transition areas. A planning study may be required to identify necessary improvements for these crossings.
- There has been a demand to increase access points within the corridor including connections to adjacent residential and commercial properties, the Bruce Vento Regional Trail, Lexington Regional Trail, and other existing parks and trails within the corridor. A planning study may be required to identify additional trail connections to the corridor.
- Redevelop existing sections of regional trail for improved use and more direct connections to amenities. Redevelopment of the existing trail will be required during implementation of the Rush Line BRT, Bruce Vento Regional Trail, and Lexington Regional Trail within the trail corridor. Improvements shall consist of trail repaving and the re-alignment of trail sections to reduce sharp corners and steep slopes adjacent to trail sections.

### 5. Vehicle Access

There are no trailhead parking lots located within the regional trail corridor. Additional planning studies may be required to determine parking opportunities for existing sections of trail, partnerships, and new trailhead locations.

### 6. Wayfinding

- Improve pedestrian signage for improved wayfinding to trail accesses, crossings at roadway corridors, and other amenities. Provide interpretive signage in natural areas for increased wayfinding to nature education opportunities.
- Vehicular entrance signage is proposed to be developed with potential future parking opportunities along the regional trail corridor.

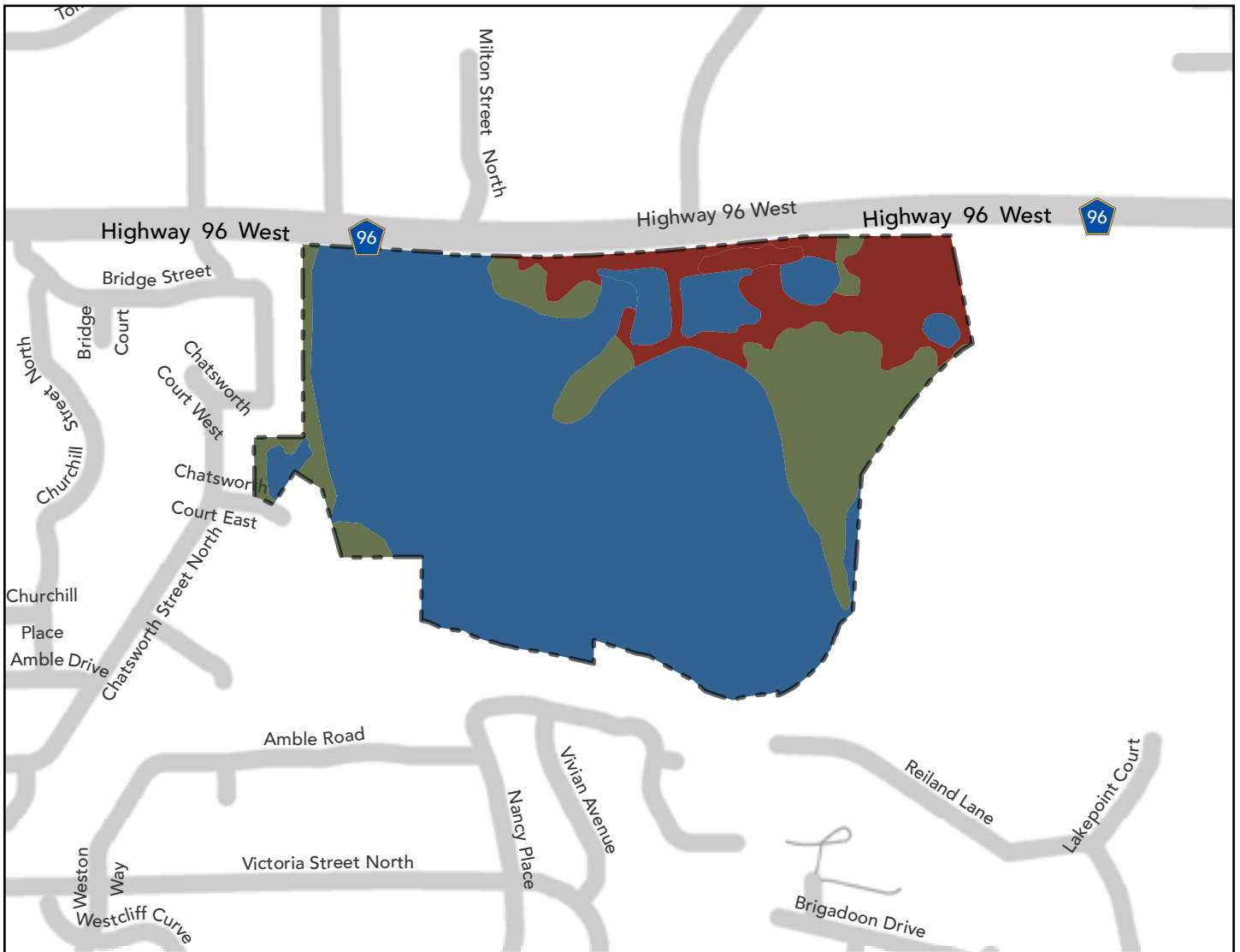
### 7. Recreation Opportunities

- **Public Art:** Provide the opportunity and appropriate infrastructure to accommodate public art to improve community connections.
- **Culturally Significant Areas:** Provide connections and interpretive education for culturally significant areas along the railway corridor. Proposed improvements would consist of interpretive educational signage and pedestrian connections for viewing opportunities.
- **Programming:** Increase recreation and nature programming activities. This may be accomplished through interpretive and educational signage.
- **Endangered Wildlife Areas:** Provide visual and interpretive educational signage, and pedestrian connections to wildlife areas. If federally or state listed protected plants and animals are discovered statutes and guidelines will be followed.

### 11. Acquisitions

Future acquisitions and easements are proposed for adjacent properties along the corridor for inclusion into Trout Brook Regional Trail when properties become available. Acquisition of properties and easement will allow additional development within the trail corridor. Further master planning

PROPOSED LAND COVER - SNAIL LAKE MARSH



0 200 400 800 1,200 1,600 2,000 Feet

Proposed Land Cover

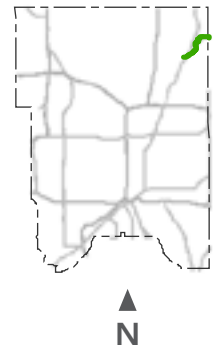
- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |



NATURAL RESOURCE MANAGEMENT UNIT TABLE

HIGHWAY 96 REGIONAL TRAIL - SNAIL LAKE MARSH							
ACRES	CURRENT LAND COVER	POTENTIAL LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIORITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
0.73	CULTIVATED CONIFERS	PRAIRIE	INVASIVE WOODY REMOVAL AND HAUL OFF SITE, MOW, HERBICIDE, RX BURN, DRILL SEED	\$1,460.00	3	RX BURN, FOLIAR SPRAY OF HERBACEOUS	\$766.50
9.60	OLD FIELD	PRAIRIE	MOW, HERBICIDE, RX BURN, DRILL SEED	\$19,200	3	RX BURN, FOLIAR SPRAY OF HERBACEOUS	\$7,200.00
14.03	MIXED WOODS	MIXED WOODS	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN	\$35,075.00	3	FOLIAR SPRAY OF BUCKTHORN	\$7,015.00
64.29	WETLAND	WETLAND	MONITOR	N/A	N/A	N/A	N/A
SNAIL LAKE MARSH TOTAL							
88.65				\$55,735.00			\$14,981.50

## LAKE LINKS REGIONAL TRAIL



### EXISTING SITE CONDITIONS

MASTER PLAN DATE: 2001



#### LOCATION AND SIZE

The regional trail corridor is approximately 2.1 miles in length. The regional trail starts at the intersection of Lake Avenue and Highway 61, then proceeds north along Lake Avenue through White Bear Lake County Park following Highway 96 to Highway 244 on the north side of White Bear Lake. The section of trail from Lake Avenue and Highway 61 to White Bear Lake County Park is also referred to as the Lake Avenue Trail.



#### SITE CHARACTERISTICS

For the most part the trail corridor follows an existing trail alignment along Lake Avenue, which has proven to be very successful and well accepted by the community. The overall character of the trail corridor is a pleasant lakeside neighborhood with easy access to the nearby downtown business district, numerous local parks, and the Ramsey County Beach. Where the trail already exists along a one-way road, there are opportunities to enhance both safety and aesthetics.



#### RECREATION DEVELOPMENT

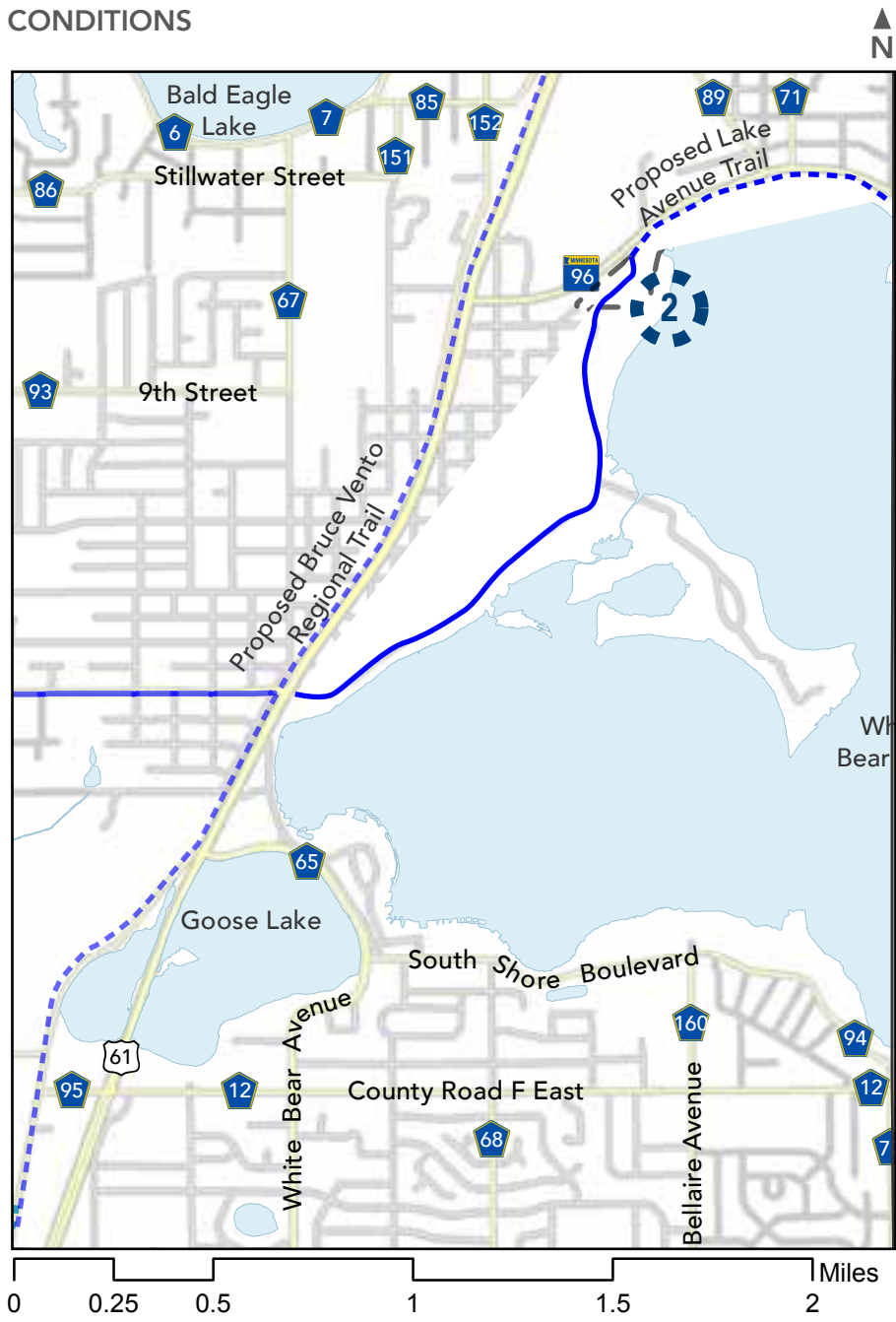
There is still an undeveloped section of trail on the north side of White Bear Lake along Highway 96 to Highway 244 at the east county line. Additional trail connections from local trail systems is anticipated to provide increase trail access.



#### MAINTENANCE

The City of White Bear Lake constructed and maintains the built section of trail from Lake Avenue and Highway 61 to White Bear Lake County Park. The Ramsey County Parks & Recreation department constructed and maintains the trail section in White Bear Lake County Park. Construction and maintenance obligations for the undeveloped trail section from White Bear Lake County Park along Highway 96 to Highway 244 will be developed as this section of trail is planned.

EXISTING CONDITIONS



Legend

- Park Border - - - - - Park Paved Trail — Regional Trail —
- Proposed Development [ 3 ] Park Turf Trail — Proposed Regional Trail - - - - -
- Proposed Development Node [ 1 ] Municipal Trail —
- Metro Tranist Stop [ T ] Municipal Ped/Bike Facility —

## PLANNING CONSIDERATIONS

A master plan for the regional trail was completed in 2001 as part of the Lake Links Trail Network Master Plan. The master plan was approved by Ramsey County and the Metropolitan Council.

### PROPOSED DEVELOPMENT

#### 1. Master Planning

Development of the regional trail corridor will follow items addressed in the 2001 master plan until changes are required as needs. Improvements to the trail corridor not addressed in the 2001 master plan will require additional master planning activities. Even though the undeveloped section of trail is identified in the 2001 master plan along Highway 96 East to Highway 244, additional master planning activities will be required for the trail alignment and location, recreation opportunities, funding, and partnerships.

- Develop partnerships with the city of White Bear Lake, White Bear Township, Minnesota Department of Transportation (MNDOT), Washington County, Rice Creek Watershed District (RCWD), Ramsey Washington, and private parties adjacent to the corridor for funding strategies, increased recreational opportunities, and improvements.

#### 2. White Bear County Park

Investigate opportunities for inclusion into the regional park and trail system as part of the Lake Links Regional Trail. The park is connected to the regional trail and is often used as a trailhead parking facility. It is proposed that White Bear Lake County Park be included as a regional trailhead facility for the Lake Links Regional Trail.

#### 3. Access Points

- **Roadway Corridors:** Several access points to the regional trail are in existing roadway corridors and municipal parks such as West Park, Memorial Beach Park, and Matoska Park. There is a demand to redevelop many of these access points for improved access and safety while crossing roads. Proposed improvements may consist of at-grade crossings, realignment of access points, safety signaling, and trail transition areas. A planning study may be required to identify necessary improvements for these crossings.
- **New Access Points:** There has been a demand to increase access points within the corridor as development occurs for Lake Links Regional Trail. A planning study may be required to identify additional trail connections to the corridor.
- **Vehicular:** White Bear Lake County Park provides the main parking access to the regional trail. Secondary parking opportunities exist along roadway corridors and municipal parks, but are primarily used for either residential parking or access to municipal parks. If the need arises for more parking, planning studies may be required to determine additional locations.

#### 4. Trail Development

- **Existing Trail:** The city of White Bear Lake provides trail improvements for the section along Lake Avenue. Trail improvements will be coordinated with the city of White Bear Lake for this section. Improvements may consist of trail repaving, and the re-alignment of trail sections to reduce sharp corners and steep slopes adjacent to trail sections.

## PROPOSED DEVELOPMENT

- **New Trail Sections:** There is still an undeveloped section of trail along Highway 96 East to Highway 244 at the county line. Master planning activities will be required for the undeveloped trail alignment, location, recreation opportunities, funding, and potential partnerships.

### 5. Recreational Opportunities

Existing trailhead access to the regional trail corridor is provided at White Bear Lake County Park. Recreation opportunities and development can be further enhanced within White Bear Lake County Park for improved access to site amenities. In addition, recreational opportunities and development can be further enhanced along the existing trail section from Lake Avenue and Highway 61 to White Bear Lake County Park via local trail and park connections.

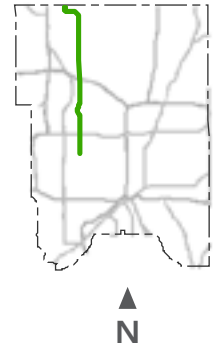
### 6. Acquisitions

Property acquisition and easements are proposed along the trail corridor for inclusion into Lake Links Regional Trail as properties become available. Acquisition of property and easements will allow additional development within the trail corridor. Further master planning activities would be required to determine potential uses for acquired properties or easements.

# LEXINGTON REGIONAL TRAIL

## EXISTING SITE CONDITIONS

MASTER PLAN DATE: ANTICIPATED IN 2019



### LOCATION AND SIZE

Overall the Lexington Regional Trail corridor is 15.04 miles in length within the Ramsey County Park & Recreation and city of St. Paul Park & Recreation jurisdictions. The Ramsey County section of the regional trail corridor is approximately 9.29 miles in length and extends through the cities of Arden Hills, Roseville, and Shoreview. The northern terminus of the regional trail is located at the intersection of Lexington Avenue and County Road J, continuing south along Lexington Avenue to the southern terminus at the intersection of Lexington Avenue and Larpentuer Avenue. The regional trail section south of Larpentuer Avenue to 7th St. West (County Road 5) is 5.75 miles in length and is within the City of St. Paul Parks & Recreation jurisdiction.



### SITE CHARACTERISTICS

The overall regional trail corridor is within the right-of-way of Lexington Avenue between County Road J in the city of Shoreview to 7th St. West (County Road 5) in the city of St. Paul. The regional trail corridor is located in an urban setting providing a mix of land uses, and is either adjacent or connects to several city, county and regional park and trail systems including the Rice Creek North Regional Trail, Arden Hills Army Training Site (AHATS), Marsden Archery Range, Island Lake County Park, Como Regional Park, and Highland Park. There is an existing bituminous trail that extends most of the Ramsey County section that is either located on both sides or has trail located one side of Lexington Avenue ranging from 8 to 10 feet. The City of St. Paul has approximately 1-mile of trail completed through Como Regional Park.



### RECREATION DEVELOPMENT

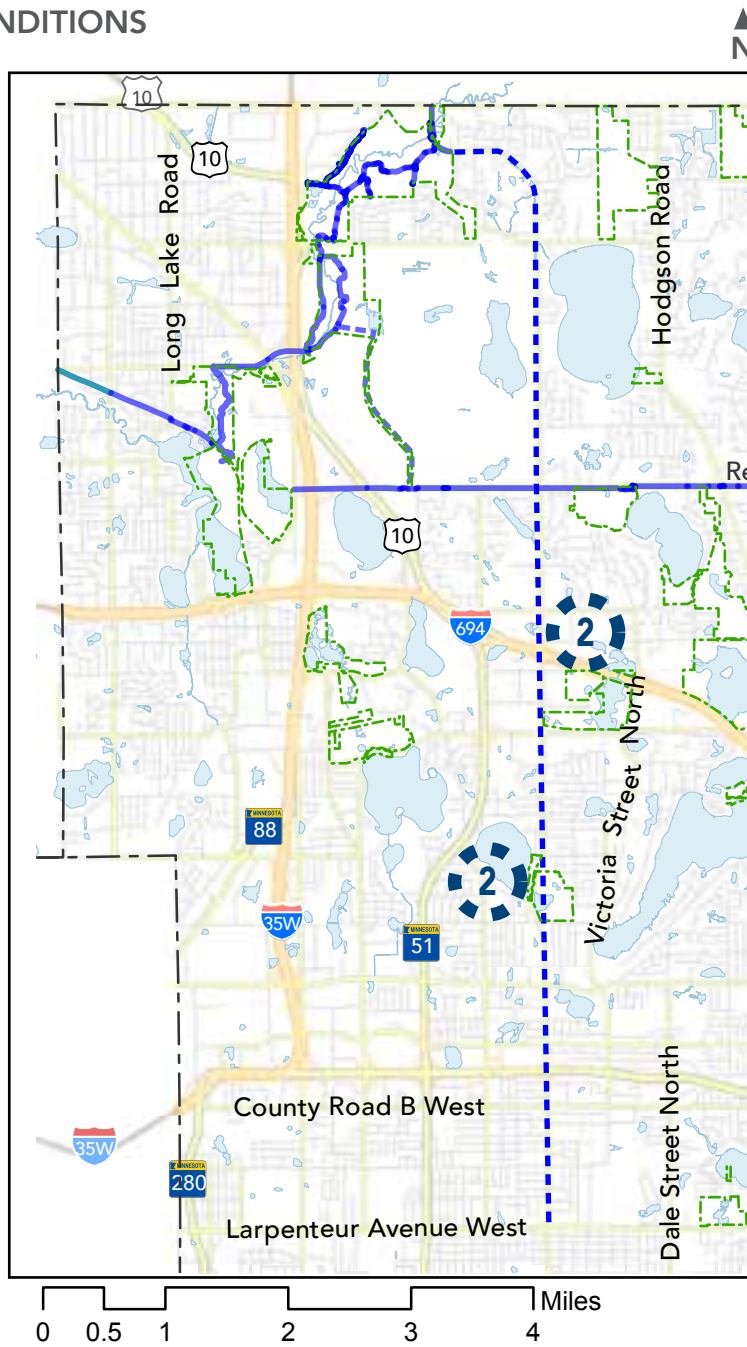
Even though the majority of the Ramsey County section has developed trail, it is anticipated that additional master planning activities will be required to identify the appropriate location of the regional trail, development, or redevelopment of existing bituminous trail to meet regional trail width requirements, and the addition of site amenities to enhance trail use. Additional trail connections to adjacent park and trail systems will be considered to provide increased access and recreation opportunities.



### MAINTENANCE

The existing bituminous trail within Ramsey County has been developed, operated, and maintained by each representative city the trail passes through. In some cases sections of bituminous trail have been developed in association with roadway projects on Lexington Avenue, however maintenance obligations are still maintained by adjacent municipalities. It is anticipated future trail construction and maintenance obligations will be reviewed by the County and representing cities for appropriate agency maintenance operations.

EXISTING CONDITIONS



Legend

- |                           |  |                             |  |                         |  |
|---------------------------|--|-----------------------------|--|-------------------------|--|
| Park Border               |  | Park Paved Trail            |  | Regional Trail          |  |
| Proposed Development      |  | Park Turf Trail             |  | Proposed Regional Trail |  |
| Proposed Development Node |  | Municipal Trail             |  |                         |  |
| Metro Tranist Stop        |  | Municipal Ped/Bike Facility |  |                         |  |

## PLANNING CONSIDERATIONS

There is no master plan completed for the Lexington Regional Trail. Lexington Avenue was identified in the Metropolitan Council 2030 and 2040 Regional Park and Trails Plan as a regional trail corridor and will require a master plan for trail development. Master planning activities are anticipated to begin in 2019 and will inform future trail development and funding efforts.

## PROPOSED DEVELOPMENT

### 1. Master Planning

Master planning activities are anticipated to begin in 2019 and will inform future trail development, trailheads, pedestrian and vehicular accesses, wayfinding signage, recreation development opportunities, funding efforts, and partnerships. The master plan will require coordination with the city of Saint Paul for potential joint regional trail master planning efforts as well as the Cities of Shoreview and Roseville.

- Develop partnerships with the Cities of Shoreview, Roseville, and Saint Paul, Minnesota Department of Transportation (MNDOT), local schools adjacent to the corridor, Rice Creek Watershed District (RCWD), Ramsey Washington Metro Watershed District (RWMWD), and private parties adjacent to the corridor for funding strategies, increased recreation opportunities, and proposed improvements.

### 2. Island Lake County Park & Lake Josephine County Park

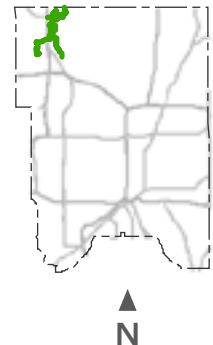
Investigate opportunities for inclusion into the regional park and trail system as part of the Lexington Regional Trail Master Plan.

### 3. Acquisitions

Future acquisitions and easements are proposed for adjacent properties to the corridor for inclusion into Lexington Regional Trail when properties become available. Acquisition of properties and easements will allow additional development within the corridor. Further master planning activities would be required to determine potential uses for acquired properties or easements.



## RICE CREEK NORTH REGIONAL TRAIL



### EXISTING SITE CONDITIONS

MASTER PLAN DATE: 1997, 1995, 2015



### LOCATION AND SIZE

Rice Creek North Regional Trail is located in the northwest corner of Ramsey County in the cities of Shoreview, Arden Hills, Mounds View, and New Brighton. The trail is 4 miles in length and is part of a 14-mile regional trail corridor that extends from the Chain of Lakes Regional Park Reserve to the Mississippi River by way of Long Lake Regional Park. Ramsey County owns 534 acres along the corridor. In Ramsey County, the trail follows Rice Creek from the north county line (County Road J) on the north to Long Lake Regional Park on the south. The trail crosses Hwy 10 and I-35W West of Rice Creek Commons on County Road H. A grade separated crossing provides trail access over the Minnesota Commercial Railroad right of way immediately north of Long Lake Regional Park. The regional trail corridor continues 1 mile north into Anoka County to the Chain of Lakes Regional Park Reserve. The corridor includes a 1-mile segment through the Twin Cities Army Ammunition Plant (TCAAP) and a 49-acre wildlife corridor. The wildlife corridor connects the Rice Creek Corridor to the Arden Hills Army Training Site (AHATS). The Arden Hills Army Training Site is a 1500-acre area of TCAAP licensed to the Minnesota National Guard for training and natural resource management.



### SITE CHARACTERISTICS

The corridor includes Rice Creek and its floodplain. The northern Shoreview segment encompasses additional acreage, which includes approximately 200 acres of former agricultural upland areas, with scattered wetlands and wooded areas. Rice Creek has sufficient depth and width to accommodate canoeing except at occasional low flow periods. Most of the corridor is well preserved in a natural condition and supports abundant wildlife. The most significant intrusions are the street and highway crossings.



### RECREATION DEVELOPMENT

Segments of the trail corridor were developed as opportunity for funding arose. A canoe launch and parking lot were constructed when Ramsey County Public Works realigned a portion of Old Highway 8. A segment of the trail located parallel to County Road 8 was constructed with advance funding by the city of Mounds View in order to address a safety issue associated with children traveling to and from school. The section located between County Road I and County Road J has received the most extensive development. A paved trail 2 miles long was constructed from County Road J to Lexington Avenue with neighborhood connections. These segments were constructed by the city of Shoreview as part of the city's basic level of service plan. A trailhead parking lot was constructed on County Road I to accommodate 29 cars. Another Trailhead was constructed to accommodate the 13-acre off leash

## RICE CREEK NORTH REGIONAL TRAIL

dog area established south and west of Lexington Avenue. This trailhead accommodates 30 cars and a 5 car and canoe trailer parking stall which supports the Rice Creek Water Trail. A restroom and drinking fountain were also built.



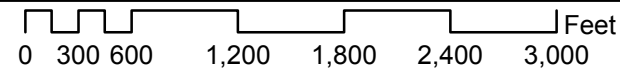
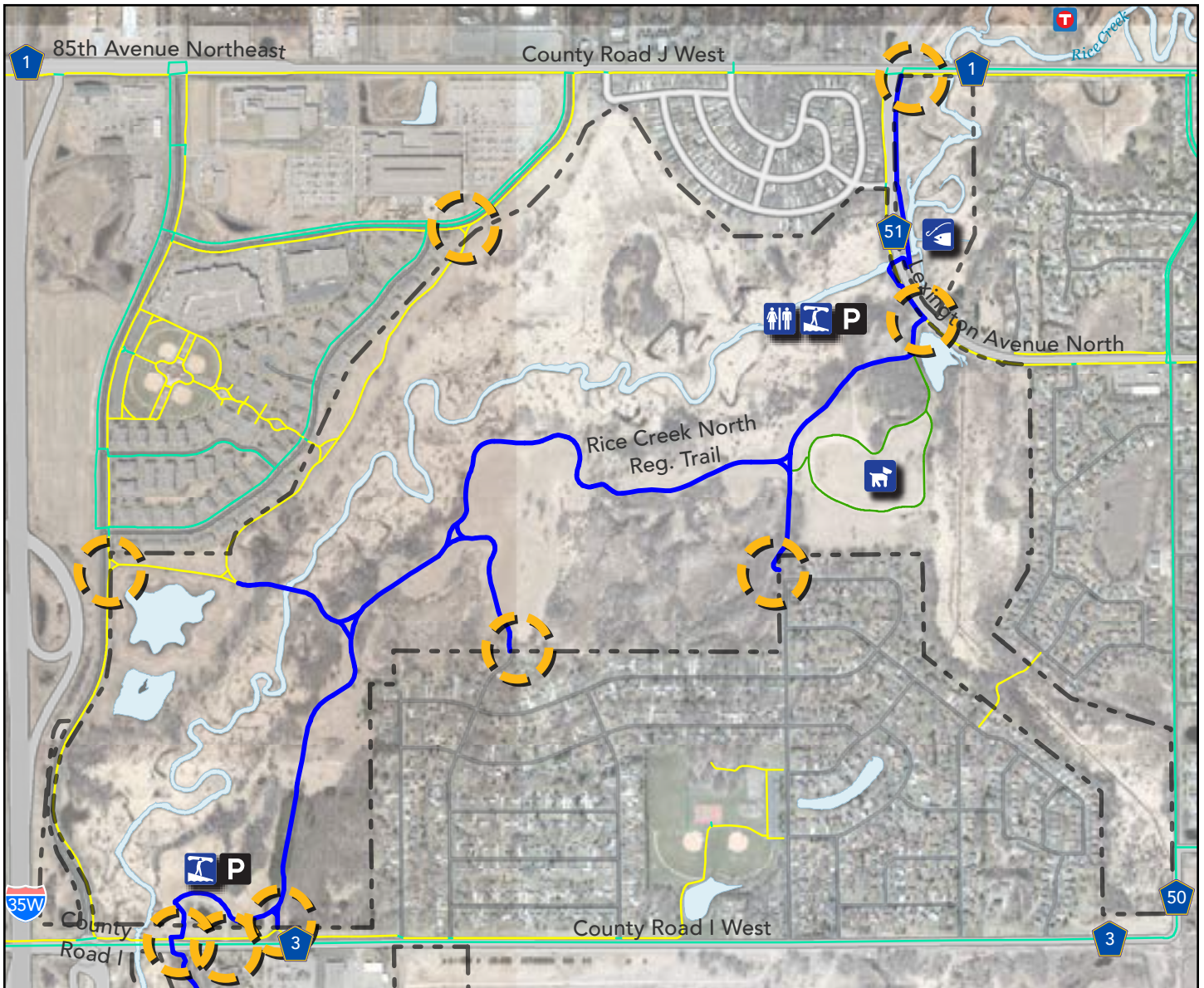
### MAINTENANCE

#### Winter Maintenance:

- Maintain parking lot access to Rice Creek Off Leash Dog Area (OLDA) year-round
- Plow trail from County Road J West to Long Lake Regional Park (Poppyseed Drive)

RICE CREEK NORTH REGIONAL TRAIL

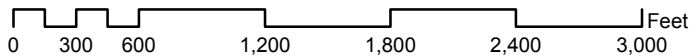
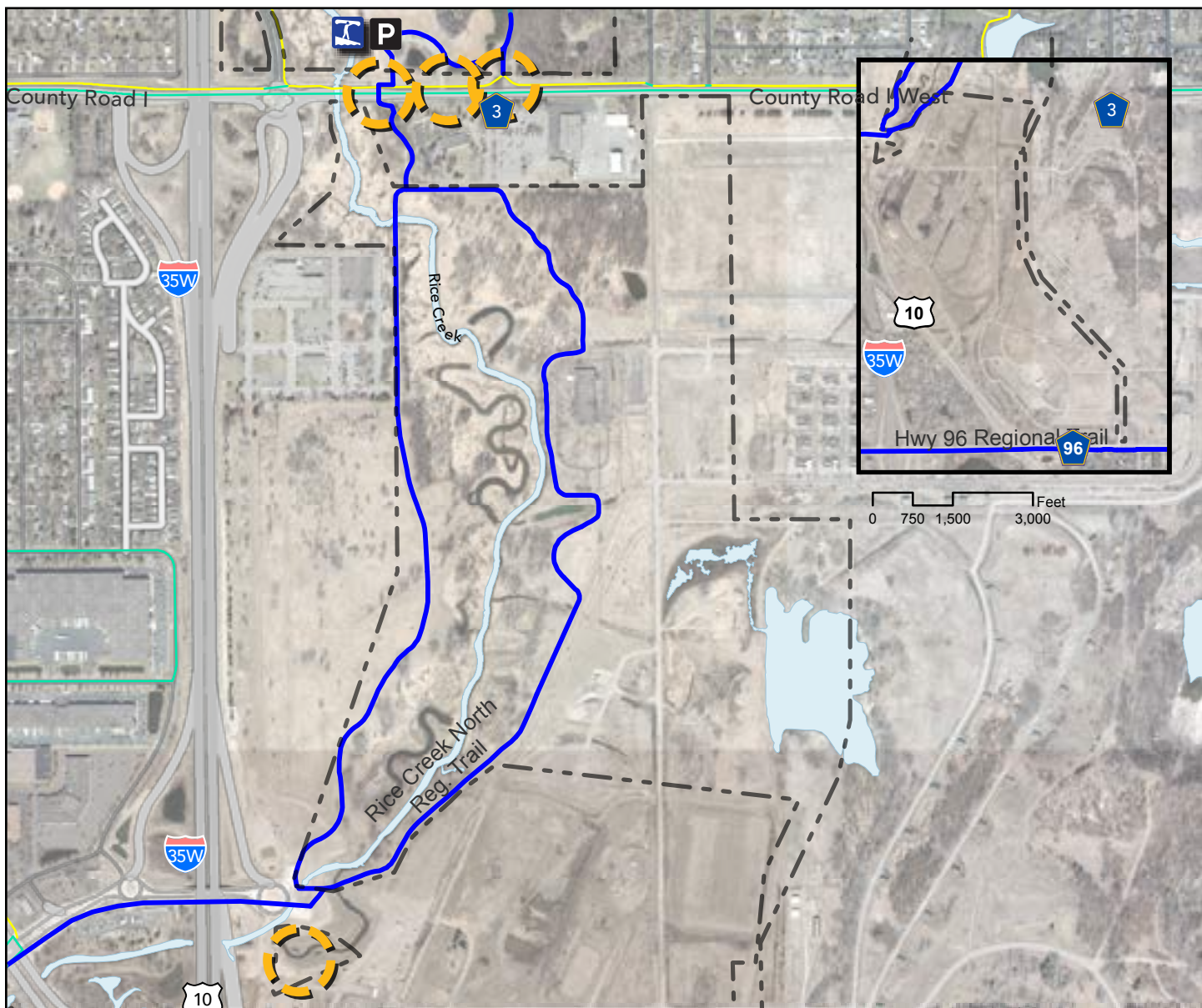
EXISTING CONDITIONS - NORTH SECTION



Legend

Park Border		Park Paved Trail		Parking Lot	
Park Entrance		Park Turf Trail		Restrooms	
Metro Tranist Stop		Municipal Trail		Carry In Access	
Regional Trail		Municipal Ped/Bike Facility		Shore Fishing	
				OLDA	

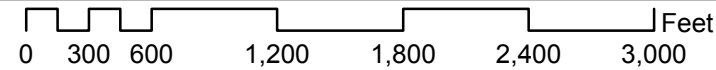
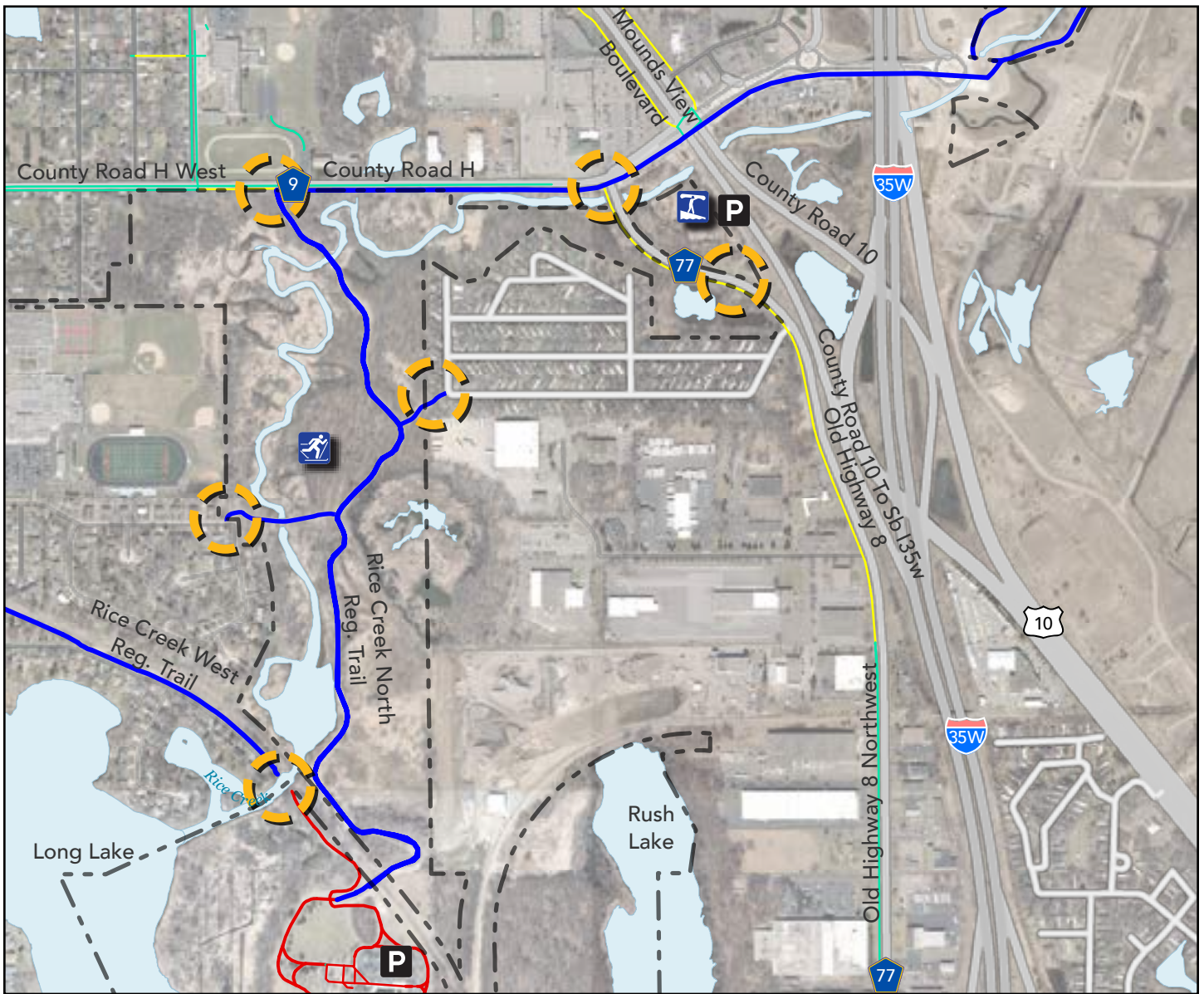
EXISTING CONDITIONS - CENTRAL SECTION



Legend

Park Border		Park Turf Trail		Park Paved Trail	
Park Entrance		Municipal Trail		Parking Lot	
Regional Trail		Municipal Ped/Bike Facility		Metro Transit Stop	

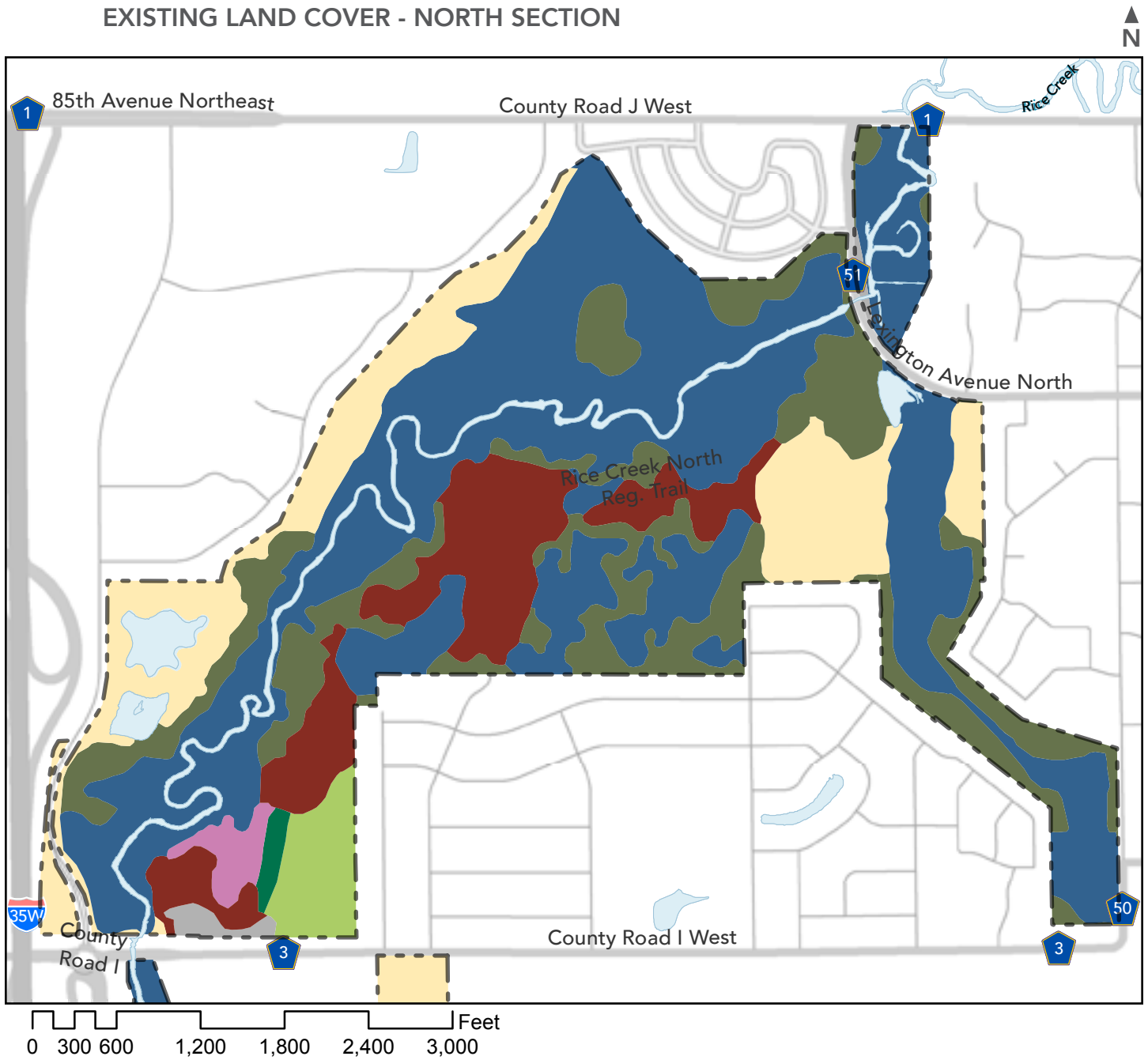
EXISTING CONDITIONS - SOUTH SECTION



Legend

Park Border		Park Paved Trail		Parking Lot	
Park Entrance		Park Turf Trail		Carry In Access	
Metro Transit Stop		Municipal Trail		XC Ski	
Regional Trail		Municipal Ped/Bike Facility			

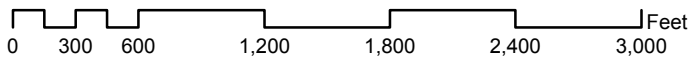
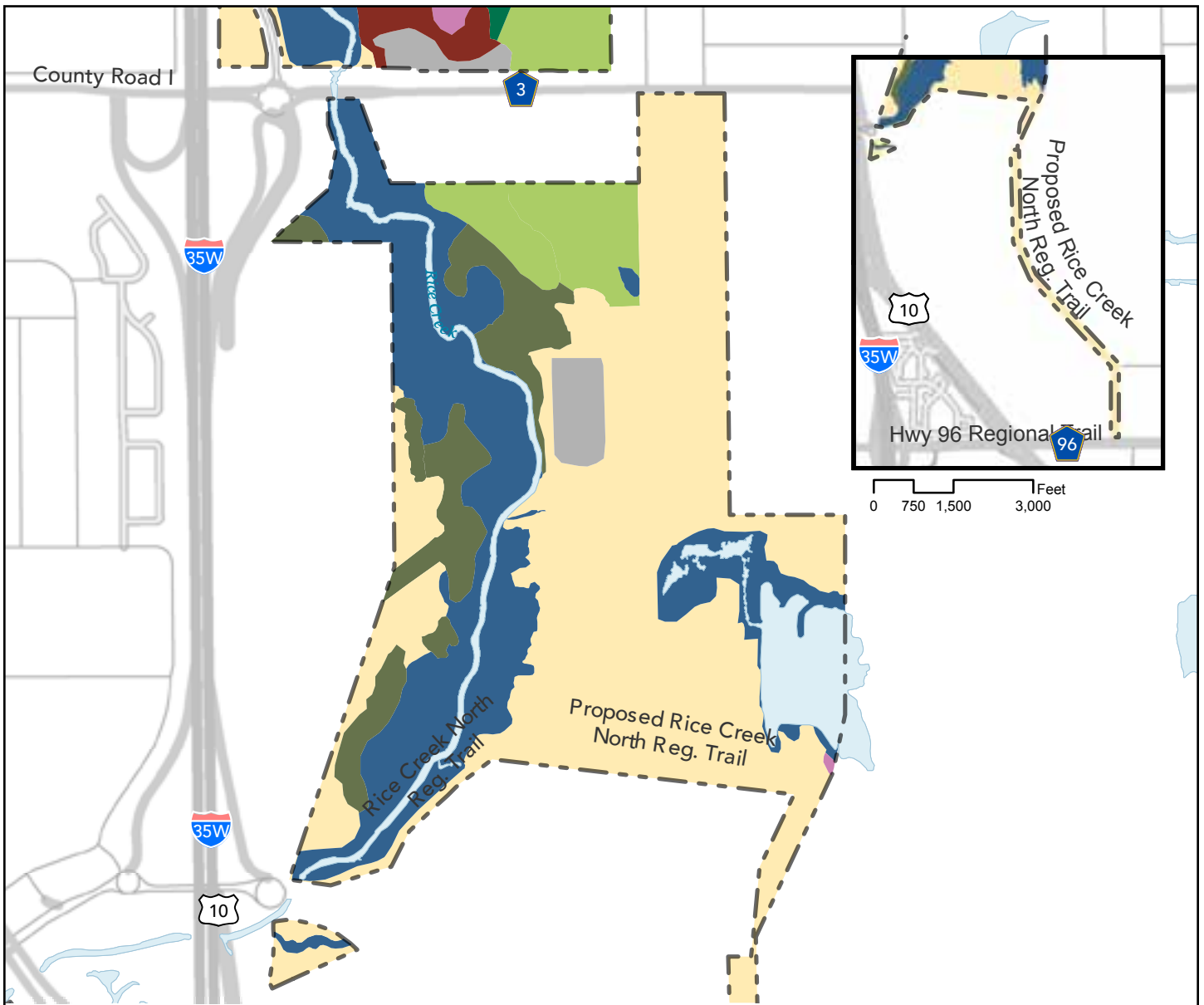
EXISTING LAND COVER - NORTH SECTION



Existing Land Cover

- |                     |                   |            |                 |
|---------------------|-------------------|------------|-----------------|
| Active Use          | Floodplain Forest | Oak Woods  | Remnant Prairie |
| Impervious          | Mesic Forest      | Old Field  | Savanna         |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp     |
| Tamarack Swamp      | Wetland           | Open Water |                 |

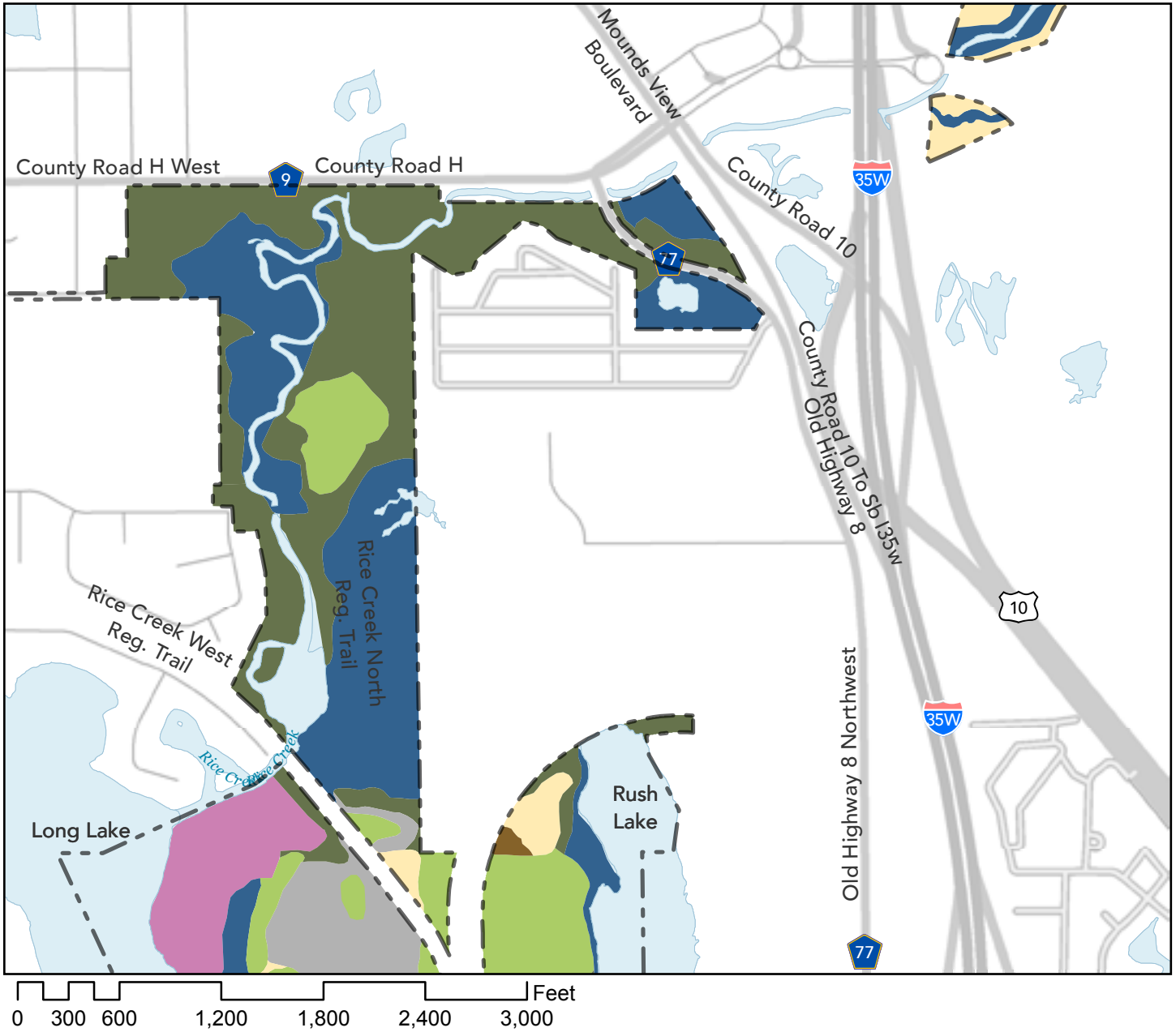
EXISTING LAND COVER - MIDDLE SECTION



Existing Land Cover

Active Use	Floodplain Forest	Oak Woods	Remnant Prairie
Impervious	Mesic Forest	Old Field	Savanna
Cultivated Conifers	Mixed Woods	Prairie	Shrub Swamp
Tamarack Swamp	Wetland	Open Water	

EXISTING LAND COVER - SOUTH SECTION



Existing Land Cover

- |                     |                   |            |                 |
|---------------------|-------------------|------------|-----------------|
| Active Use          | Floodplain Forest | Oak Woods  | Remnant Prairie |
| Impervious          | Mesic Forest      | Old Field  | Savanna         |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp     |
| Tamarack Swamp      | Wetland           | Open Water |                 |



## RICE CREEK NORTH REGIONAL TRAIL

### LAND COVER AND HABITAT

The native vegetation of Rice Creek North Regional Trail is an extensive floodplain wetlands with scattered oak woods, savannas, mixed woods, and prairies. Much of the native vegetation was altered because of the channelization of Rice Creek for past agricultural use. Invasive species have also become widespread throughout the corridor and include reed canary grass and common and glossy buckthorn. In 2014, emerald ash borer was discovered within a small isolated grove of ash trees in the northern section of the park and is currently being monitored by the Minnesota Department of Agriculture. Current vegetation is mainly old field, wetlands, remnant native habitat, and converted natural habitats including converted native prairies, native woodland restoration, and creek meandering throughout the middle and southern portion of the corridor.



### WILDLIFE

The park hosts diverse wildlife including nesting songbirds, waterfowl, and raptors. Larger mammals include white-tailed deer, otter, coyotes, red fox, and raccoons.

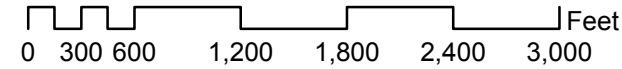
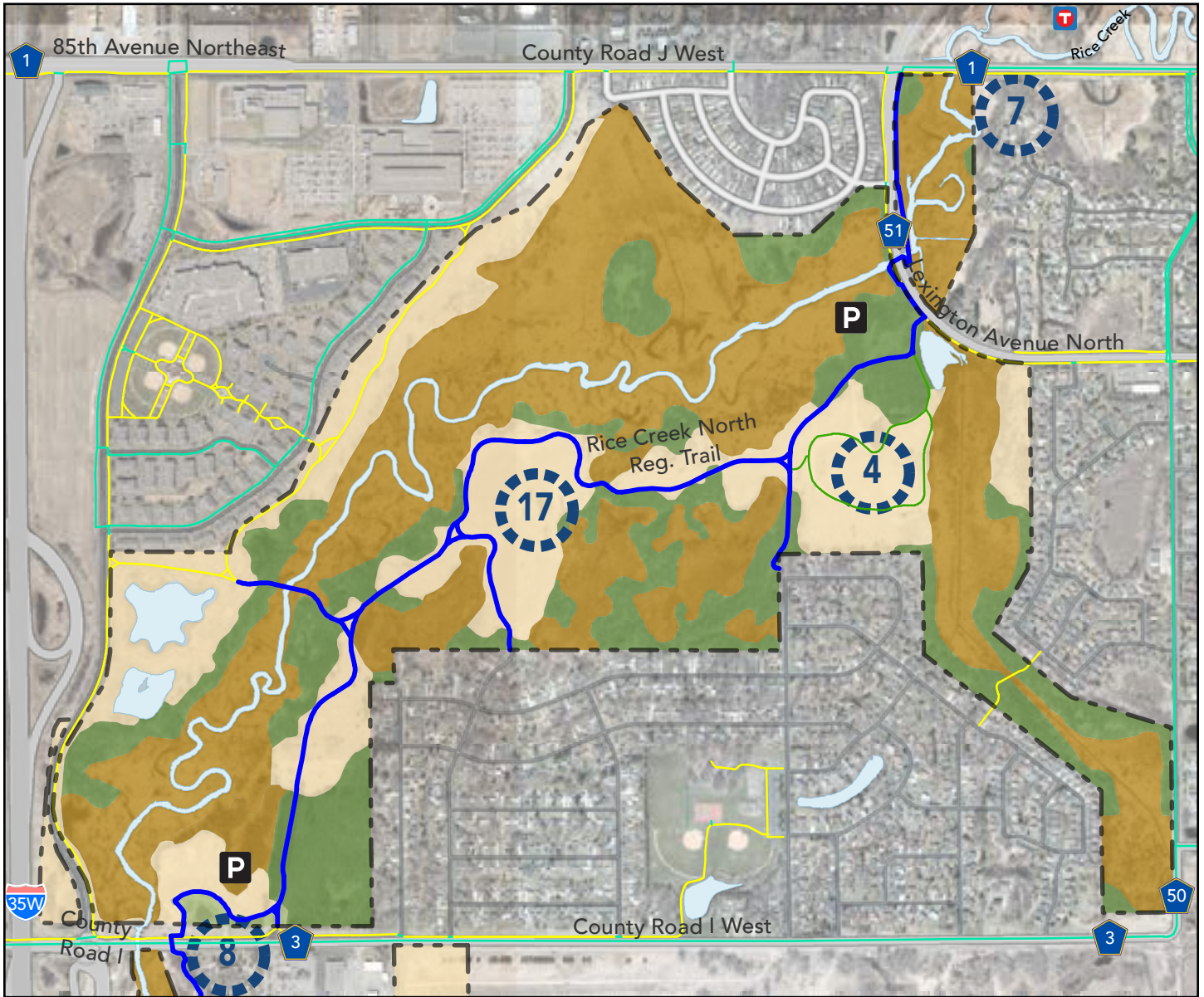
### WILDLIFE MANAGEMENT

Deer populations in the area are surveyed annually to determine the need and location for special archery hunts. Since 2015, the section of Rice Creek North Regional trail north of County Road I has been the location of several special archery hunts, under the provisions of the Ramsey County Cooperative Deer Management Plan in partnership with the city of Shoreview. The Minnesota Department of Agriculture is currently using the Emerald Ash Borer site discovered within the park as a biological control survey location and will continue to monitor the site.

### SURFACE WATER RESOURCES

Rice Creek is a popular canoe and kayak navigable waterway and is a designated water trail that spans from Anoka to Ramsey County. In addition to the Rice Creek Watershed District's meandering project, they also complete water testing on the Creek and carp monitoring. In 2017 the RCWD installed a temporary carp barrier across Rice Creek, north of where the creek enters Long Lake. Future projects may include a permanent barrier at this location.

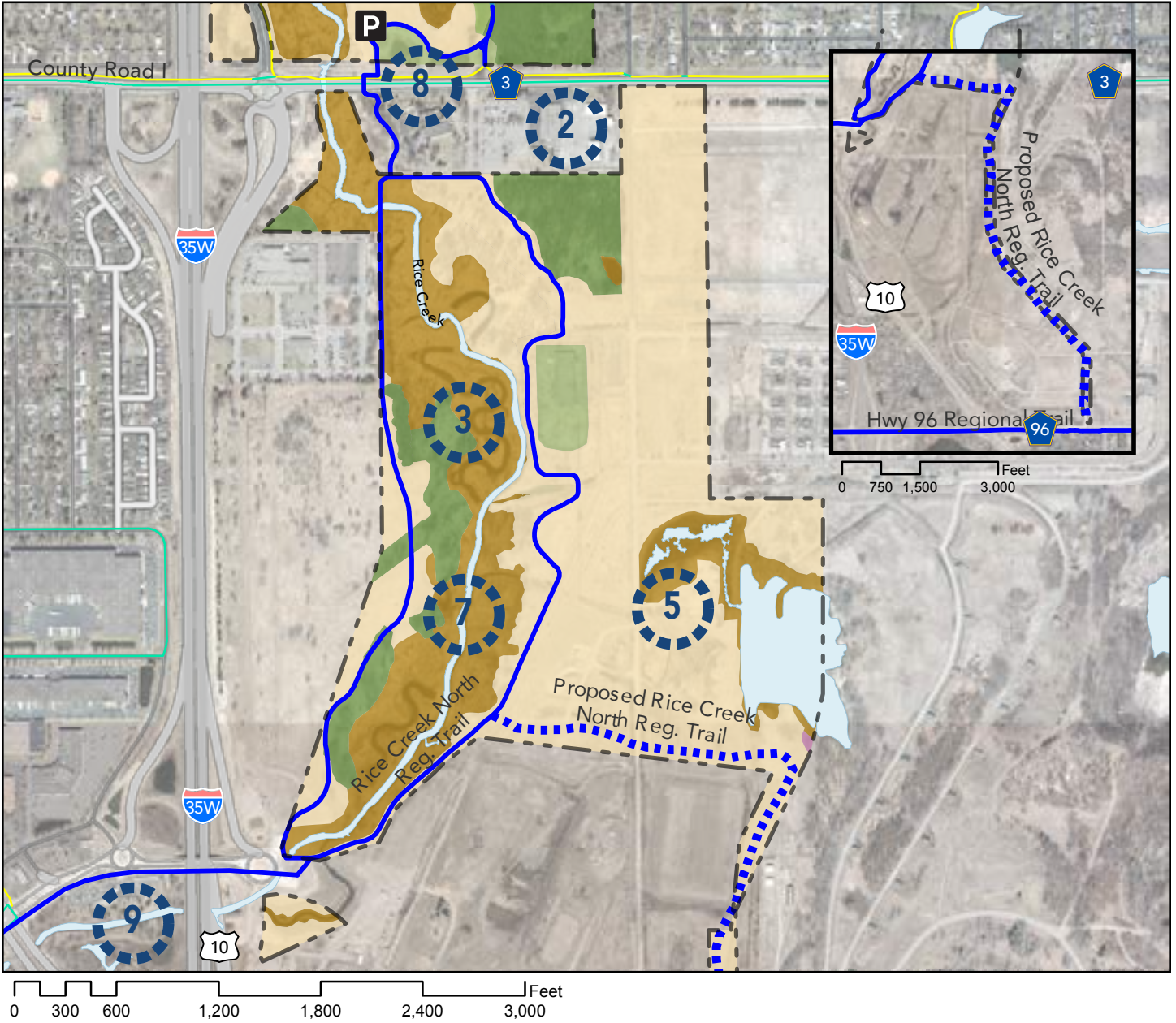
PROPOSED DEVELOPMENT - NORTH SECTION



Legend

Park Border		Park Paved Trail		Regional Trail	
Proposed Development		Park Turf Trail		Proposed Regional Trail	
Proposed Development Node		Municipal Trail		Parking Lot	
Metro Tranist Stop		Municipal Ped/Bike Facility			

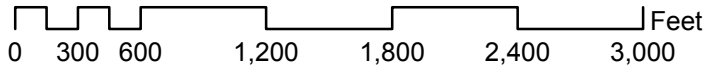
PROPOSED DEVELOPMENT - CENTRAL SECTION



Legend

- |                           |           |                             |            |                         |                  |
|---------------------------|-----------|-----------------------------|------------|-------------------------|------------------|
| Park Border               | - - - - - | Park Paved Trail            | — (red)    | Regional Trail          | — (blue)         |
| Proposed Development      | [ 3 ]     | Park Turf Trail             | — (green)  | Proposed Regional Trail | - - - - - (blue) |
| Proposed Development Node | ( 1 )     | Municipal Trail             | — (yellow) | Parking Lot             | [ P ]            |
| Metro Tranist Stop        | [ T ]     | Municipal Ped/Bike Facility | — (green)  |                         |                  |

PROPOSED DEVELOPMENT - SOUTH SECTION



Legend

- |                           |  |                             |  |                         |  |
|---------------------------|--|-----------------------------|--|-------------------------|--|
| Park Border               |  | Park Paved Trail            |  | Regional Trail          |  |
| Proposed Development      |  | Park Turf Trail             |  | Proposed Regional Trail |  |
| Proposed Development Node |  | Municipal Trail             |  | Parking Lot             |  |
| Metro Tranist Stop        |  | Municipal Ped/Bike Facility |  |                         |  |

## PLANNING CONSIDERATIONS

The 113-acre Rice Creek North Regional Trail Corridor is located within the Twin Cities Army Ammunitions Plant was transferred to the county from the National Park Service under the Federal Lands to Park Program. Under the agreement with the National Park Service, Ramsey County is obligated to make the site available for public recreational use within 5 years of transfer. This segment also includes a 1-acre archaeological site which must be preserved and protected.

The 49-acre wildlife corridor identified within TCAAP is proposed for transfer to Ramsey County as part of the land transaction between the General Services Administration (representing the U. S. Army) and the city of Arden Hills. The wildlife corridor provides a critical link to the 1,500 acre AHATS property.

The Minnesota Amateur Sports Commission has an interest in converting the large warehouse building located on the Rice Creek Corridor for use as a staging area for major cross country ski and other trail events. Conversion of the warehouse building to a recreational building will require appropriations from the State of Minnesota. Trail access to the AHATS property will require approval from the Minnesota National Guard. Future development of the Twin Cities Army Ammunition Plant property within the city of Arden Hills is underway through a master developer.

The Rice Creek Watershed District is actively involved in the restoration of Rice Creek. Sections of the creek located between County Road I and J were realigned in order to reduce the flow rate and stabilize eroding banks. It is anticipated that additional sections of the creek will be improved by the Watershed District. Ramsey County must continue to work with TCAAP to gain access to the creek for canoeing and acquire a corridor of land along the creek for land trails. These efforts need to be coordinated with all other agencies with interests.

All new road bridges constructed at creek crossings should accommodate canoeing and a trail underpass.

## PROPOSED DEVELOPMENT

### 1. Master Planning

The master plan for Rice Creek North Regional trail was last updated in August 2013 and was approved the by Ramsey County Board of Commissioners and the Metropolitan Council. A master plan update is planned for 2019 due to recent changes within the regional corridor and recreational development opportunities. This master plan will address improvements throughout the corridor for recreational needs due to changing trends, demographics, and recreational amenities. Coordination with multiple local and state agencies will be required for long-term master planning of improvements in the regional trail corridor. Continued development of the regional trail corridor will follow items addressed within the 2019 master plan amendment until future changes are required to the park as needs arise.

- Develop partnerships with the Cities of Shoreview, Mounds View, New Brighton, the Minnesota Department of Transportation (MNDOT), Anoka County Parks & Recreation department, local schools adjacent to the corridor, Minnesota Commercial Railway, and Rice Creek Watershed District (RCWD) for funding strategies, increased recreational opportunities and improvements.

## PROPOSED DEVELOPMENT

### 2. MNDOT Arden Hills Training Center & Truck Station

MNDOT is starting a master planning process in 2018 for long-term improvements to the current Arden Hills Training Center and Truck Station. MNDOT has expressed a need for additional training facility opportunities and improvements to the Truck Station. Dependent on the outcome of the MNDOT master planning process there may be opportunities for a shared training facility, maintenance facility, and recreational development opportunities within the central section of the corridor.

### 3. Central Corridor

Several changes to the central section of the Rice Creek corridor are proposed for additional recreational development opportunities and connection to Rice Creek Commons. Proposed improvements consist of improved vehicular and pedestrian access from County Rd I, repurposing Building 189 for shared uses, trailhead improvements, a shared picnic and restroom facility, playground development, parking facility, interpretive and education facility, improved trails, large event spaces for recreational uses, connections to the Rice Creek Water Trail, a satellite maintenance facility, passive recreation opportunities conducive to the area, storm water management best practices, and habitat restoration. Improvements will be identified in the 2019 Rice Creek Regional Trail Corridor Master Plan update.

### 4. Off Leash Dog Area

Master planning activities for the system wide Off Leash Dog Area Master Plan began in 2017 and was completed in 2018. The master plan addresses improvements to the Rice Creek Off Leash Dog Area.

### 5. Arden Hills Army Training Site (AHATS)

A long-term plan is in place to open up AHATS for recreational use. Ramsey County will continue to coordinate with the Minnesota National Guard for access and potential use of the area. Potential uses could include passive recreation, paved trails, natural surface trails, cross-country ski and mountain bike trails, observation areas, and interpretive educational programming. Dependent on allowable use by the Minnesota National Guard additional development may be proposed for the AHATS site.

### 6. Irondale High School

Irondale High School uses the lower section of the Rice Creek Corridor for cross-country ski and running training. An existing agreement has been established with Irondale for maintenance of existing natural surface trails for school use. Dependent on future uses additional improvements may be required for these trails to provide a high quality experience.

### 7. Rice Creek Water Trail

Continue coordination with Anoka County and RCWD for recreation improvement to the water trail. Additional improvements to the water trail consist of improved water navigation, access, wayfinding signage, and maintenance responsibilities.

- Improve access points throughout the water trail.

- New access points to the water trail are proposed for Rice Creek Commons near Interstate 35W and County Road H bridge interchange, and in the existing parking lot off of Old County Road 8.

## PROPOSED DEVELOPMENT

### 8. County Road I Access

Improve the existing at-grade access on County Road I for safe crossing. A planning study will be required to identify necessary improvements for this crossing. A new access point is proposed for access into the central section of the Rice Creek corridor at the intersection of County Road I and Fairview Avenue North. This will likely occur during construction of an access road into the County Road I south trailhead.

### 9. Rice Creek Commons

Develop new access points for connection to the existing trail system within the Rice Creek corridor.

### 10. Trail Development

- **Internal Corridor Trails:** Redevelop existing internal corridor trails for improved use and more direct connections to corridor amenities. Improvements shall consist of trail repaving, the re-alignment of trails for improved connections, as well as the reduction of sharp corners and steep slopes adjacent to trails.
- **Boardwalk:** Redevelop the existing boardwalk as needed for improved used and maintenance operations.
- **Rice Creek Commons:** Develop a trail on the East side of Rice Creek Commons for connection to the Highway 96 Regional Trail. This trail will likely have to be constructed with portions of Rice Creek Commons due to existing site conditions. Additional trail connections are proposed for access into Rice Creek Commons.

### 11. Vehicular Access & Parking

- **Lexington Trailhead Parking Lot:** Redevelopment of the parking lot occurred in 2014 for improved access to the Rice Creek Off-Leash Dog Area and Rice Creek Water Trail. No additional development is required, pavement will need maintenance for the duration of its life cycle.
- **County Road I Parking Lot:** Maintenance of the parking lot occurred in 2004. A mill and overlay will be required for improved use and maintenance operations. During any parking lot redevelopment additional vehicular parking should be considered along with improved pedestrian connections, signage, storm water management best practices, and site amenities.
- **Building 189:** There is not currently access to this parking lot. Development of this parking lot will occur when an access road is constructed from County Road I along with proposed development in this area. This lot is expected to be designed to accommodate a trailhead and large event activities within the central section of the Rice Creek Corridor.
- **Rice Creek Commons:** Development of a parking lot is proposed near Interstate 35w and the County Road H bridge interchange on the south side of Rice Creek. This will allow trailhead parking at Rice Creek Commons and improved access to the water trail. During any parking lot development pedestrian connections, signage, storm water management best practices, and site amenities shall be considered for improved recreational opportunities.
- **Old Highway 8 Parking Lot:** Redevelopment of the parking lot will be required for improved use and maintenance operations. During any parking lot redevelopment pedestrian connections, signage, storm water management solutions, and site amenities shall be updated for improved recreational opportunities.
- **Edgewood Middle School:** Shared parking is proposed at the Edgewood Middle School parking lot off of County Road H2 for a secondary access point to the Rice Creek North Regional Trail.

## PROPOSED DEVELOPMENT

- **Poppyseed Drive:** Develop a small trailhead parking lot at the entrance on Poppyseed drive for improved access to the existing trail.

### 12. Wayfinding

- Improve pedestrian signage for improved trail access and wayfinding ability. Provide interpretive signage in natural areas for increased nature education opportunities.
- Improve vehicular entrance signage for better access to the park. Replace existing wood park ID signs at existing trailhead parking lots, except at the Lexington Trailhead. This entrance sign was replaced with the development of the parking lot.
- Add Additional trailhead signs at newly developed access points and parking lots.

### 13. Recreational Opportunities

Redevelop existing internal park trails for improved use and more direct and user-friendly trail connections to park amenities. Improvements shall consist of trail repaving, re-alignment of trail sections for improved connections, as well as the reduction of sharp corners and steep slopes adjacent to trails.

### 14. Wayfinding

- **Pedestrian:** Improve pedestrian signage for improved wayfinding to trail accesses and other amenities. Provide interpretive signage in natural areas for increased wayfinding to nature education opportunities.
- **Vehicular:** Improve vehicular entrance signage for better wayfinding to park accesses.
  - Main Park Entrance Road: Redevelop the main regional park entrance monument sign and adjacent components.
  - South Shore Fishing Area and Boat Launch Entrance Road: Install appropriate entrance monument signs for improved vehicular wayfinding.
  - Internal Park Areas: Install appropriate entrance monument signs for improved vehicular wayfinding.

### 15. Recreation Opportunities

- **Public Art:** Provide the opportunity and appropriate infrastructure to accommodate public art from improved community connections.
- **Culturally Significant Areas:** Provide connections and interpretive education to culturally significant areas within Rice Creek corridor. Proposed improvements would consist of protection of these areas, interpretive educational signage, and pedestrian connections to viewing opportunities.
- **Wildlife Areas:** Provide visual and interpretive educational signage and pedestrian connections to wildlife areas. If Federally or state listed protected plants or animals are discovered statutes and guidelines will be followed.
- **Fishing:** Provide fishing access points along Rice Creek where conditions allow.
- **Programming:** Increase recreation and nature programming activities.
- **Water Access:**
  - Provide access for small water craft such as canoe and kayak within the Rice Creek corridor area
  - Provide necessary improvements for portages on Rice Creek.



## PROPOSED DEVELOPMENT

### 16. Habitat Restoration & Management

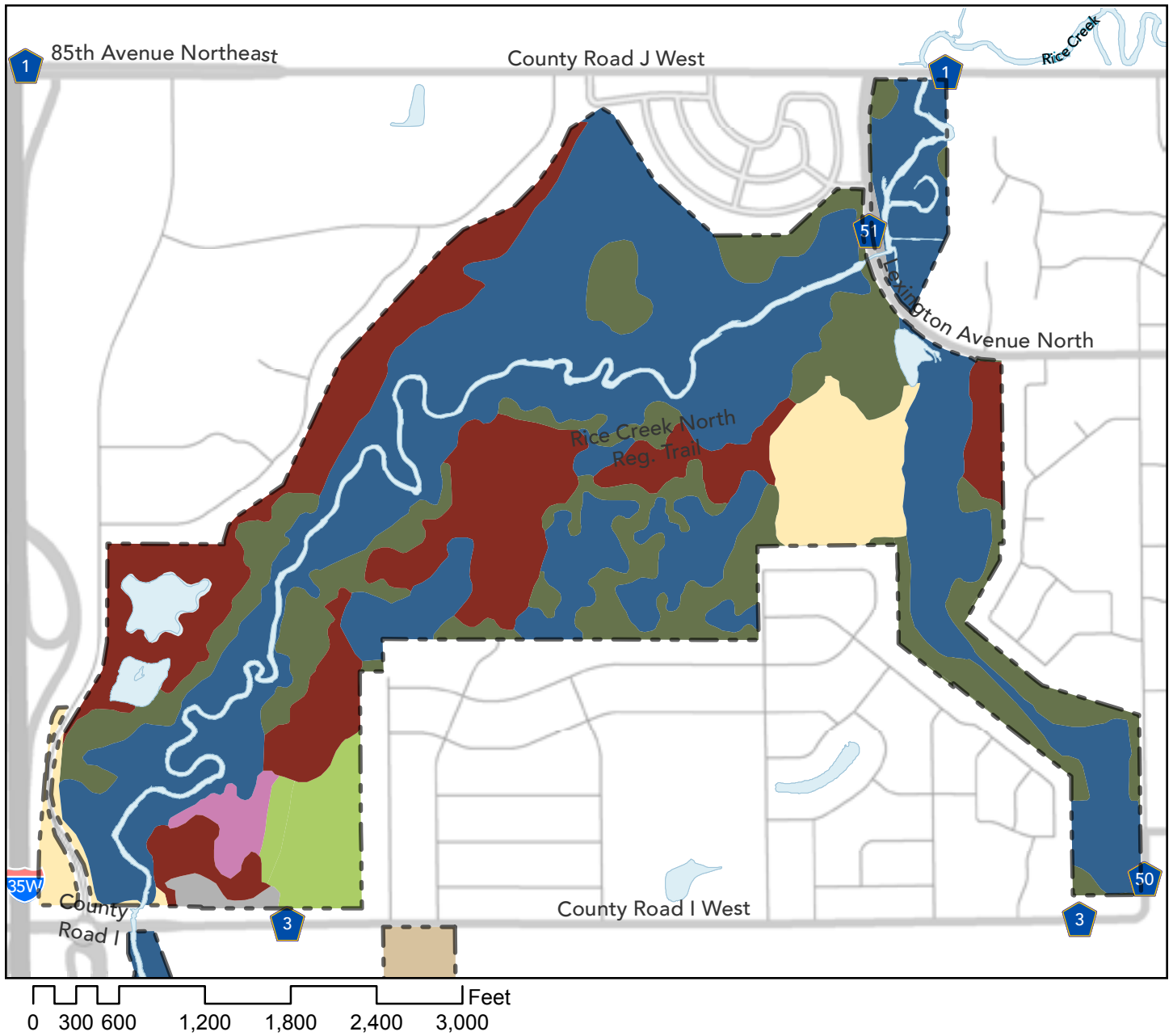
- Current restored and maintained habitat includes the oak and mixed woods in management unit (MU) 1 and converted native prairie in MU 3.
- The native prairies have been established for over a decade and are maintained with prescribed burns.
- In 2015 a major habitat restoration project began with the removal of buckthorn within MU1 for the restoration of the oak and mixed woodlands. To date, all of the buckthorn within this management unit has been removed, stacked and burned, with a prescribed burn and seeding of native herbaceous grasses and forbs to follow in the next year. A maintenance plan will include foliar spraying of buckthorn and periodic prescribed burns.
- Future priority restoration will include the conversion of old field to savanna within MU 2 and woodland restoration and conversion of old field to prairie within MU 3.
- In addition to habitat restoration projects, the Rice Creek Watershed District (RCWD) completed meandering restoration of the Rice Creek channel north of County Road I in early 2000s and since 2015 RCWD has been meandering the channel south of County Road I to Interstate 35W. The creek through these areas was straightened in the early 1900s to expand agricultural land and the meandering restoration projects will put the Creek back into its previous natural channel to regain the twists and turns to slow water, which will reduce stream bank erosion, sediment loading, and increase aquatic life.

### 17. Acquisitions

Ramsey County is in the process of transferring land that was within the former Twin Cities Army Ammunition Plant site for inclusion into the Rice Creek corridor. Ramsey County is also coordinating with the Minnesota National Guard for obtaining an easement for the northern most parcel identified as Parcel C. This will allow access from County Road I and the ability to provide recreational opportunities on Parcel C.

Long-term acquisition may be considered for sections of AHATS if the property is not needed for Minnesota National Guard activities.

PROPOSED LAND COVER - NORTH SECTION



Proposed Land Cover

- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |

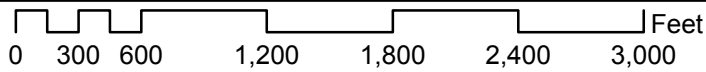
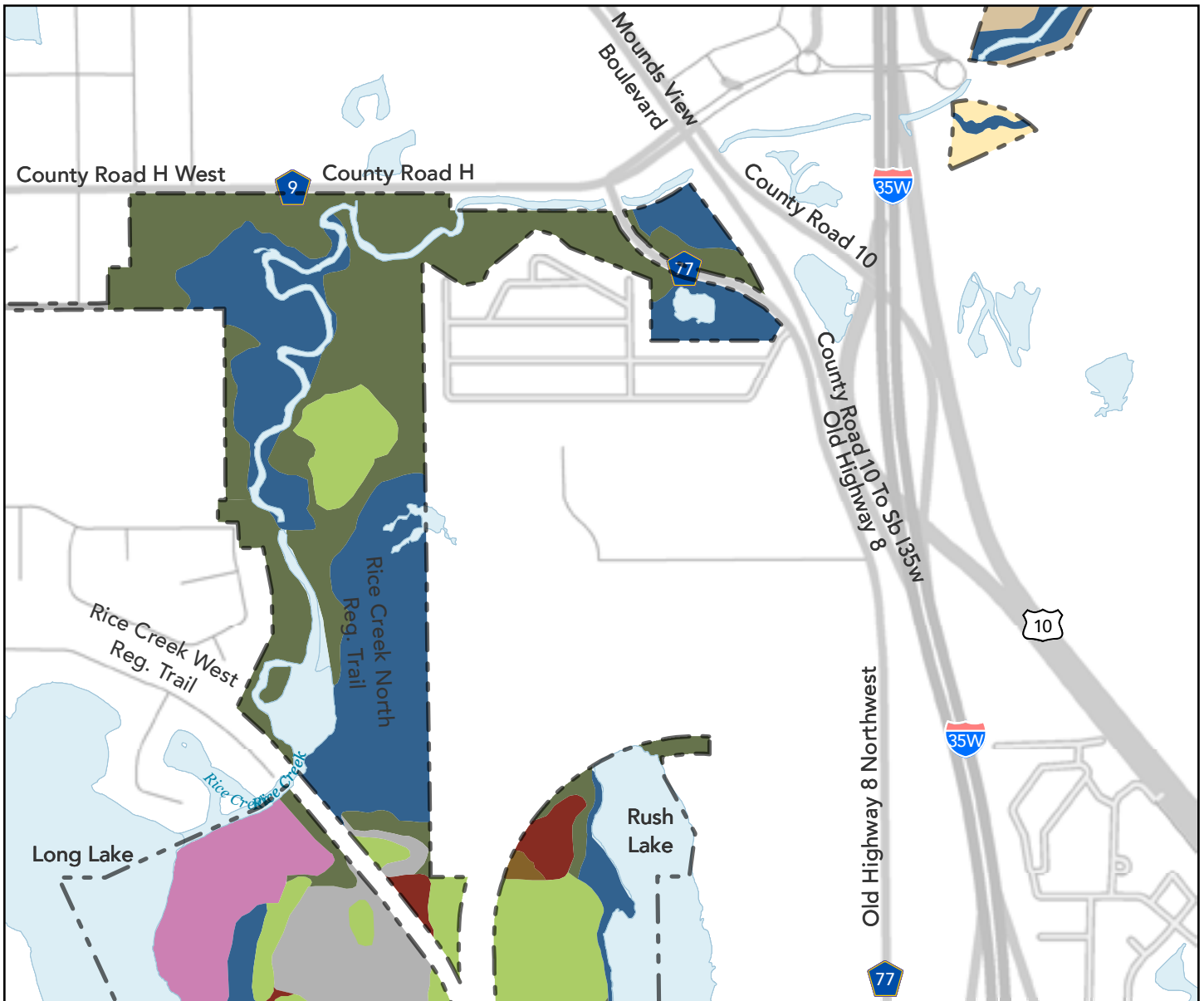
PROPOSED LAND COVER - CENTRAL SECTION



Proposed Land Cover

- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |

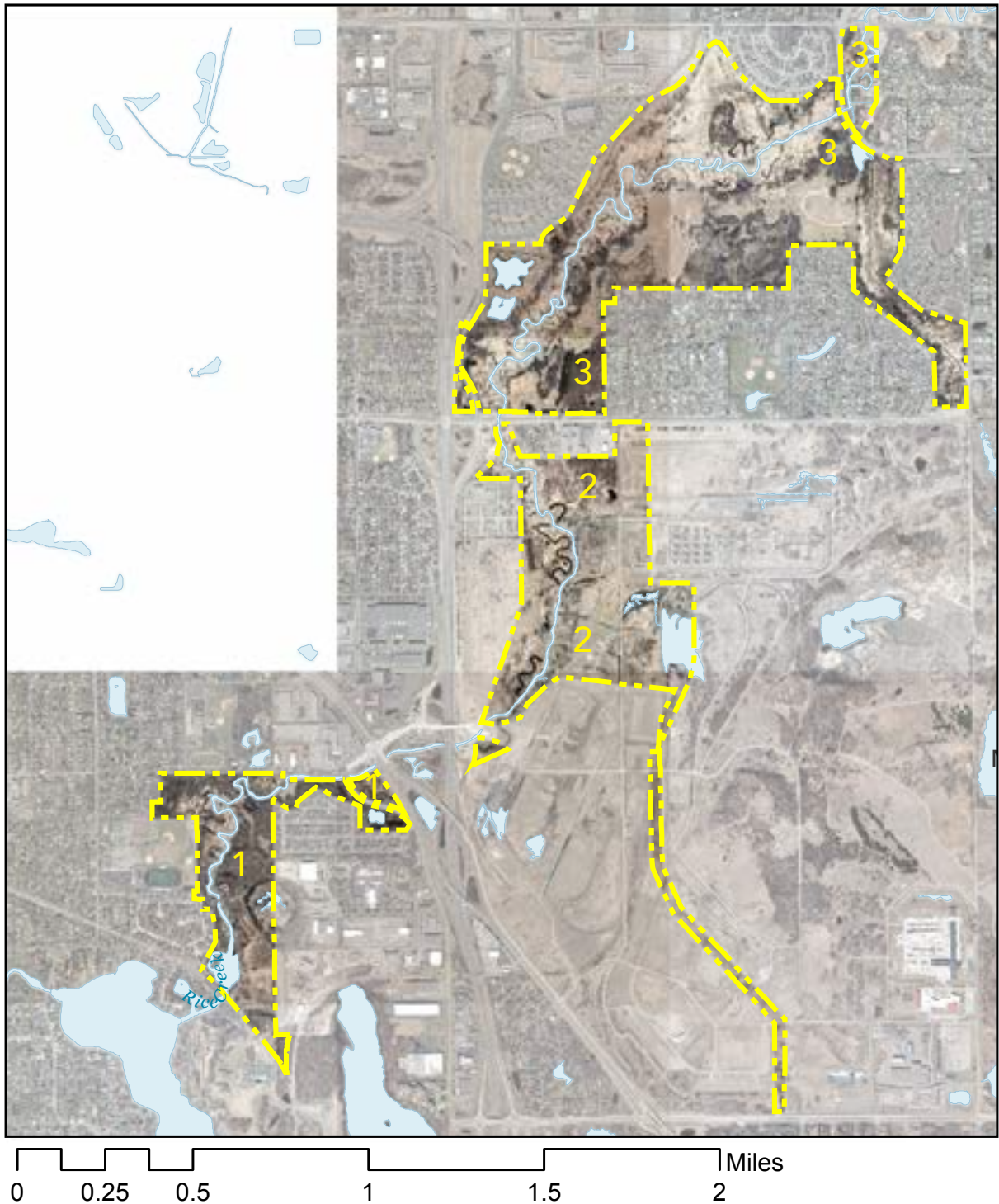
PROPOSED LAND COVER - SOUTH SECTION



Proposed Land Cover

- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |

NATURAL RESOURCE MANAGEMENT UNITS



Legend

- Management Unit #
- Management Unit Border - - - - -

RICE CREEK NORTH REGIONAL TRAIL

NATURAL RESOURCE MANAGEMENT UNIT TABLE

MANAGEMENT UNIT 1 - RICE CREEK REGIONAL TRAIL							
ACRES	CURRENT LAND COVER	PRO-POSED LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIOR-ITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
0.98	OLD FIELD	PRAIRIE	MOW, HERBI-CIDE, RX BURN, DRILL SEED	\$1,950.50	3	RX BURN, FOLIAR SPRAY OF HERBA-CEOUS	\$1,029.00
1.75	ACTIVE USE	ACTIVE USE	N/A	N/A	N/A	N/A	N/A
4.81	OPEN WATER	OPEN WA-TER	N/A	N/A	N/A	N/A	N/A
8.59	OAK WOODS	OAK WOODS	INVASIVE WOODY REMOV-AL, CUT, STUMP TREAT, STACK & BURN, RX BURN, NATIVE SEED	\$30,067.97	2	RX BURN, FOLIAR SPRAY OF BUCK-THORN	\$8,161.31
48.48	WETLAND	WETLAND	MONITOR	N/A	N/A	N/A	N/A
54.03	MIXED WOODS	MIXED WOODS	INVASIVE WOODY REMOV-AL, CUT, STUMP TREAT, STACK & BURN, RX BURN, NATIVE SEED	\$189,097.48	2	RX BURN, FOLIAR SPRAY OF BUCK-THORN	\$27,013.93
MANAGEMENT UNIT 1 TOTAL							
118.63				\$221,115.95			\$36,204.23

MANAGEMENT UNIT 2 - RICE CREEK REGIONAL TRAIL							
ACRES	CURRENT LAND COVER	PRO-POSED LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIOR-ITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
4.08	ACTIVE USE	ACTIVE USE	N/A	N/A	N/A	N/A	N/A
0.11	SHRUB SWAMP	SHRUB SWAMP	INVASIVE WOODY RE-MOVAL, CUT, STUMP TREAT, STACK & BURN	\$220.00	3	FOLIAR SPRAY OF HERBA-CEOUS	\$55.00

RICE CREEK NORTH REGIONAL TRAIL

NATURAL RESOURCE MANAGEMENT UNIT TABLE

MANAGEMENT UNIT 2 - RICE CREEK REGIONAL TRAIL							
13.02	OAK WOODS	SAVANNA 4.66 ACRES, OAK WOODS 8.36 ACRES	INVASIVE WOODY REMOV- AL, CUT, STUMP TREAT, STACK & BURN, RX BURN, NATIVE SEED	\$45,570.00	2	FOLIAR SPRAY OF BUCK- THORN	\$6,510.00
18.90	MIXED WOODS	SAVANNA 7.21 ACRES, MIXED WOODS 11.69 ACRES	MOW, HERBI- CIDE, RX BURN, DRILL SEED	\$37,800.00	2	FOLIAR SPRAY OF BUCK- THORN	\$9,450.00
64.73	WETLAND	WETLAND	MONITOR	N/A	N/A	N/A	N/A
126.57	OLD FIELD	SAVANNA	MOW, HERBI- CIDE, RX BURN, DRILL SEED	\$253,140.00	2	RX BURN, FOLIAR SPRAY OF HERBA- CEOUS	\$63,285.00
MANAGEMENT UNIT 2 TOTAL							
227.41				\$336,730.00			\$79,300.00

MANAGEMENT UNIT 3 - RICE CREEK REGIONAL TRAIL							
ACRES	CURRENT LAND COVER	PRO- POSED LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIOR- ITY	MAINTEN- ANCE	MAINTEN- ANCE COST/ 3 YEARS
2.15	CULTIVATED CONIFERS	OAK WOODS	INVASIVE WOODY RE- MOVAL AND HAUL OFF SITE, MOW, HERBI- CIDE, RX BURN, DRILL SEED, PLANT OAKS	\$3,200.00	3	FOLIAR SPRAY OF BUCK- THORN	\$1,074.76
3.23	ACTIVE USE	ACTIVE USE	N/A	N/A	N/A	N/A	N/A
5.28	SHRUB SWAMP	SHRUB SWAMP	INVASIVE WOODY RE- MOVAL, CUT, STUMP TREAT, STACK & BURN	\$10,558.35	2	FOLIAR SPRAY OF BUCK- THORN	\$2,639.59
6.30	OPEN WATER	OPEN WA- TER	N/A	N/A	N/A	N/A	N/A

RICE CREEK NORTH REGIONAL TRAIL

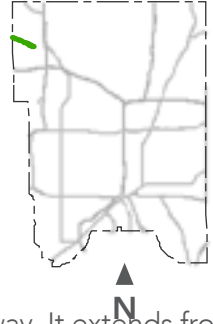
NATURAL RESOURCE MANAGEMENT UNIT TABLE

MANAGEMENT UNIT 3 - RICE CREEK REGIONAL TRAIL							
12.68	OAK WOODS	OAK WOODS	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN, RX BURN, NATIVE SEED	\$44,391.25	2	RX BURN, FOLIAR SPRAY OF BUCKTHORN	\$12,049.05
49.49	PRAIRIE	PRAIRIE	N/A	N/A	2	RX BURN, FOLIAR SPRAY OF HERBACEOUS	\$34,624.83
64.08	OLD FIELD	OLD FIELD 25.36 ACRES	N/A	N/A	N/A	N/A	N/A
		PRAIRIE 38.72 ACRES	MOW, HERBICIDE, RX BURN, DRILL SEED	\$77,440.00	2	FOLIAR SPRAY OF HERBACEOUS	\$40,656.00
85.85	MIXED WOODS	MIXED WOODS	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN	\$171,706.51	3	FOLIAR SPRAY OF HERBACEOUS	\$25,755.98
216.74	WETLAND	WETLAND	MONITOR	N/A	N/A	N/A	N/A
MANAGEMENT UNIT 3 TOTAL							
445.81				\$307,296.11			\$116,800.21
RICE CREEK REGIONAL TRAIL CORRIDOR TOTAL							
791.85				\$865,142.06			\$232,304.45



# RICE CREEK WEST REGIONAL TRAIL

## EXISTING SITE CONDITIONS



### LOCATION AND SIZE

Rice Creek West Regional Trail is located in the northwest corner of Ramsey County in the city of New Brighton. The Rice Creek West Regional Trail is part of a 14-mile regional trail extending from the Chain of Lakes Regional Park Reserve in Anoka County to the Mississippi River by way of Long Lake Regional Park. The trail is 1½ miles in length in Ramsey County, and continues an additional 4 miles in Anoka County to the Mississippi River. The Ramsey County segment is on a 25-foot wide strip of property at the edge of the Minnesota Transfer Railroad rights of way. It extends from the north end of Long Lake Regional Park on the east to the Ramsey-Anoka County line at County Road H on the west.



### SITE CHARACTERISTICS

The corridor is a relatively level narrow strip of land between the railroad tracks and residential property. A portion of the corridor has an overhead power line.



### RECREATION DEVELOPMENT

A 10-foot wide bituminous multi-use trail has been constructed. In response to safety and security concerns expressed by adjacent property owners, a 6-foot chain link fence was installed on the common property line where requested. The trail connects to the Anoka County trails in the city of Fridley and to the existing trails at the north end of Long Lake Regional Park.

### PLANNING CONSIDERATIONS

Given the fact that this trail is part of a 14-mile regional trail jointly managed by Anoka and Ramsey Counties, a coordinated signing system should be developed and implemented throughout the regional trail.

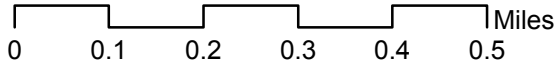
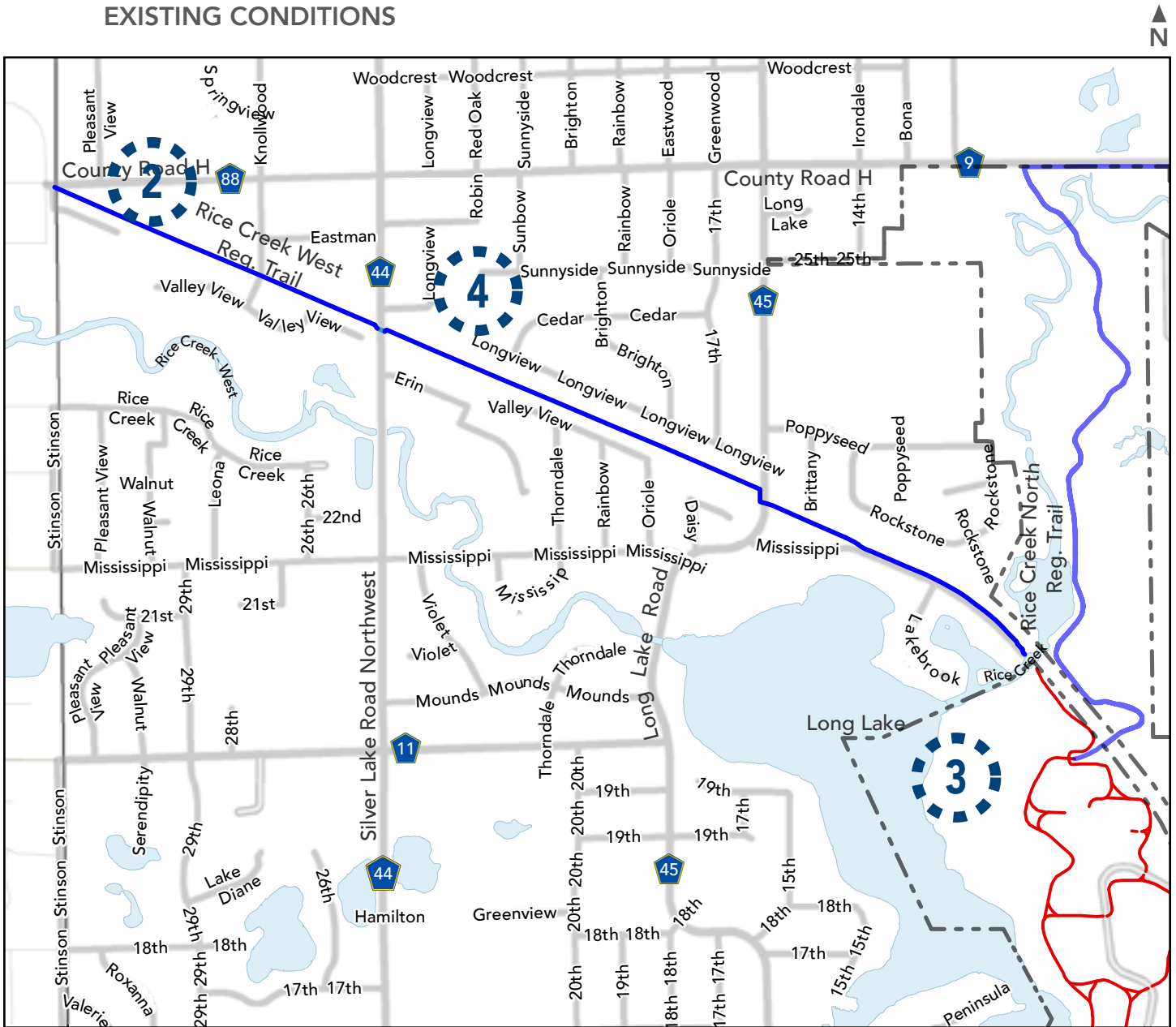


### MAINTENANCE

#### Winter Maintenance:

- Plow from Long Lake Regional Park to County Road H

EXISTING CONDITIONS



Legend

- Park Border
- Park Entrance
- Development Node 1
- Metro Tranist Stop T
- Park Paved Trail
- Park Turf Trail
- Municipal Trail
- Municipal Ped/Bike Facility
- Regional Trail

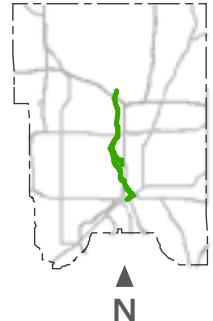
# TROUT BROOK REGIONAL TRAIL

## EXISTING SITE CONDITIONS



### LOCATION AND SIZE

Trout Brook Regional Trail is a 1.6-mile trail extending from Lake McCarron's County Park to the Gateway Section of the Willard Munger State Trail. The trail is located in the cities of Maplewood and Saint Paul. The trail has been constructed on right of way owned by the Saint Paul Regional Water Services and city of Saint Paul road right of way. The master plan for Trout Brook Regional trail is a joint regional trail master plan between Ramsey County and the city of Saint Paul and was approved in October 2009 by the Ramsey County Board of Commissioners, city of Saint Paul, and the Metropolitan Council. Several changes to the existing regional trail and additional development is proposed throughout the trail corridor which will require additional master planning activities.



N



### SITE CHARACTERISTICS

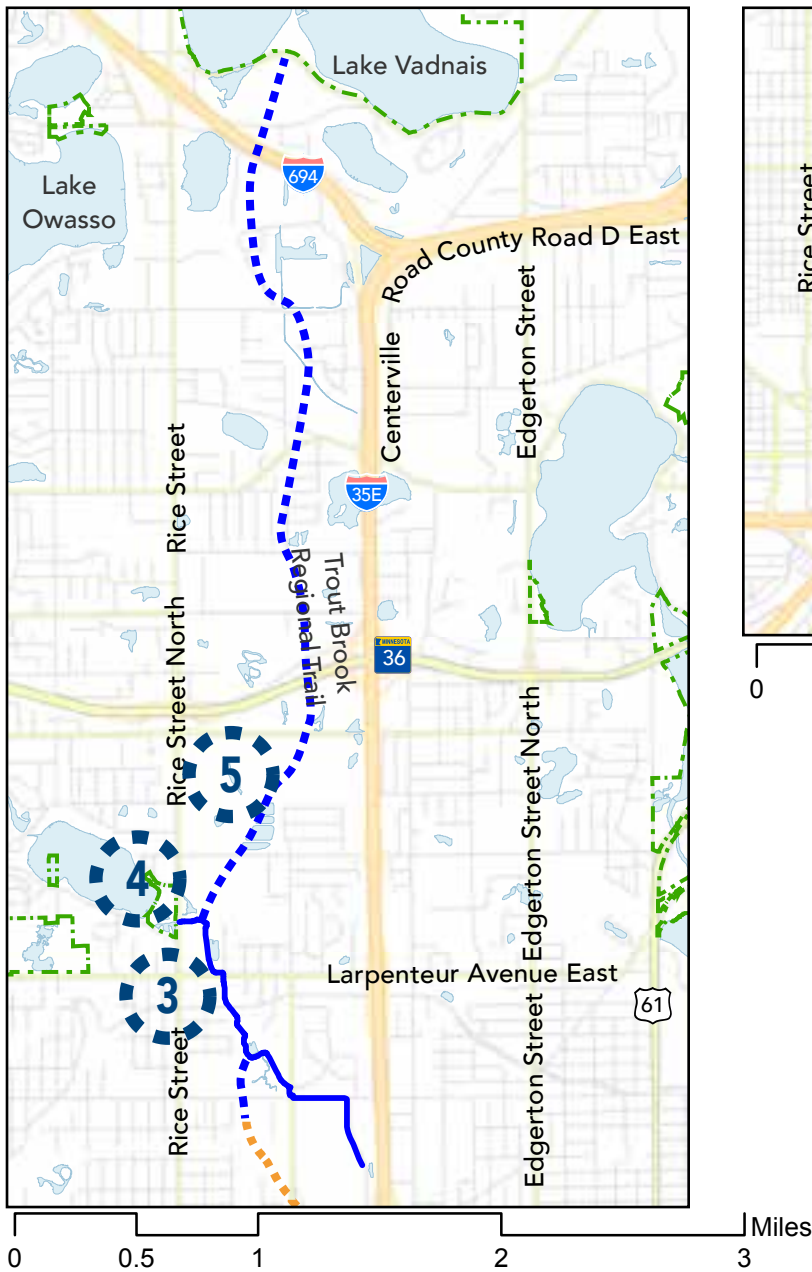
The 1.1 mile trail section between Lake McCarron's County Park and Arlington Avenue is located within Saint Paul Regional Water Services' right of way. The right of way is a naturally vegetated corridor 100 to 500 feet wide following Trout Brook. The corridor also contains water distribution pipe (below grade) maintained by the Saint Paul Regional Water Services.



### RECREATION DEVELOPMENT

A bituminous trail has been developed between Lake McCarrons County Park and the Gateway Trail. West of Lake McCarrons County Park, local trail connections extend into Reservoir Woods Park and the Woodview Protection Open Space site.

EXISTING CONDITIONS



Legend

- |                    |  |                             |  |  |  |
|--------------------|--|-----------------------------|--|--|--|
| Park Border        |  | Park Paved Trail            |  | Regional Trail                           |  |
| Park Entrance      |  | Park Turf Trail             |  | Proposed Regional Trail                  |  |
| Development Node   |  | Municipal Trail             |  | Regional Trail (Managed by Other Entity) |  |
| Metro Tranist Stop |  | Municipal Ped/Bike Facility |  |  |  |

## PLANNING CONSIDERATIONS

Extension of the Trout Brook Trail south of its current location and a connection to the Bruce Vento Regional Trail and the city of Saint Paul's Trillium Trail will require coordination with the city of Saint Paul, community groups, and the Minnesota Department of Transportation. Trail alignment and its relationship with the Gateway Trail will be analyzed to establish the best alignment and avoid unnecessary duplication. As the county has participated in the Trillium Trail procurement the Parks & Recreation department will work in partnership with these organizations to complete these connections.

It should be noted that the Metropolitan Council in their recently adopted Comprehensive Parks and Trails Plan designated the Ramsey County Trout Brook Trail a regional trail and that plan included the proposed trail connection south from Arlington/Jackson through Trillium to Cayuga/I- 35E (which is scheduled for reconstruction).

## PROPOSED DEVELOPMENT

### 1. Master Planning

A master plan amendment is planned for 2019 to address a proposed regional trail extension north of Lake McCarron's County Park to Vadnais Snail Lakes Regional Park, changes within the regional corridor, inclusion of Lake McCarron's County Park into Regional Park and Trail system as part of the Trout Brook Regional Trail, and additional recreation opportunities. Development of the regional trail corridor will follow items addressed in the 2019 master plan amendment until future changes are required as development needs arise for trail improvements. Trail improvements to existing sections of regional trail and new development of regional trail that is located on SPRWS property will need to be coordinated with SPRWS.

- Develop partnerships with Saint Paul Regional Water Service (SPRWS), the cities of Saint Paul, Maplewood, Little Canada, and Vadnais Heights, Minnesota Department of Transportation (MNDOT), Canadian Pacific Railway, Capitol Regions Watershed District (CRWD), Ramsey Washington Metro Watershed District (RWMWD), Vadnais Lakes Area Water Management Organization (VLAWMO), other local agencies, adjacent schools, and private parties adjacent to the corridor for funding strategies, increased recreational opportunities, and proposed improvements.

### 2. Trout Brook Regional Trail Feasibility Study

In 2011 a feasibility study was completed by the Cities of Maplewood and Little Canada for potential regional trail alignments extending north of Lake McCarron's County Park to Vadnais-Snail Lakes Regional Park. The feasibility study highlighted several options for trail alignments with potential impacts and associated costs. Ramsey County is using this plan as a basis to determine the proposed trail alignment for the extension of Trout Brook Regional Trail.

### 3. Rice Larpenteur Vision Plan

The Rice Larpenteur Vision Plan was a collaborative effort of the cities Maplewood, Roseville, Saint Paul, and Ramsey County. The primary purpose of this plan is to create a strategy to manage future growth within the roadway corridor and to focus on a corridor that is safe, comfortable, with access to natural amenities such as Lake McCarron's County Park and the Trout Brook Regional Trail. Additional planning activities will guide development within the corridor and address park and recreation development at

## PROPOSED DEVELOPMENT

Lake McCarron's County Park and the Trout Brook Regional Trail.

### 4. Regional Park & Trail

Investigate opportunities for inclusion of Lake McCarron's County Park into the regional park and trail system as part of the Trout Brook Regional Trail Master Plan Amendment. It is proposed that Lake McCarron's County Park would serve as a regional trailhead facility for the Trout Brook Regional Trail.

### 5. Railway

Canadian Pacific owns the active railway lines adjacent to the regional trail corridor. Proposed improvements to existing sections of regional trail and new development of the regional trail within the corridor should be coordinated with Canadian Pacific Railway.

### 6. Trail Access

- Redevelop existing access points throughout the corridor for improved access to recreational amenities. Additional access points may be proposed for increased connection to neighborhoods if the need arises
- Several access points to the regional trail are in existing roadway corridors. There has been a demand to redevelop many of these access points for improved access and safety while crossing roads. Proposed improvements may consist of redevelopment of existing at-grade crossings, realignment of access points, safety signaling, and trail transition areas. A planning study may be required to identify necessary improvements for these crossings.
- There has been a demand to increase access points to adjacent residential neighborhoods and commercial areas. Additional access points will be proposed for undeveloped trail sections as trail development occurs. A planning study may be required to identify additional trail connections to the corridor.

### 7. Trail Development

- **Existing Trail:** Redevelop existing sections of regional trail for improved use and more direct trail connections to amenities. Improvements shall consist of trail repaving, re-alignment of trail sections, and the reduction of sharp corners and steep slopes adjacent to trails. Improvements to the existing trail shall be coordinated with SPRWS.

### 8. Trailhead Parking Lots

Lake McCarron's County Park serves as a trailhead for the Trout Brook Regional Trail. There are no additional trailhead parking lots for the south portion of trail located within the Ramsey County section. The city of Saint Paul has identified trailhead locations for the regional trail south of Arlington/Jackson as part of the Trillium Park Nature Area. There has been a demand to increase parking opportunities for access to the regional trail corridor. Additional trailheads are proposed for new sections of trail to be developed. Additional planning studies may be required to determine parking opportunities for existing sections of trail, partnerships, and potential new trailhead locations.

## PROPOSED DEVELOPMENT

### 9. Wayfinding

- Improve pedestrian signage for improved wayfinding to trail accesses, trail crossings at roadway corridors, and other amenities. Provide interpretive signage in natural areas for increased nature education opportunities.
- Vehicular entrance signage is proposed to be developed with additional parking opportunities along the regional trail corridor with new trail development.

### 10. Recreation Opportunities

- **Public Art:** Provide the opportunity and appropriate infrastructure to accommodate public art for improved community connections.
- **Culturally Significant Areas:** Provide connections and interpretive education for culturally significant areas along the railway corridor. Proposed improvements would consist of interpretive educational signage and pedestrian connections for viewing opportunities.
- **Programming:** Increase recreation and nature programming activities. This may be accomplished through interpretive and educational signage.
- **Wildlife Areas:** Provide visual and interpretive educational signage and pedestrians to wildlife areas. If federally or state listed protected plants or animals are discovered statutes and guidelines will be followed.

### 11. Acquisitions

Future acquisitions and easements are proposed for adjacent properties along the corridor for inclusion into Trout Brook Regional Trail when properties become available. Acquisition of properties and easement will allow additional development within the trail corridor. Further master planning activities would be required to determine recreation uses for any expansion of the trail.

## COUNTY PARKS

The county park areas tend to be of limited size and resource base (generally associated with a significant water recreation resource) that offer a range of related outdoor recreational opportunities for county and metropolitan area residents. They have natural resource based facilities and amenities. The county parks differ from city parks in that they tend to focus on passive recreation and the natural resources rather than active sports that city parks tend to accommodate.

The county parks operation and capital funding is mostly provided through the levy. There are occasional capital grants available but the regular funding comes totally from the levy. Poplar Lake County Park is undeveloped with a portion currently utilized for a yard waste site. A master planning process would be the first step towards development of this park and could be a realistic goal within the next 10 years. Lake Owasso is the last of the county parks being redeveloped from 2017 to 2020 and then planning begins for redevelopment of all of the other county parks. New master plans will begin the process for each location.

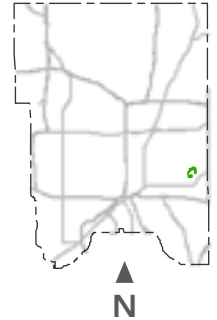
### Objectives:

- To provide outdoor recreation facilities for intense public use that complement the natural resource base.
- To provide public access to waterbodies.
- To accommodate maximum use of site resources.
- To provide facilities that require intense management.
- To accommodate exclusive-use requests and special-interest groups.
- To protect and manage significant natural resources within park units for aesthetic enjoyment and outdoor education.

There are currently nine county parks under the jurisdiction of Ramsey County. These parks total 726.49 acres.



## BEAVER LAKE COUNTY PARK



### EXISTING SITE CONDITIONS

MASTER PLAN DATE: ANTICIPATED IN 2019

#### LOCATION AND SIZE

Beaver Lake County Park is located in the southeast part of Ramsey County in the cities of Saint Paul and Maplewood, with a total size of 55 acres. The park is bounded by Stillwater Avenue on the south, Lakewood Drive on the east, Maryland Avenue on the north and Edgewater Boulevard on the west.

#### SITE CHARACTERISTICS

The predominant natural feature of the park is Beaver Lake, a shallow 75-acre lake. The park includes a relatively narrow band of property around the entire lake except for a ¼-mile wide residential area on the southeastern shore. The park property includes wetlands, wooded areas, and the existing recreation area which is mowed grass.

#### RECREATION DEVELOPMENT

##### Existing Development

A 10-acre picnic site is located on the west shore of the lake. The picnic site includes a 30-car parking lot, small picnic shelter, game field, play area and fishing pier. An aeration system maintains the fish population through the winter. The Minnesota Department of Natural Resources stocks the lake with fish. A bituminous pedestrian/bicycle trail within the right of way of Lakewood Drive, follows the east side of the lake and continues within the park forming a loop around the lake. In the ¼-mile area along Case Avenue where there is no park property, the trail loop follows Case Avenue, a very low volume residential street.

#### MAINTENANCE

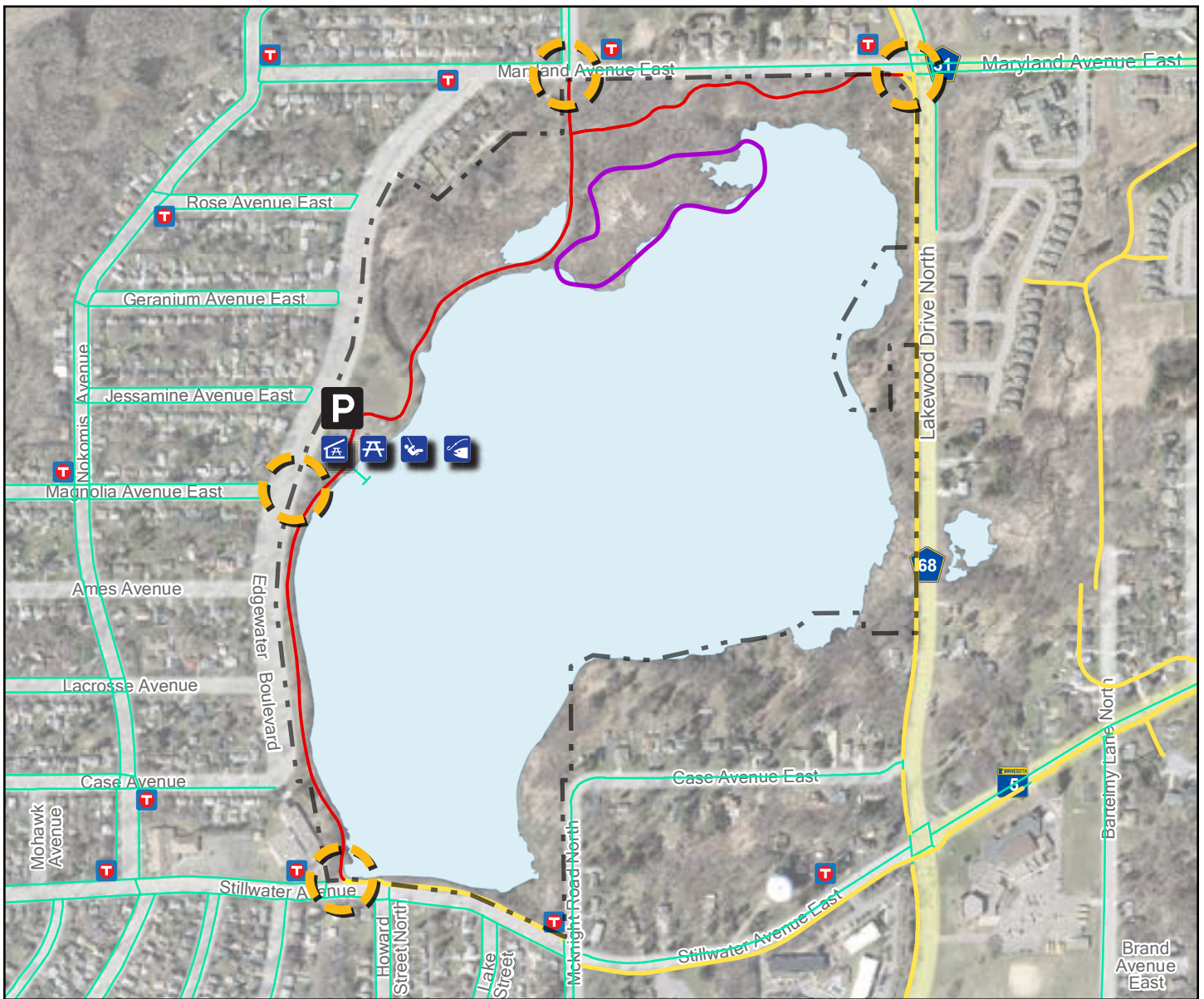
##### Winter Maintenance:

- Plow path from McKnight and Maryland to Stillwater Ave East for school

##### Special maintenance items:

- Park is closed for winter and gate is locked
- Gate closed by Sheriff's department nightly to prevent vandalism and enforce ordinance
- Order portable toilet for summer season
- Remove dumpster in the winter to prevent illegal dumping
- Remove homeless camps immediately upon discovery
- Check playground in the spring to repair damage from frost heaves

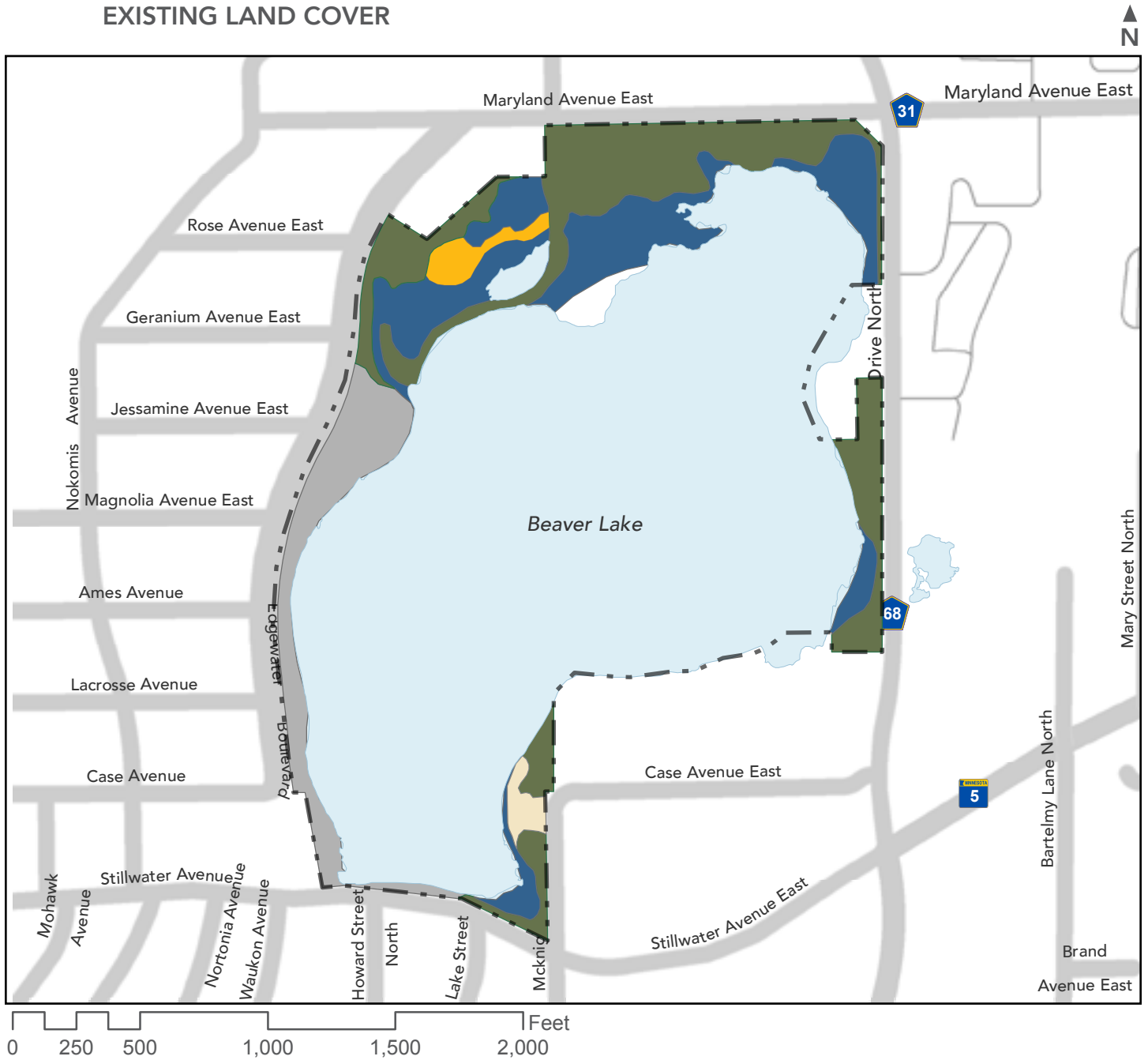
EXISTING CONDITIONS



Legend

Park Border		County Paved Trail		Picnic Shelter	
Park Entrance		Municipal Trail		Picnic Area	
Metro Transit Stops		Municipal Sidewalk		Playground	
		Regional Trail		Fishing Pier	
		Proposed Reg. Trail		Parking Lot	

EXISTING LAND COVER



Existing Land Cover

- |                     |                   |            |                 |
|---------------------|-------------------|------------|-----------------|
| Active Use          | Floodplain Forest | Oak Woods  | Remnant Prairie |
| Impervious          | Mesic Forest      | Old Field  | Savanna         |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp     |
| Tamarack Swamp      | Wetland           | Open Water |                 |

## BEAVER LAKE COUNTY PARK

### LAND COVER AND HABITAT

Most of the habitat exists in the northern portion of the park and consists of wetlands, shrub swamp, and mixed woods amongst rolling topography. A small portion of degraded mixed woods and old field is located south and east of Beaver Lake. The shoreline of Beaver Lake consists of a cattail marsh wetlands.

### WILDLIFE

The park hosts a variety of common wildlife. The park has a diverse number of nesting songbirds and waterfowl.



### WILDLIFE MANAGEMENT

The Canada goose population is monitored and roundups will be conducted when numbers exceed the social and/or carrying capacity.

### SURFACE WATER RESOURCES

Beaver Lake is an 87 – acre lake, mostly surrounded by county parkland. There is an outlet structure located in the southwest corner of the lake and the lake is aerated in the winter. There is a wetland that was created for storm water control located in the northwest corner of the park. There is no public boat access, although there is a fishing pier on the west shoreline within the county park. As mentioned, the shoreline on the west side of the park is steep and is eroding, especially along makeshift walking paths to shoreline fishing locations, restoration is needed to prevent further erosion.

PROPOSED DEVELOPMENT



Legend

- Park Border
- Proposed Development 3
- Proposed Development Node 2
- County Path
- Municipal Trail
- Municipal Sidewalk
- Parking Lot P
- Metro Transit Stop T

## PLANNING CONSIDERATIONS

Beaver Lake County Park is located in both the city of Maplewood and the city of Saint Paul. The primary developed area is on the Saint Paul side of the park. The park is the next county park in line for redevelopment activities and master planning will need to be completed in order to assess the direction the county should take with the park.

## PROPOSED DEVELOPMENT

### 1. Master Planning - Master planning activities will begin in 2019.

This master plan will inform future redevelopment and funding efforts.

- Develop a picnic shelter with adjacent restroom facility. Building development shall comply with Americans with Disabilities Act (ADA), and Universal Design standards.
- Relocate playground away from water edge to reduce damage to playground equipment and to provide better access to proposed building structures.
- Possible additional lighting for evening activities. (Although ordinance prohibits events beyond a certain time so lighting may be a wasted resource)
- Additional security features. There have been several issues with break-ins and vandalism of facilities in the past. If the county were to invest in additional new facilities such as the picnic pavilion, additional security would be needed.
- Improve multi-use turf area for increased recreational opportunities.
- Provide an area for court games such as Tug of War and volleyball.
- Provide opportunities and appropriate infrastructure to accommodate public art.
- Increase fishing opportunities within the main park area and provide a secondary fishing node access.
- Provide necessary improvements to the existing fishing pier.
- Provide secondary fishing nodes on the north and west sides of the lake.
- Increase recreation and nature programming activities for additional recreation opportunities.
- Water Access – Provide swimming and water play opportunities within the main park area.
- Canoe/kayak access – Provide access for small water craft such as canoe and kayak within the main park area. Increase variety of rental amenities for potential canoe and kayak rental.
- Programming Elements
  - Yoga in the park
  - Fitness Courses
  - Meditation

### 2. Vehicular and Pedestrian Access

- **Pedestrian Trail Connections:** Increase pedestrian access to trails and the main park area from adjacent neighborhoods. Redevelop trails for an improved loop around the lake. Define an improved trail route along Case Avenue East and McKnight Road North.
- **Vehicular:** Redevelop and increase parking opportunities for improved access to the park.
  - Primary parking lot – Redevelop and expand existing parking lot.
  - Secondary parking area – Develop trailhead parking lot along Maryland Avenue near McKnight/Lakewood Drive North.
- **Wayfinding:**
  - Pedestrian** – Improve pedestrian signage for enhanced wayfinding to trail accesses, and other amenities not located within the main park area. Provide interpretive signage in natural areas for increased nature education opportunities.

## PROPOSED DEVELOPMENT

**Vehicular** – Improve vehicular entrance signage for enhanced wayfinding to the park access. Replace existing park entrance monument sign and provide tertiary signage for recreational amenities not located in the main park area.

### 3. Habitat Restoration & Management

- Currently there is no Active Management within this park
- Removal of woody invasive species and conversion of non-native grass areas to native prairie.

### 4. Acquisitions

- Ramsey County Parks & Recreation has identified properties for future acquisition to be included in Beaver Lake County Park Boundaries.

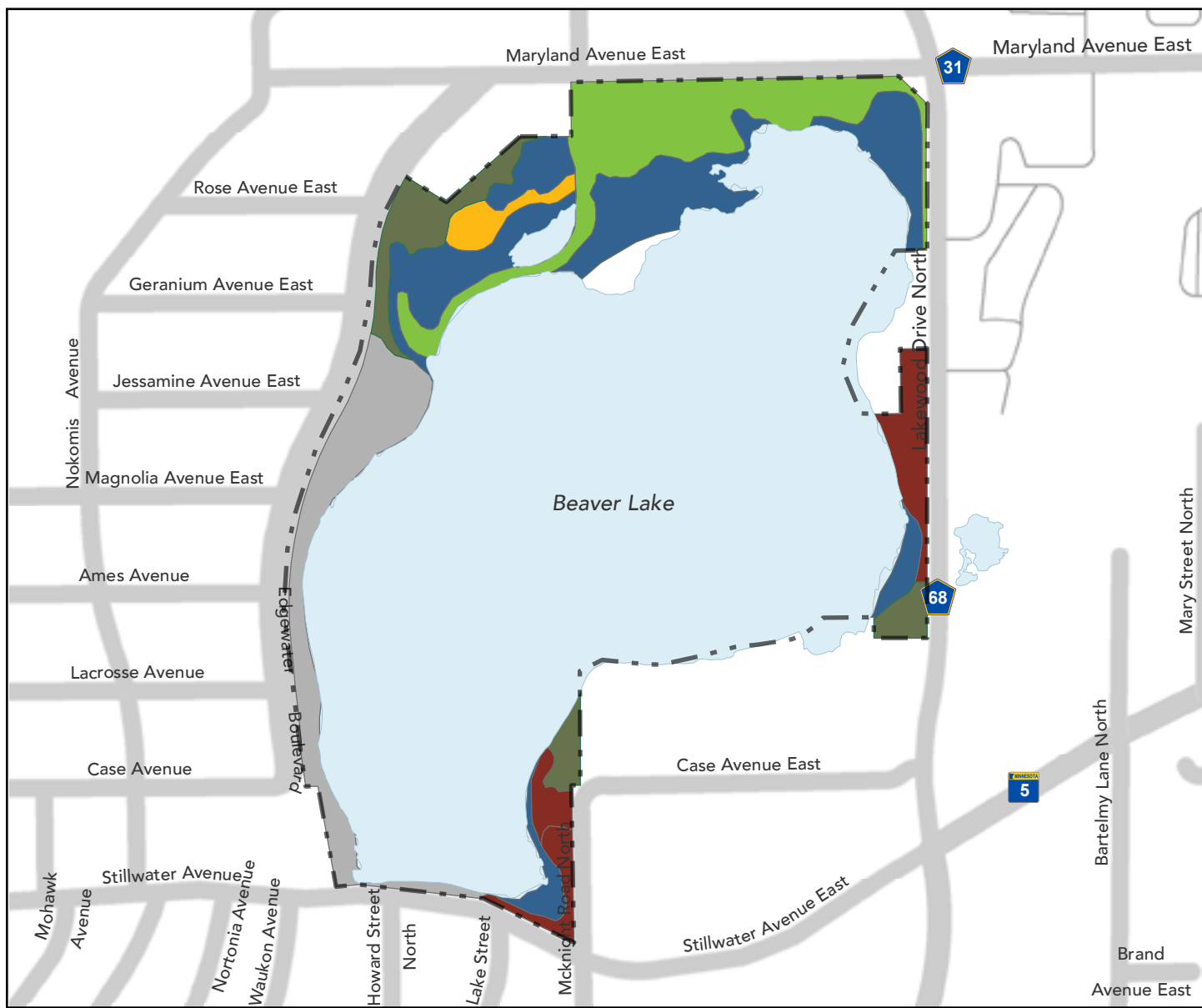
### 5. Energy & Resilience

The current orientation and location of the park shelter is not conducive to rooftop solar arrays. Carport-style solar arrays in the parking lot could potentially provide 14.95 MWh of energy to the site.

The department is in the process of updating the site's master plan, which would lead to a park redevelopment project in a few years. Given the park's low energy use and small size, this project would provide an excellent opportunity for "net-zero" energy consumption. Redevelopment projects must take into consideration building location and orientation in order to maximize solar generation. On-site battery storage should be explored as well.

The future redevelopment project also provides opportunities for innovative stormwater management designs such as rain gardens, permeable pavements, and stormwater filtration systems (given the proximity of Beaver Lake), incorporation of native plantings and trees, nature play areas, and universal design practices to ensure that the park and its amenities are able to be used by all residents, irrespective of race, age, gender, language, and physical ability.

PROPOSED LAND COVER



Proposed Land Cover

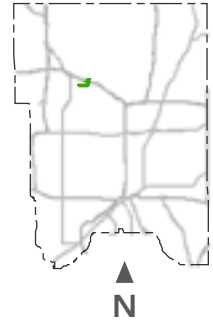
- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |



NATURAL RESOURCE MANAGEMENT UNIT TABLE

ACRES	CURRENT LAND COVER	PRO-POSED LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIOR-ITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
6.01	ACTIVE USE	ACTIVE USE	N/A	N/A	N/A	RX BURN	\$306.90
14.44	MIXED WOODS	OAK WOODS 8.16 ACRES	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK/BURN, RX BURN, NATIVE SEED, PLANT OAKS	\$28,560.00	3	FOLIAR SPRAY OF BUCK-THORN	\$4,080.00
		MIXED WOODS 3.6 ACRES	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK/BURN	\$7,200.00	3	FOLIAR SPRAY OF BUCK-THORN	\$1,800.00
		PRAIRIE 2.68 ACRES	WOODY REMOVAL AND HAUL OFF SITE, MOW, HERBICIDE, RX BURN, DRILL SEED	\$8,576.00	3	RX BURN	\$1,206.00
0.682	OLD FIELD	PRAIRIE	MOW, HERBICIDE, RX BURN, DRILL SEED	\$1,364.00	3	RX BURN	\$306.90
17.42	OPEN WATER	OPEN WATER	MONITOR	N/A	N/A	N/A	N/A
0.99	SHRUB SWAMP	SHRUB SWAMP	MONITOR	N/A	N/A	N/A	N/A
11.36	WETLAND	WETLAND	MONITOR	N/A	N/A	N/A	N/A
<b>PARK TOTAL</b>							
50.902				\$45,700.00			\$7,392.90

## ISLAND LAKE COUNTY PARK



### EXISTING SITE CONDITIONS



#### LOCATION AND SIZE

Island Lake County Park is located in the north-central part of Ramsey County in the city of Shoreview. The park is comprised of three distinct segments: the 22-acre picnic area on the east side of the lake; the 41-acre golf teaching center on the northwest side of the lake; and the 30-acre natural area on the southwest side of the lake. The park is bounded by County Road E on the south, Victoria Street on the east, I-694 on the north and Lexington Avenue on the west.



#### SITE CHARACTERISTICS

Island Lake is a small, shallow, 70-acre lake. The park consists of rolling topography with scattered trees. The park is lightly wooded and has an open feeling. The lake and park are ideally suited for shore fishing or water-ski events.



#### RECREATION DEVELOPMENT

A picnic area with interior roads, parking for 270 cars, two restrooms with water and sewer, three picnic shelters (two for 100 people with electrical outlets and one for 50 people), a large play area, one mile of bituminous trails, ball field, two sand volleyball courts, picnic tables, and benches are located on the east side of the lake. A boat launch is located on the northwest side of the lake with parking lot for 5 car and boat trailers and 9 car stalls to support a fishing pier. The road to the boat launch from the east side of the park is considered a shared multi-use road and trail. An aeration system maintains the fish population. A 41-acre golf teaching facility is located on the northwest side of the lake. It includes a clubhouse, maintenance shop, putting course, driving range, and a par three 9-hole golf course. A bituminous trail extends from the boat launch to Milton Street and west to Lexington Avenue on the southwest side of the lake. This trail provides public access into the 30-acre natural area of the park.



#### MAINTENANCE

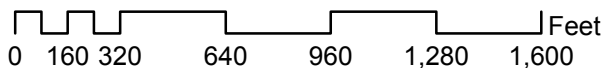
Winter Maintenance:

- Maintain access to boat launch
- Plow boat launch parking lot

### Special maintenance items

- Preparation for Slice of Shoreview
  - Have parking lots swept prior to events
  - Move dumpsters out of carnival ride location
  - Stock additional consumable supplies for event
  - Add additional staff for weekend to prepare shelters and bathrooms.
  - Groom volleyball courts daily and check nets
  - Inspect park post event for damage and arrange repairs as needed

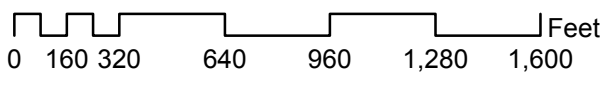
EXISTING CONDITIONS



Legend

Park Border		County Paved Trail		Restrooms		Shore Fishing	
Park Entrance		Municipal Trail		Picnic Area		Carry In	
Metro Transit Stops		Municipal Sidewalk		Playground		Beach	
		Regional Trail		Boat launch		Picnic Shelter	
				Parking Lot		Fishing Pier	

EXISTING LAND COVER



Existing Land Cover

- |                     |                   |            |                 |
|---------------------|-------------------|------------|-----------------|
| Active Use          | Floodplain Forest | Oak Woods  | Remnant Prairie |
| Impervious          | Mesic Forest      | Old Field  | Savanna         |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp     |
| Tamarack Swamp      | Wetland           | Open Water |                 |

### LAND COVER AND HABITAT

The parkland on the east side of the lake is active use with no sustainable habitat. There is a small linear section of oak woods separating the golf course from the lake on the west side, with the most sustainable habitat found in the southwest portion of the park. This area consists of mixed woods, containing some oaks, open fields and scattered wetlands. The edges of the mixed woods and open field areas are being encroached at a rapid rate by invasive Amur maple trees, which are causing negative pressure on existing native vegetation that exists within the park.

### WILDLIFE

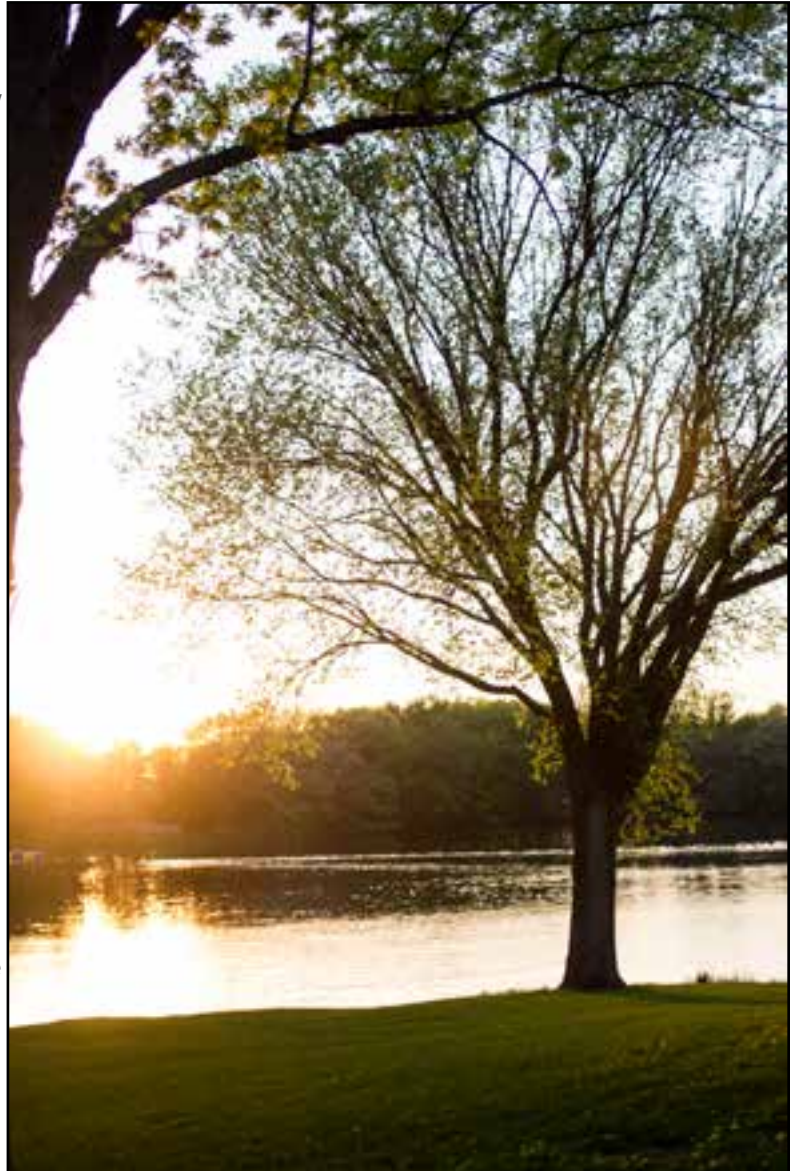
The park hosts diverse wildlife including a variety of nesting songbirds, waterfowl, and raptors. Larger mammals include white-tailed deer, red fox, and raccoons. It is transitory habitat for deer.

### WILDLIFE MANAGEMENT

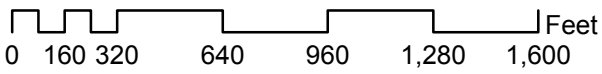
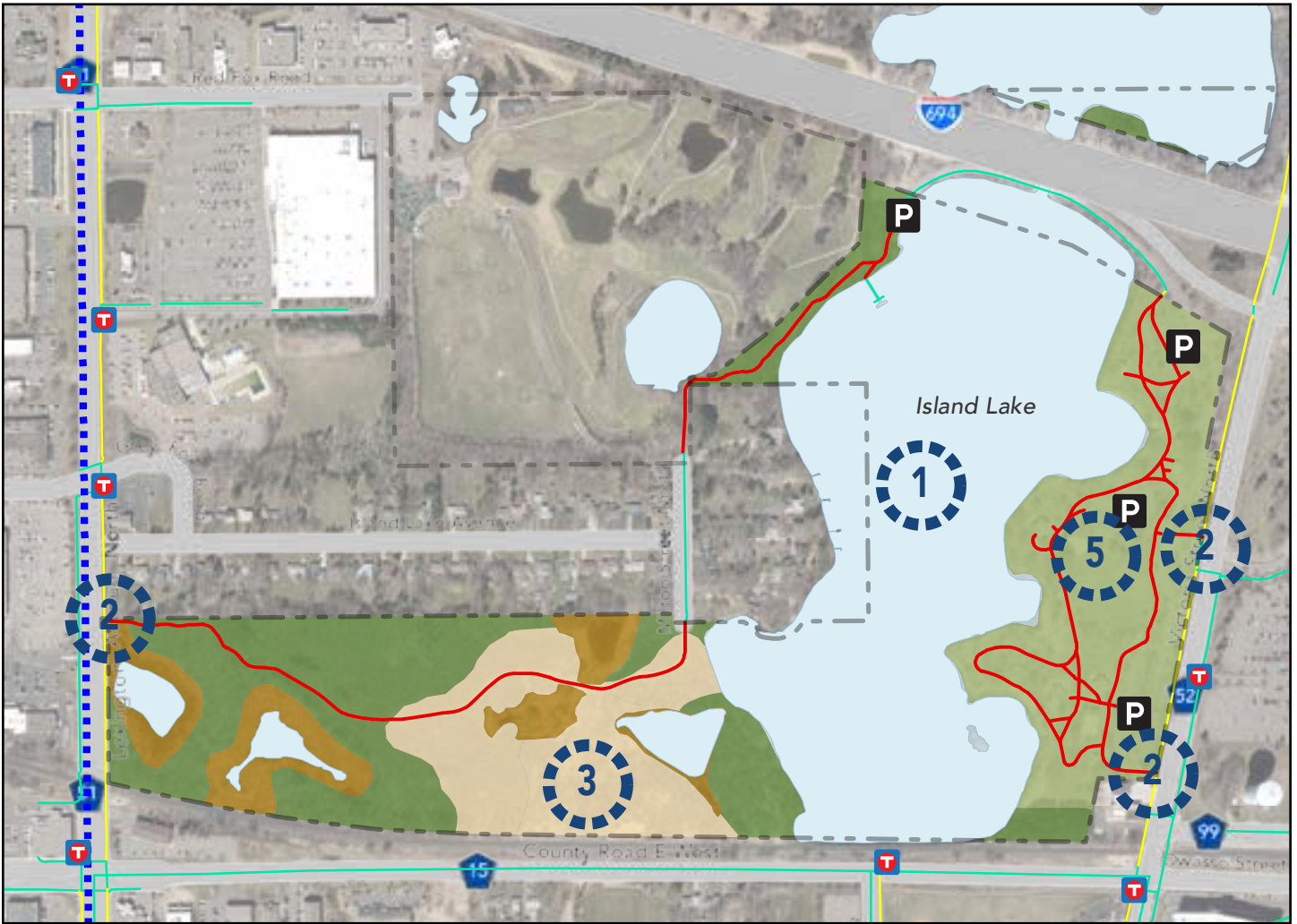
Currently there is not a need for whitetail deer management within the park. Deer surveys are completed annually to determine when deer management should be implemented within the area. The Canada goose population will be monitored and roundups will be conducted when numbers exceed the social and/or carrying capacity.

### SURFACE WATER RESOURCES

Island Lake is around 62 acres and consists of a north and south basin, separated by Interstate 694. There is a boat launch and fishing pier on the west side of the park. There are buffers along the east side of the park separating turf grass from the lake edge, however, there is opportunity to expand these buffers in select areas and to restore sections of shoreline to prevent erosion.



PROPOSED DEVELOPMENT



Legend

Park Border	---	Park Paved Trail	—	Regional Trail	—
Proposed Development	3	Park Turf Trail	—	Proposed Regional Trail	---
Proposed Development Node	1	Municipal Trail	—	Proposed Paved Park Trail	---
Metro Tranist Stop	T	Municipal Ped/Bike Facility	—		

## PLANNING CONSIDERATIONS

A master plan for Island Lake County Park has not been completed to date. Public Engagement shall be used as a primary tool to determine future uses and amenities within the park.

The Trail along the northern boundary of Island Lake, south of I 694, sits on land not owned by the county within the I 694 corridor. The Parks & Recreation Department should continue to work with other agencies and land holders to continue providing access along this route to the northwest portion of the site.

Currently the trail access off of Lexington Avenue does not support equipment or vehicles that maintain the park. Improvements to this access should be looked at to aid in ease of maintenance.

## PROPOSED DEVELOPMENT

### 1. Master Planning

Detailed master planning activities will be addressed in the future as redevelopment needs arise for park improvements. This master plan will inform future redevelopment and funding efforts

- Future improvements to the park will require a future master planning process to address proposed park and recreational opportunities.
- Investigate opportunities for inclusion into the Regional Park and Trail system as part of the Lexington Regional Trail Master Plan.
- Master planning activities for a county-wide golf course study is planned to begin in 2018 to determine long term use and potential improvements for golf courses within the park system. Dependent on outcomes of the golf course study and sustainability of the course, there may be an opportunity to investigate alternate park and recreational opportunities at Island Lake Golf Course.
- There is a need for future improvements to accommodate community events such as the Slice of Shoreview. Possible improvements may consist of improved vehicular and pedestrian access, event areas, and improved recreational amenities that would be conducive for these types of events.
- Redevelop existing picnic shelters and restrooms to provide enhanced recreational amenities for picnic reservations, improved use with adjacent recreational amenities and comply with the Americans with Disabilities Act (ADA), and Universal Design standards.
- Redevelop existing playgrounds for improved use and play. Replace existing playground surface materials for improved accessibility and maintenance operations.
- Improve turf areas for increased recreational and community event opportunities.
- Redevelop existing court areas to provide enhanced recreation opportunities.
- Provide the opportunity and appropriate infrastructure to accommodate public art for improved community connections.
- Increase fishing opportunities within the park area and provide a secondary fishing node.
  - Provide necessary improvements to the existing fishing pier for improved use and maintenance operations.
  - Provide secondary fishing access point along the lake edge where existing conditions allow.
- Increase recreation and nature programming activities.
- Provide access for small water craft within the park area. Increase variety of rental amenities for potential canoe/kayak rental.



## PROPOSED DEVELOPMENT

- Redevelop the existing boat launch facility and parking lot for improved access to Island Lake.

### 2. Vehicular and Pedestrian Access

- **Pedestrian Trail Connections:** Redevelop existing trail systems and increase pedestrian access points into the park for improved connectivity.
- **Access Points:** Redevelop the pedestrian access into the park area from Victoria Street, Lexington Avenue, and access points from adjacent neighborhoods on the west side of the park. An additional trail connection should be developed from Victoria Street at the southeast corner of the park.
- **Trail development:** Redevelop existing trails throughout the park for improved access to recreational amenities. Specific trail projects that have been identified are listed below:
  - Trail development activities have been identified with the 2019 County Capital Improvement budget for trail development along the frontage road adjacent to Interstate 694 to the boat launch facility. Trail development shall consist of on-road and off-road trail sections, and a separated trail system with channel bridge improvements.
  - A boardwalk and necessary trail connections are proposed along the south edge of Island Lake, resulting in a loop around the lake.
  - Additional loop trails are proposed in the southwest corner of the park to provide improved connections and educational opportunities to the natural areas of the park.
- **Vehicular:** Redevelop and increase parking opportunities for improved access to the park.
  - Primary Parking Lot** – Redevelop and expand existing parking lot.
  - Secondary Parking Area** – Redevelop existing parking along entrance road for improved circulation and expanded parking.
- **Wayfinding:**
  - Pedestrian** – Improve pedestrian signage for enhanced wayfinding to trail accesses, and other amenities. Provide interpretive signage in natural areas for increased nature education opportunities.
  - Vehicular** – Improve vehicular entrance signage for enhanced wayfinding to park accesses. Replace existing park entrance park entrance monument sign.

### 3. Habitat Restoration & Management

- Convert Amur dominated woodland edges and old fields to native prairie and remove invasive woody species from the greater mixed woods areas in the southwest section of the park.
- Remove buckthorn and other woody invasive species from the small section of oak woods.
- Prescribed burns of select areas and seeding of a native herbaceous understory to follow the initial removal of invasive woody species.

### 4. Acquisitions

Identify properties for future park acquisition for inclusion into Island Lake County Park when properties become available.

## PROPOSED DEVELOPMENT

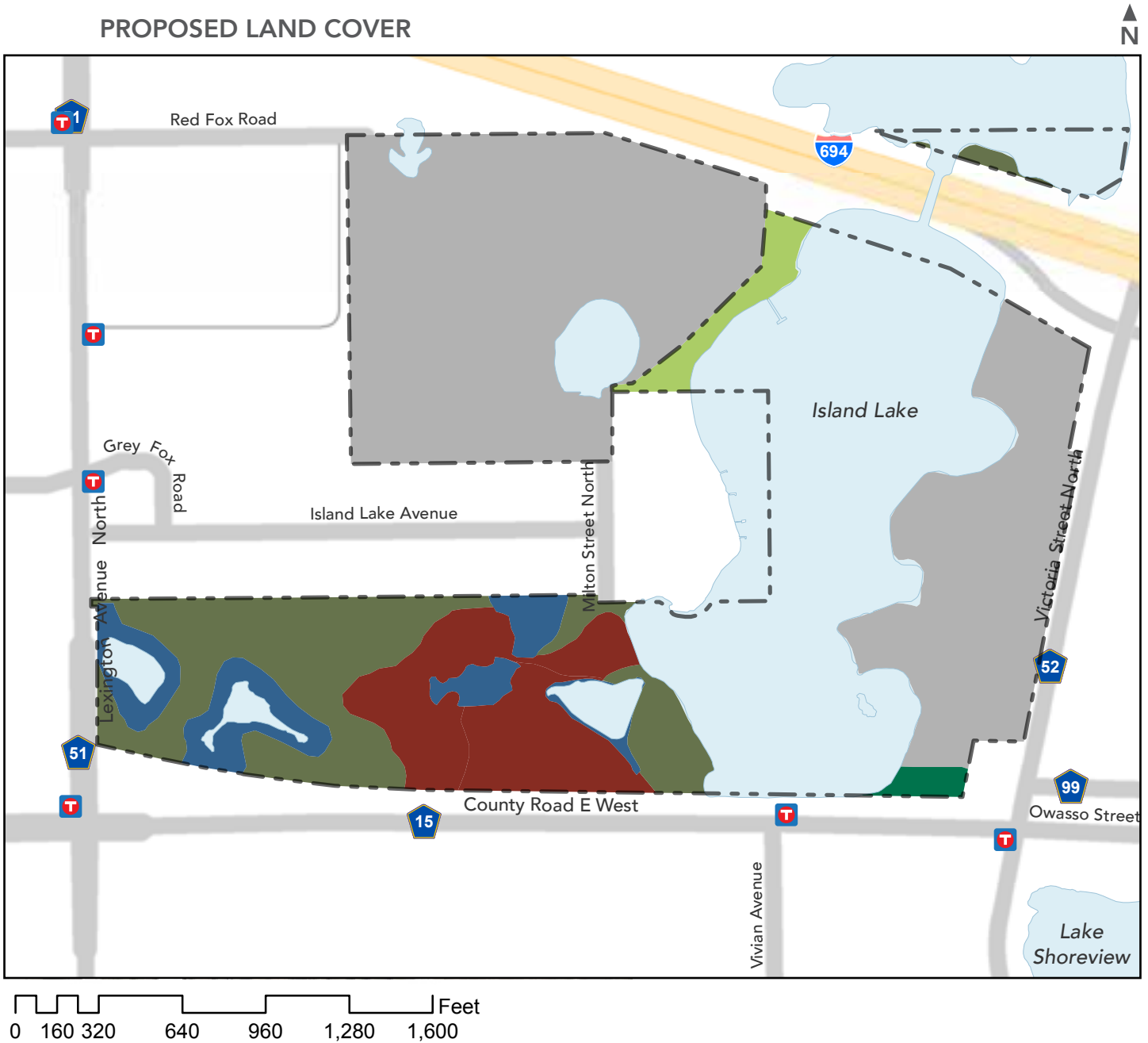
### 5. Energy & Resilience

The current orientation, location, and design of the Shelter #1 is moderately conducive to a small rooftop solar array. Shelters #2 and #3 are not conducive to rooftop solar, but parking lot carports provide a viable alternative. This combination of rooftop and carport solar would potentially provide 14.3.0 MWh/year of energy to offset the site's energy use. However, due to the capital cost of such a system, and current regulations which do not allow for on-site solar arrays to generate more energy than the site uses, the energy cost savings over the estimated life of a solar system would not offset the capital cost.

The site's Energy Use Intensity (EUI), which measures energy use relative to physical building square footage, is 112, which is more than 5 times the typical EUI for county park facilities. An energy study would identify opportunities for reducing energy consumption, thus reducing the size of the solar array necessary to offset the site's energy use.

Master planning efforts should be coordinated with the adjacent Island Lake Golf Center. Should the Golf Center be converted to parkland, and/or if the park were to be converted to a regional park, energy use and renewable energy should be major considerations in any development plans.

PROPOSED LAND COVER



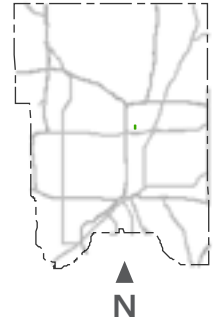
Proposed Land Cover

- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |

NATURAL RESOURCE MANAGEMENT UNIT TABLE

ACRES	CURRENT LAND COVER	PROPOSED LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIORITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
0.79	CULTIVATED CONIFERS	CULTIVATED CONIFERS	N/A	N/A	N/A	N/A	N/A
2.46	OAK WOODS	OAK WOODS	INVASIVE WOODY REMOVAL AND HAUL OFF SITE	\$2,952.00	3	FOLIAR SPRAY OF BUCKTHORN	\$1,230.00
4.89	OLD FIELD	PRAIRIE	MOW, HERBICIDE, RX BURN, DRILL SEED	\$9,780.00	3	RX BURN, FOLIAR SPRAY OF HERBICIDES	\$5,134.50
8.67	WETLAND	WETLAND	MONITOR	N/A	N/A	N/A	N/A
22.37	MIXED WOODS	PRAIRIE 6.4 ACRES	FORESTRY MOW, FOLIAR SPRAY, MOW, HERBICIDE, RX BURN, DRILL SEED	\$22,400	3	RX BURN, FOLIAR SPRAY OF HERBACEOUS	\$6,720.00
		MIXED WOODS 15.97 ACRES	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK AND BURN	\$31,060.00	3	FOLIAR SPRAY OF BUCKTHORN	\$7,765.00
40.42	OPEN WATER	OPEN WATER	MONITOR	N/A	N/A	N/A	N/A
57.16	ACTIVE USE	ACTIVE USE	N/A	N/A	N/A	N/A	N/A
<b>PARK TOTAL</b>							
136.76				\$66,192.00			\$20,849.50

## LAKE GERVAIS COUNTY PARK



### EXISTING SITE CONDITIONS



#### LOCATION AND SIZE

Lake Gervais County Park is located in the center of Ramsey County, in the city of Little Canada. The park is a small 5-acre area lying between Edgerton Street and Lake Gervais, just north of County Road B-2.



#### SITE CHARACTERISTICS

The park includes approximately ¼ mile of shoreline on Lake Gervais, a 275-acre lake. The park is mostly flat and developed for recreational use. There is one oak wooded ridge parallel to the shoreline in the northern part of the park.



#### RECREATION DEVELOPMENT

The park is fully developed for active recreational use. Facilities include a picnic area, swimming beach, building, play area, fishing pier, and parking lot for 115 cars. The recreation facilities are connected by a paved trail. A wooded ridge north of the beach area is a prominent feature of the park, this area also has benches and a great view of the lake.



#### MAINTENANCE

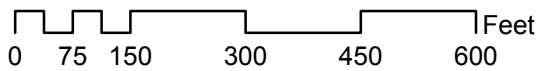
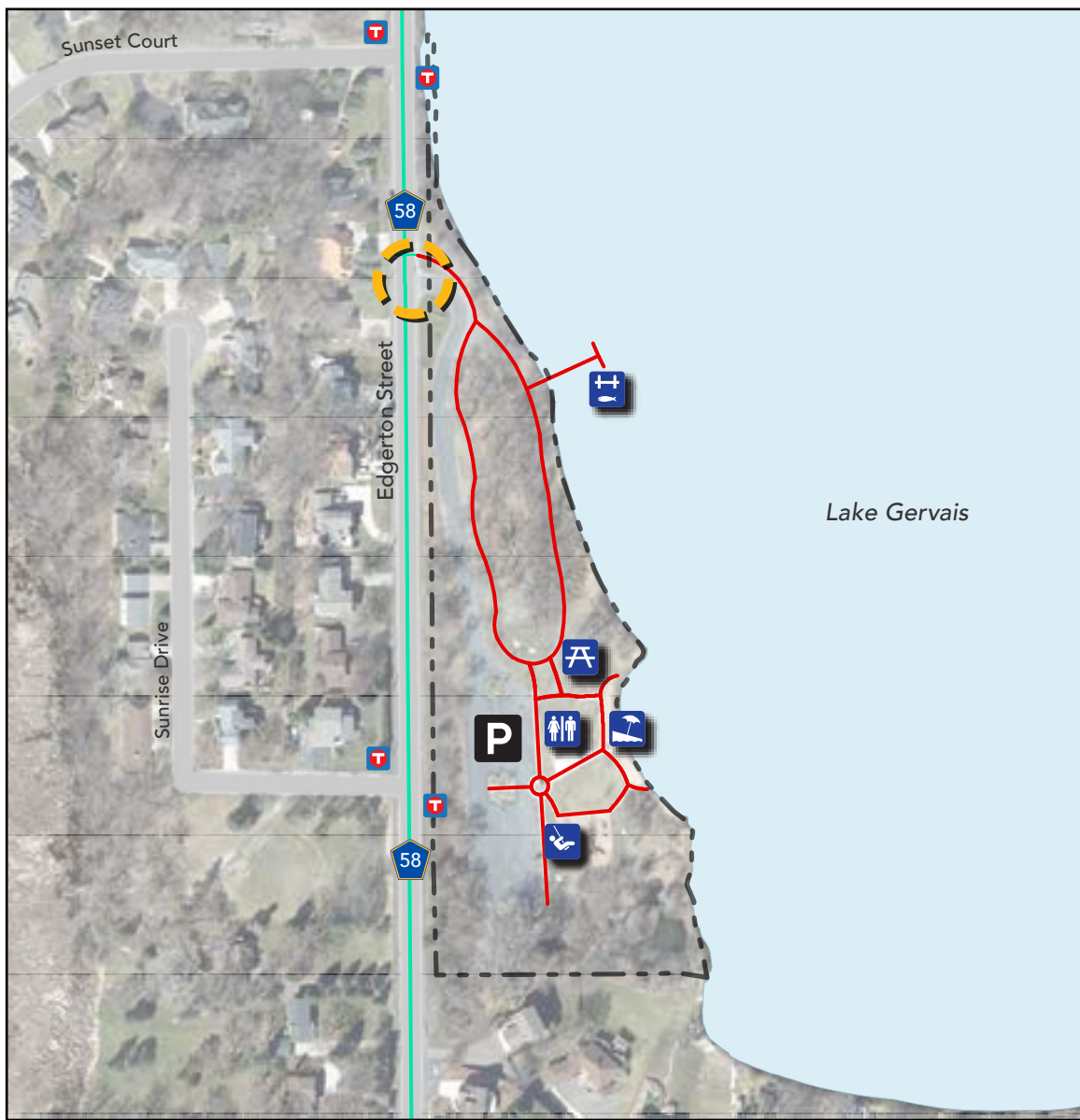
##### Winter Maintenance:

- Plow entrance parking to allow for ice fishing access.

##### Special maintenance requirements:

- Park is closed for the winter
- February open access to lake for city of Little Canada's ice fishing tournament
- Additional maintenance required to clean the beach of goose droppings

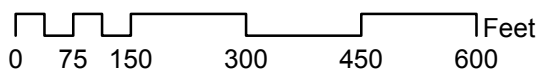
EXISTING CONDITIONS



Legend

Park Border		County Paved Trail		Restrooms		Fishing	
Park Entrance		Municipal Trail		Picnic Area		Carry In	
Metro Transit Stops		Municipal Sidewalk		Playground		Fishing Pier	
		Regional Trail		Beach		Parking Lot	

EXISTING LAND COVER



Existing Land Cover

- |                     |                   |            |                 |
|---------------------|-------------------|------------|-----------------|
| Active Use          | Floodplain Forest | Oak Woods  | Remnant Prairie |
| Impervious          | Mesic Forest      | Old Field  | Savanna         |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp     |
| Tamarack Swamp      | Wetland           | Open Water |                 |

## LAKE GERVAIS COUNTY PARK

### LAND COVER AND HABITAT

The park is mainly developed. There is a small mixed forest and wetland on the south end of the park that is maintained by the Ramsey Washington Metro Watershed District. The hillside north of the beach consists of a small mature oak woods.

### WILDLIFE

The park hosts a variety of common wildlife including nesting songbirds and waterfowl.



### WILDLIFE MANAGEMENT

The Canada goose population can be a nuisance around the beach area, and the population will be monitored and roundups will be conducted when numbers exceed the social and/or carrying capacity.

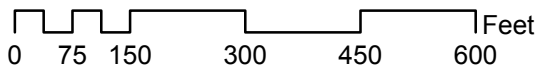
### SURFACE WATER RESOURCES

At around 235 acres, Lake Gervais is the largest lake in the Keller-Phalen chain of lakes and is a popular recreational lake for anglers and boaters. There is a fishing pier and swimming beach at the county park. Over the last five years, the Ramsey-Washington Metro Watershed District has removed 60% of the common carp throughout the chain to aid in pollution reduction efforts. The shoreline within the park consists of flat terrain, which is not prone to erosion.

RWMWD oversees a storm water system on the south end of the park which treats water before entering Lake Gervais and provides a natural amenity.



PROPOSED DEVELOPMENT



Legend

Park Border	— · — · —	Park Paved Trail	— (red)	Regional Trail	— (blue)
Proposed Development	3 (yellow grid)	Park Turf Trail	— (green)	Proposed Regional Trail	— (blue dashed)
Proposed Development Node	1 (blue dashed circle)	Municipal Trail	— (yellow)	Proposed Paved Park Trail	— (red dashed)
Metro Transit Stop	T (red square)	Municipal Ped/Bike Facility	— (green)		

## PLANNING CONSIDERATIONS

Past requests by the public and city of Little Canada have encouraged the consideration to allow winter access to Lake Gervais through the park. The county has been reluctant to add this provision due to damages caused by the public to the park, shoreline, and beach areas.

Lake Gervais County Park contains outdated infrastructure providing opportunity for future public engagement and master planning to guide future development of the park.

## PROPOSED DEVELOPMENT

### 1. Master Planning

Detailed master planning activities will be addressed in the future as needs arise for park and recreation improvements. This master plan will inform future redevelopment and funding efforts.

- Future improvements to the park will require a master planning and public engagement process to address proposed park and recreational opportunities.
- Develop partnerships with the city of Little Canada and Ramsey Washington Metro Watershed District (RWMWD) for funding strategies, increased recreational opportunities, and improvements throughout the park.
- Develop a picnic shelter with an adjacent restroom facility. Building redevelopment for the existing restroom and picnic shelter shall comply with the Americans with Disabilities Act (ADA) and Universal Design standards.
- Redevelop existing playground to provide improved play features.
- Improve turf areas for recreational opportunities.
- Develop a court area, such as volleyball, for additional recreation opportunities.
- Provide the opportunity and appropriate infrastructure to accommodate public art for improved community connections.
- Increase fishing opportunities within the park area and provide a secondary fishing node access.
  - Provide necessary improvements to the existing fishing pier.
  - Provide secondary fishing along the edge where conditions allow.
- Increase recreation and nature programming activities.
- Water Access
  - Redevelop beach area with improved amenities and water play opportunities.
  - Provide access for small water craft within the park area. Increase rental amenities for potential canoe and kayak rental.
  - Develop an improved vehicle access to Lake Gervais for winter fishing activities.

### 2. Vehicular and Pedestrian Access

- **Pedestrian Trail Connections:** Increase pedestrian access into the park from Edgerton Street and adjacent neighborhoods.
- **Vehicular:** Redevelop and increase parking opportunities for improved access to the park.
  - Primary Parking Lot** – Redevelop and expand existing parking lot.
  - Secondary Parking Area** – redevelop existing parking along entrance road for improved circulation and expanded parking.
- **Wayfinding**
  - Pedestrian** – Improve pedestrian signage for enhanced wayfinding to trails and amenities. Provide interpretive signage in natural areas for education opportunities.

## PROPOSED DEVELOPMENT

**Vehicular** – Improve vehicular entrance signage for enhanced wayfinding to the park access.  
Replace existing park entrance monument sign.

### 3. Habitat Restoration & Management

- Prescribed burns and seeding of native herbaceous understory

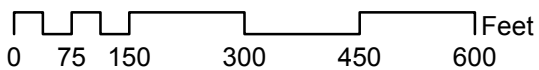
### 4. Acquisitions

Identify properties for future inclusion into Lake Gervais County Park as properties become available.

### 5. Energy & Resilience

The current orientation, location, and design of the park shelter is moderately conducive to a small rooftop solar array which would potentially provide 3.0 MWh/year of energy to offset the site's energy use. However, due to the capital cost of such a system, and current regulations which do not allow for on-site solar arrays to generate more energy than the site uses, the energy cost savings over the estimated life of a solar system would not offset the capital cost.

PROPOSED LAND COVER



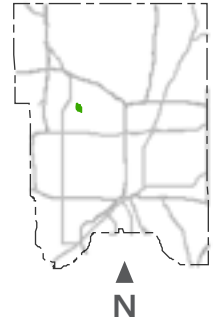
Proposed Land Cover

- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |

NATURAL RESOURCE MANAGEMENT UNIT TABLE

ACRES	CURRENT LAND COVER	PRO-POSED LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIOR-ITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
0.17	WETLAND	WETLAND	N/A	N/A	N/A	N/A	N/A
0.67	OAK WOODS	OAK WOODS	INVASIVE WOODY REMOVAL, STUMP TREAT, HAUL OFF SITE, RX BURN, NATIVE SEED	\$2,100.00	3	FOLIAR SPRAY OF BUCK-THORN	\$335.00
0.98	MIXED WOODS	MIXED WOODS	N/A	N/A	N/A	N/A	N/A
3.86	ACTIVE USE	ACTIVE USE	N/A	N/A	N/A	N/A	N/A
<b>PARK TOTAL</b>							
5.68				\$2,100.00			\$335.00

## LAKE JOSEPHINE COUNTY PARK



### EXISTING SITE CONDITIONS

MASTER PLAN DATE 1967



#### LOCATION AND SIZE

Lake Josephine County Park is located in west-central Ramsey County in the city of Roseville. The park is comprised of two distinct segments: the 9-acre Lake Front Recreation Area, west of Lexington Avenue, and the 65-acre Little Lake Josephine Segment, east of Lexington Avenue. The 74-acre park is bounded by County Road C-2 on the south, Chatsworth Street on the east, County Road D on the north, and Lake Josephine on the west.



#### SITE CHARACTERISTICS

The park includes about ¼ mile of shoreline on Lake Josephine, a 114-acre lake. The part of the park between the lake and Lexington Avenue is developed for recreational use. The area of the park east of Lexington Avenue is a natural area surrounding Little Lake Josephine, a 40-acre deep marsh.



#### RECREATION DEVELOPMENT

**Lakefront Recreation Area.** This segment of the park includes a boat launch facility with parking for 6 cars and boat trailers and 6 car top boat spaces, a central picnic area with a 25-car parking lot and a beach area/picnic area with a parking lot for 109 cars. The area also includes a play area, beach building and fishing pier.

**Little Lake Josephine segment.** A 1-mile unpaved hiking trail encircles Little Lake Josephine.



#### MAINTENANCE

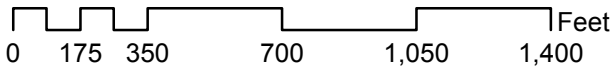
##### Winter Maintenance:

- Maintain access to the boat launch
- Plow boat launch parking lot

##### Special maintenance requirements:

- Remove hazardous trees in the county's right-of-way along the southwest corner of the park.

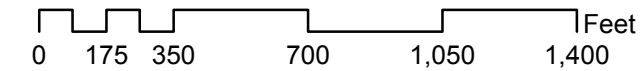
EXISTING CONDITIONS



Legend

Park Border		County Paved Trail		Restrooms		Fishing	
Park Entrance		Municipal Trail		Picnic Area		Carry In	
Metro Transit Stops		Municipal Sidewalk		Playground		Beach	
Parking Lot		Regional Trail		Boat launch		Fishing Pier	

EXISTING LAND COVER



Existing Land Cover

- |                     |                   |            |                 |
|---------------------|-------------------|------------|-----------------|
| Active Use          | Floodplain Forest | Oak Woods  | Remnant Prairie |
| Impervious          | Mesic Forest      | Old Field  | Savanna         |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp     |
| Tamarack Swamp      | Wetland           | Open Water |                 |



## LAKE JOSEPHINE COUNTY PARK

### LAND COVER AND HABITAT

The native habitat of this park is mainly on the east side of Lexington Avenue and consists of a large wetland with open water, cattails, and some shrub swamp bordered by a degraded oak and mixed woods. The wetland has had a long-term infestation of purple loosestrife which is currently in check through biological beetle control. There is an old field at the south end that contains a smaller prairie of native grasses. There is a small patch of oak and mixed woods north of the active use area on the east side of Lexington Avenue. The stormwater generated by the parking lots in the southern half of the Lakefront Recreation Area is processed through a 3-cell rain garden located at the south end of the segment. The rain garden is designed for water infiltration and is planted with vegetation designed to thrive in various moisture levels. Ongoing maintenance of the rain garden is necessary to maintain the integrity of the plant material and eliminate volunteer woody plants. The area within the Little Lake Josephine Segment is managed and maintained as a natural area. A small prairie remnant is burned periodically to maintain the prairie's integrity.

### WILDLIFE

The park hosts diverse wildlife including a variety of nesting songbirds, waterfowl, and raptors. Larger mammals include white-tailed deer, red fox, beaver, and raccoons. An active osprey nest is located on the south end of Little Josephine Lake.

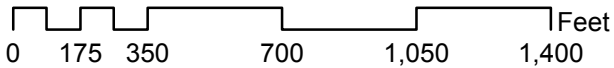


### WILDLIFE MANAGEMENT

Deer populations are annually surveyed. If needed, the deer herd will be managed with special hunts under the Ramsey County Cooperative Deer Management Plan in partnership with the city of Roseville. The Canada goose population is monitored and roundups are conducted around the beach area if needed. Selective beaver control is occasionally needed when the outflow channel is blocked by dams. Nest boxes are provided within the park for wood ducks and eastern bluebirds.

### SURFACE WATER RESOURCES

The Ramsey County Parks & Recreation department owns around 1,500 feet of shoreline along Lake Josephine, consisting of a swimming beach, boat launch, and mostly active area with natural shoreline and buffers separating most of the park from the lake. There is opportunity to expand these buffers in select areas and to restore sections of shoreline to prevent erosion. Currently, erosion is occurring north of the active use area because of steep terrain and foot traffic from shore fishing access. The Ramsey County Parks & Recreation department will need to work with the MN DNR, as well as local watershed and conservation districts to design and implement restoration practices to stop further erosion in this area.



Legend

- |                           |  |                             |  |                           |  |
|---------------------------|--|-----------------------------|--|---------------------------|--|
| Park Border               |  | Park Paved Trail            |  | Regional Trail            |  |
| Proposed Development      |  | Park Turf Trail             |  | Proposed Regional Trail   |  |
| Proposed Development Node |  | Municipal Trail             |  | Proposed Paved Park Trail |  |
| Metro Tranist Stop        |  | Municipal Ped/Bike Facility |  | Trail                     |  |

## PLANNING CONSIDERATIONS

The infrastructure located in Lake Josephine County park is outdated, as such master planning and community engagement will be necessary to determine future development and programming.

The large wetland complex east of Lexington Avenue is undeveloped except for a dirt path. This area would be a good location to explore the opportunity of nature based education in the park. The area would also benefit from the removal of invasive species.

## PROPOSED DEVELOPMENT

### 1. Master Planning

Detailed master planning activities will be addressed in the future as redevelopment needs arise for park and recreation improvements. Master planning activities along with coordination from local agencies would address improvements for recreation needs due changing trends, demographics, improved amenities, and storm water management best practices.

- Develop partnerships with the city of Roseville, and Rice Creek Watershed District (RCWD) for funding strategies, increased recreational opportunities, and proposed improvements.
- **County Park Master Plan:** Future improvements to the park will require a master planning process to address proposed park and recreational opportunities.
- **City of Roseville:** The city of Roseville has identified potential access points and trail development within the east section of Lake Josephine County Park.
- **Regional Park and Trail:** Investigate opportunities for access and or inclusion into the regional park and trail system as part of the Lexington Regional Trail Master Plan.

### 2. Pedestrian Access

- Redevelop pedestrian access to the park area from adjacent neighborhoods. An additional trail connection should be developed to provide increased access to the park.

### 3. Trail Redevelopment

- Redevelop existing trails throughout the park for improved access to recreational amenities. Improvements shall consist of trail repaving, the re-alignment of trail sections for improved connections, and the reduction of sharp corners and steep slopes adjacent to trails.
- Redevelop the existing natural surface trail within the east section of Lake Josephine County Park. Improvement may consist of paved trail connections, improved natural surface trail connections, connections to adjacent residential areas, and observation areas for interpretive and educational programming.

### 4. Boardwalk Development

- A boardwalk and observation overlook are proposed as part of potential trail improvements on Little Lake Josephine and adjacent wetland complex.

## PROPOSED DEVELOPMENT

### 5. Vehicular Access

- **Parking Lots:** Pavement maintenance was last completed in 2011. A mill and overlay will be required for improved use and maintenance operations. During any parking lot redevelopment additional parking expansion for boat trailers and vehicles should be considered along with improved pedestrian connections, signage, storm water management best practices, and site amenities.

### 6. Wayfinding

- **Pedestrian:** Improve signage for enhanced wayfinding to trails and other amenities. Provide interpretive signage in natural areas for increased wayfinding to nature education.
- **Vehicular:** Improve entrance signage for better wayfinding to the park access. Replace existing park entrance monument sign.

### 7. Recreation Opportunities

- **Shelter & Restroom:** Develop a picnic shelter with an adjacent restroom facility. Improvements shall comply with Americans with Disabilities Act (ADA), and Universal Design conformance, as well as improve use with adjacent recreation amenities.
- **Beach House Facility:** Building redevelopment for the existing beach house facility and picnic shelter development shall comply with the Americans with Disabilities Act (ADA), and Universal Design standards.
- **Playground:** Redevelop existing playground to provide improved play features and connections to the beach and adjacent turf areas.
- **Multi-Use Turf:** Improve turf areas for increased recreation opportunities.
- **Court Games:** Develop a court area for additional recreation opportunities that comply with beach and general park use.
- **Public Art:** Provide opportunity and appropriate infrastructure to accommodate public art for improved community connections.
- **Fishing Pier:** Provide necessary improvements to the existing fishing pier.
- **Secondary Fishing Node:** Provide fishing along the lake edge where existing conditions allow.
- **Swimming Beach:** redevelop beach area with improved amenities and water play opportunities. Explore options for beach sand stabilization which is washed away with prevailing wind wave action.
- **Small Watercraft Access:** Provide access for small water craft within the park. Include rental amenities for potential watercraft rental.

### 8. Habitat Restoration & Management

- Future restoration efforts will include expansion of the prairie within the old field, weeding, and occasional prescribed burns for maintenance of the native vegetation within the rain garden.
- Black locust will continue to be controlled to prevent further spread along the oak woodland edge north of the active use area.
- There are no plans in place for the restoration of the woodlands on the east side, because of the smaller size and fragmentation of the woods. At this time the cost for restoration outweighs the ecological benefit.

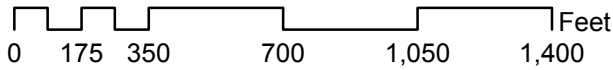
**PROPOSED DEVELOPMENT****9. Acquisitions**

Identify properties for future acquisition and inclusion into Lake Josephine County Park when properties become available.

**10. Energy & Resilience**

The current orientation, location, and design of the park shelter is moderately conducive to a small rooftop solar array which would potentially provide 5.1 MWh/year of energy to offset the site's energy use. However, due to the capital cost of such a system, and current regulations which do not allow for on-site solar arrays to generate more energy than the site uses, the energy cost savings over the estimated life of a solar system would not offset the capital cost.

PROPOSED LAND COVER



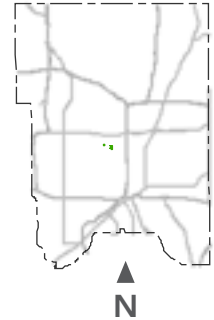
Proposed Land Cover

- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |

NATURAL RESOURCE MANAGEMENT UNIT TABLE

ACRES	CURRENT LAND COVER	PRO-POSED LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIOR-ITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
1.4	OLD FIELD	PRAIRIE	MOW, HERBICIDE, RX BURN, DRILL SEED	\$4,900.00	4	RX BURN, FOLIAR SPRAY OF HERBACEOUS	\$1,470.00
4.11	OAK WOODS	OAK WOODS	MONITOR	N/A	4	N/A	N/A
6.17	ACTIVE USE	ACTIVE USE	N/A	N/A	N/A	N/A	N/A
22.31	MIXED WOODS	MIXED WOODS	MONITOR	N/A	4	N/A	N/A
48.34	WETLAND	WETLAND	MONITOR	N/A	N/A	N/A	N/A
<b>PARK TOTAL</b>							
82.33				\$4,900.00			\$1,470.00

## LAKE MCCARRONS COUNTY PARK



### EXISTING SITE CONDITIONS



#### LOCATION AND SIZE

Lake McCarrons County Park is located in the central part of Ramsey County in the city of Roseville. The park is situated on the municipal boundaries with the city of Saint Paul to the south and the city of Maplewood to the east. The 15-acre park is bounded on the south by McCarrons Boulevard, on the east by Rice Street, on the north by Center Street, and on the west by McCarrons Lake.



#### SITE CHARACTERISTICS

The park includes approximately 900 feet of shoreline on the east shore of McCarrons Lake, an 81-acre lake. The park is flat and close to the elevation of the lake. The majority of the park is developed for recreational use. A wetland complex on the southern portion of the park provides stormwater treatment for park runoff and runoff generated by adjacent roadways. The open nature of the park and surrounding land use gives the park a more urban character than most other county parks.



#### RECREATION DEVELOPMENT

The park is fully developed and includes a boat launch with parking for 8 car/boat trailers, a 300-foot swimming beach, beach building, picnic shelter, two play areas, fishing pier, and a 150-car parking lot. The park has trail connections to municipal trails and it functions as a trailhead for the Trout Brook Regional Trail.



#### MAINTENANCE

##### Winter Maintenance:

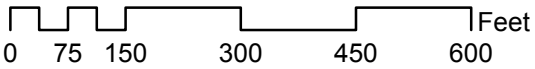
- Maintain access to the boat launch
- Plow boat launch parking lot and trail to Rice Street

##### Special maintenance items:

- Park is closed in the winter and gate is locked
- Additional maintenance is needed periodically to repair damage from vandalism and remove graffiti
- Additional maintenance is needed to clean the beach of goose droppings



EXISTING CONDITIONS



Legend

Park Border		County Paved Trail		Restrooms		Fishing	
Park Entrance		Municipal Trail		Picnic Area		Carry In	
Metro Transit Stops		Municipal Sidewalk		Playground		Beach	
Parking Lot		Regional Trail		Boat launch		Picnic Shelter	
						Fishing Pier	

EXISTING LAND COVER



0 75 150 300 450 600 Feet

Existing Land Cover

- |                     |                   |            |                 |
|---------------------|-------------------|------------|-----------------|
| Active Use          | Floodplain Forest | Oak Woods  | Remnant Prairie |
| Impervious          | Mesic Forest      | Old Field  | Savanna         |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp     |
| Tamarack Swamp      | Wetland           | Open Water |                 |

## LAKE MCCARRONS COUNTY PARK

### LAND COVER AND HABITAT

Native habitats are found in the southern portion of the park. There is a series of wetlands at the outflow of the lake. The vegetation around the wetlands is a mixture of native and nonnative vegetation.

### WILDLIFE

The park hosts a variety of common wildlife including a variety of nesting songbirds and waterfowl.



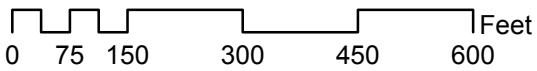
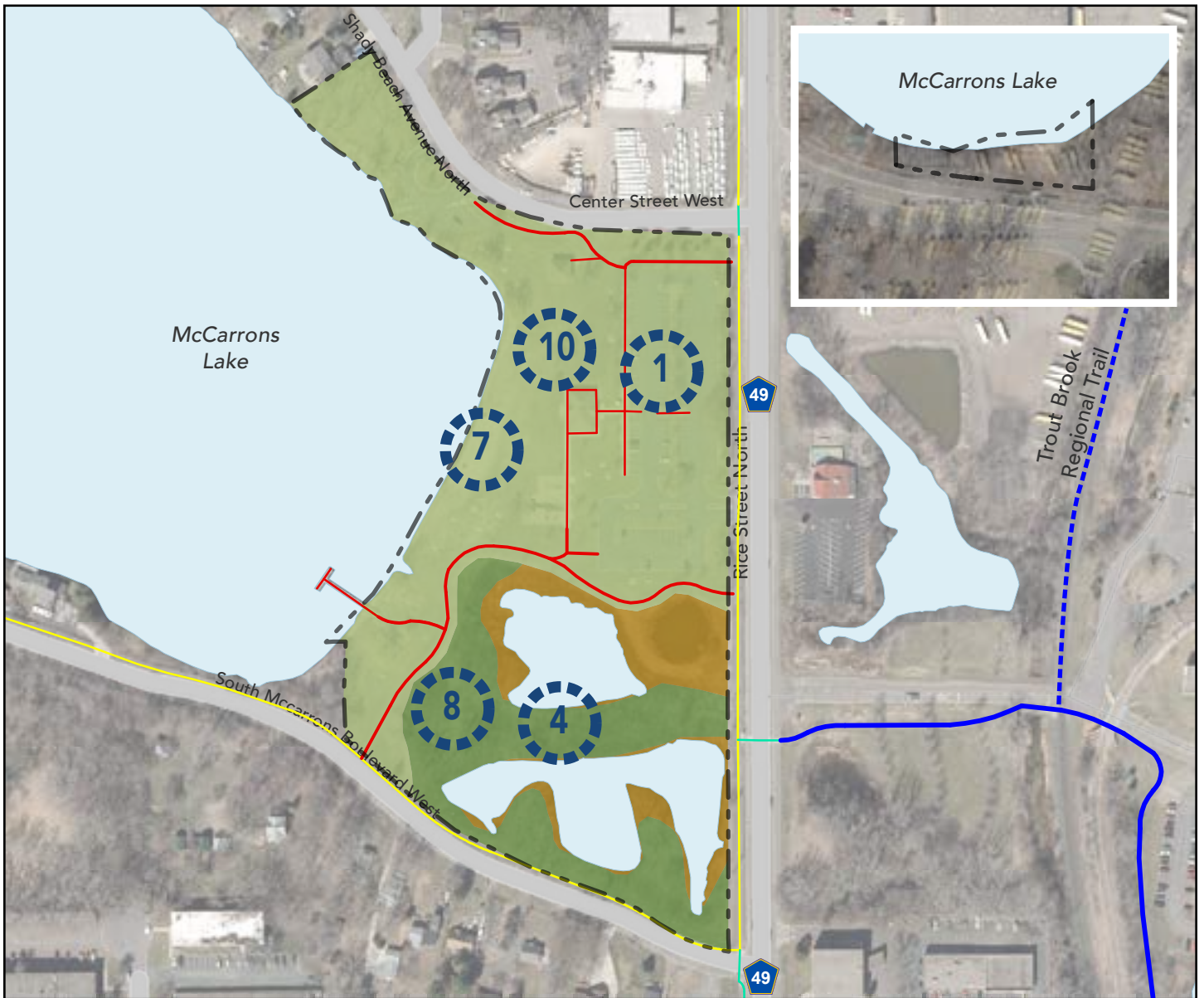
### WILDLIFE MANAGEMENT

The Canada goose population is monitored and roundups are conducted if needed.

### SURFACE WATER RESOURCES

Ramsey County Parks & Recreation department owns around 1,200 feet of shoreline along Lake McCarrons, consisting of a small parcel on the west side of the lake with most of the park on the east side of the lake, consisting of a swimming beach, boat launch, and mostly active area with some natural shoreline and buffers. There is opportunity to expand these buffers in select areas and to restore sections of natural shoreline to prevent erosion.

PROPOSED DEVELOPMENT



Legend

- |                           |  |                             |  |                           |  |
|---------------------------|--|-----------------------------|--|---------------------------|--|
| Park Border               |  | Park Paved Trail            |  | Regional Trail            |  |
| Proposed Development      |  | Park Turf Trail             |  | Proposed Regional Trail   |  |
| Proposed Development Node |  | Municipal Trail             |  | Proposed Paved Park Trail |  |
| Metro Transit Stop        |  | Municipal Ped/Bike Facility |  |                           |  |

## PROPOSED DEVELOPMENT

### 1. Master Planning

Detailed master planning activities will be addressed in the future as redevelopment needs arise for park and recreation improvements. Master planning activities along with coordination from local agencies would address improvements for recreational needs due to changing trends, demographics, improved recreational amenities, and storm water management best practices.

- Develop partnerships with the city of Roseville, and Capitol Region Watershed District (CRWD) for funding strategies, increased recreational opportunities, and proposed improvements throughout the park.
- **County Park Master Plan:** Future improvements to the park will require a future master planning process to address proposed park and recreational opportunities.
- **Rice Larpenteur Vision Plan:** a collaborative effort between the municipalities of Maplewood, Roseville, Saint Paul, and Ramsey County. The primary purpose of this plan is to create a strategy to manage future growth within the corridor and will focus on a corridor that is safe, comfortable, and promotes access to natural amenities such as Lake McCarrons County park. Additional planning activities will guide development within the corridor and will likely address park and recreational development improvements at Lake McCarrons County Park. Proposed improvements from this vision plan consist of additional or reconfigured parking, additional recreation amenities, creation of multi-functional spaces, and enhanced features.
- **Regional Park and Trail:** Investigate opportunities for inclusion into the regional park and trail system as part of the Trout Brook Regional Trail Master Plan Amendment for the north extension from Lake McCarrons County Park to Vadnais-Snail Lakes Regional Park. The existing Trout Brook Regional Trail alignment starts at Lake McCarrons County Park and extends south to the Gateway State Trail. It is proposed that Lake McCarrons County Park would serve as a regional trailhead facility for the Trout Brook Regional Trail.

### 2. Pedestrian Access

- Improve the pedestrian access into the park from adjacent neighborhoods. Existing regional trail access should be upgraded. Additional trail connections should be developed to provide increased access to the park.

### 3. Trail Redevelopment

- Redevelop existing trails throughout the park for improved access to recreational amenities. Improvements shall consist of trail repaving, re-alignment of trail sections, and the reduction of sharp corners and steep slopes adjacent to trails.

### 4. Boardwalk Development

- A boardwalk and observation overlooks are proposed to provide interpretive and educational programming to the existing wetland complex on the south side of the park.

### 5. Vehicular Access

- **Beach Parking Lot:** Pavement maintenance was last completed 2011. A mill and overlay will be required for improved use and maintenance operations. During any parking lot redevelopment additional parking for boat trailers and vehicles should be considered along with improved pedestrian connections, signage, storm water management best practices, and site amenities.

## PROPOSED DEVELOPMENT

- **Boat Launch Parking Lot:** Pavement maintenance was last completed 1998. A mill and overlay will be required for improved use and maintenance operations. During any parking lot redevelopment additional parking for boat trailers and vehicles should be considered along with improved pedestrian connections, signage, storm water management best practices, and site amenities.

### 6. Wayfinding

- **Pedestrian:** Improve signage for enhanced wayfinding to access trails and other amenities. Provide interpretive wayfinding and signage in natural areas for increased nature education.
- **Vehicular:** Improve entrance signage for better wayfinding to access the park. Replace existing park entrance monument sign.

### 7. Recreation Opportunities

- **Shelter & Restroom:** Develop a picnic shelter with an adjacent restroom facility. Improvements shall comply with the Americans with Disabilities Act (ADA), and Universal Design standards, as well as improve use with adjacent recreation amenities.
- **Beach House Facility:** Building redevelopment of the existing beach house facility and picnic shelter development shall comply with the Americans with Disabilities Act (ADA), and Universal Design standards, as well as improve use with adjacent recreation amenities.
- **Playground:** Redevelop existing playground to provide improved play features and connections to the beach and adjacent turf areas.
- **Multi-Use Turf:** Improve turf areas for increased recreational opportunity.
- **Court Games:** Develop a court area for additional recreation opportunities that comply with beach and general park use.
- **Public Art:** Provide the opportunity and appropriate infrastructure to accommodate public art to improve community connections
- **Fishing Pier:** Provide necessary improvements to the existing fishing pier.
- **Secondary Fishing Node:** Provide fishing along the lake edge where existing conditions allow.
- **Swimming Beach:** redevelop beach area with improved amenities and water play opportunities.
- **Small Watercraft Access:** Provide access for small water craft within the park. Include rental amenities for potential watercraft rental.
- **Programming:** Increase recreation and nature programming activities for additional recreation opportunities.

### 8. Habitat Restoration & Management

- Currently there is no active management within this park. Black locust will continue to be controlled to prevent further spread along the oak woodland edge north of the active use area.
- Future restoration efforts will include removal of invasive species within the woodlands surrounding the wetland area.

### 9. Acquisitions

Identify properties for future acquisition and inclusion into Lake McCarrons County Park when properties become available.

**PROPOSED DEVELOPMENT****10. Energy & Resilience**

The current orientation, location, and design of the park shelter is moderately conducive to a small rooftop solar array which would potentially provide 7.8 MWh/year of energy to offset the site's energy use. However, due to the capital cost of such a system, and current regulations which do not allow for on-site solar arrays to generate more energy than the site uses, the energy cost savings over the estimated life of a solar system would not offset the capital cost.

Due to the amount of multi-family housing in the area, the park may be a good fit for a community garden or urban farm project, which would provide fresh food access for residents who may not otherwise have access to land for these opportunities.

PROPOSED LAND COVER



Proposed Land Cover

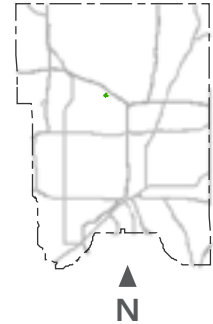
- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |



NATURAL RESOURCE MANAGEMENT UNIT TABLE

ACRES	CURRENT LAND COVER	PRO-POSED LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIOR-ITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
2.42	MIXED WOODS	MIXED WOODS	INVASIVE WOODY RE-MOVAL, HAUL OFF SITE	\$2,904.00	4	FOLIAR SPRAY OF BUCK-THORN	\$1,210.00
2.79	WETLAND	WETLAND	MONITOR	N/A	N/A	N/A	N/A
2.49	OPEN WATER	OPEN WA-TER	N/A	N/A	N/A	N/A	N/A
7.25	ACTIVE USE	ACTIVE USE	N/A	N/A	4	N/A	N/A
<b>PARK TOTAL</b>							
14.95				\$2,904.00			\$1,210.

## LAKE OWASSO COUNTY PARK



### EXISTING SITE CONDITIONS

MASTER PLAN DATE: 2017



#### LOCATION AND SIZE

Lake Owasso County Park is located in the north-central part of Ramsey County in the city of Shoreview. The 9-acre park is bisected by Owasso Boulevard North. The park is bounded by Lake Owasso on the south and Lake Wabasso on the north.



#### SITE CHARACTERISTICS

The park includes 1,000 feet of shoreline on Lake Owasso and 700 feet of shoreline on Lake Wabasso. Lake Owasso is a 393-acre lake popular for swimming, boating, water skiing and fishing. Lake Wabasso is a small 50-acre lake primarily used for fishing. The park is relatively flat, open and fully developed for recreational use. It is surrounded by residential use.



#### RECREATION DEVELOPMENT

The area of the park south of Owasso Blvd North includes a 250-foot sand beach along Lake Owasso, a beach restroom building, site amenities, and parking for 75 cars. On the north side of Owasso Blvd N, a picnic area has been constructed including a medium sized shelter and restroom building, children's nature play area, open turf area, and a 37-car parking lot. The park includes boat launches on Owasso and Wabasso lakes. Car/boat trailer parking for Lake Owasso includes 5 spaces adjacent to the boat ramp with an additional 16 car/trailer parking north of Owasso Blvd. Stormwater treatment is accommodated by an agreement with the city of Shoreview and several shared stormwater best management practices located across the park and under Owasso Blvd N.



#### MAINTENANCE

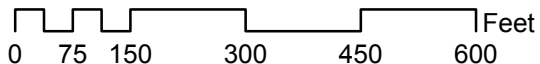
##### Winter Maintenance:

- Maintain boat launch access to Lake Owasso and Lake Wabasso

##### Special maintenance items:

- Additional maintenance is required to clean the beach of goose droppings
- The park is currently being redeveloped and will require more maintenance due to the addition of a larger shelter, two restroom facilities, and permeable pavement sections.
- The new playground being installed is a "nature play" area and may require more maintenance and inspections to keep it clean and safe for patrons.

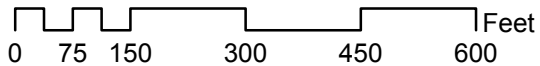
EXISTING CONDITIONS



Legend

Park Border	---	County Paved Trail	—	Restrooms		Fishing	
Park Entrance		Municipal Trail	—	Picnic Area		Carry In	
Opportunity Area		Municipal Sidewalk	—	Playground		Beach	
Constraint Area		Regional Trail	—	Boat launch		Picnic Shelter	
Metro Transit Stops		Parking Lot					

EXISTING LAND COVER



Existing Land Cover

- |                     |                   |            |                 |
|---------------------|-------------------|------------|-----------------|
| Active Use          | Floodplain Forest | Oak Woods  | Remnant Prairie |
| Impervious          | Mesic Forest      | Old Field  | Savanna         |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp     |
| Tamarack Swamp      | Wetland           | Open Water |                 |

## LAKE OWASSO COUNTY PARK

### **LAND COVER AND HABITAT**

Lake Owasso County Park is mainly active use with some native habitats found in the northern portion of the park. These habitats consist of a small section of oak woods, mixed woods and natural shoreline of cattail marsh along Lake Wabasso. All upland habitat is highly infested with buckthorn.

### **WILDLIFE**

The park hosts a variety of common wildlife including nesting songbirds and waterfowl.

### **WILDLIFE MANAGEMENT**

The Canada goose population is monitored and roundups are conducted around the beach area if needed.

### **SURFACE WATER RESOURCES**

The park lies between Lake Wabasso and Lake Owasso with park shoreline on both lakes. There is over 770 feet of mostly natural shoreline on Lake Wabasso and a boat launch. There is over 1000 feet of shoreline on Lake Owasso consisting of a swimming beach, boat launch and around 700 feet of shoreline buffer separating turf grass from the water's edge. There is opportunity for shoreline buffer expansion in some areas. Lake Owasso is a high use recreational lake.

PROPOSED DEVELOPMENT



Legend

Park Border - - - -

Proposed Development 

Proposed Development Node 

County Path 

Municipal Trail 

Municipal Sidewalk 

Parking Lot 

Metro Transit Stop 

## PLANNING CONSIDERATIONS

Lake Owasso County Park is currently in the midst of redevelopment. The new Facility provides all of the amenities the old configuration of the park had and more. The Park was designed, developed, and budgeted by working with a unique collaborative group including the county, city of Shoreview and the Ramsey-Washington Metro Watershed District. The Parks & Recreation department should look for partnerships in every project in an effort to make more of an impact on the local community.

### PROPOSED DEVELOPMENT

#### 1. Master Planning

Master planning for park redevelopment started in 2016 and was completed in 2017. Several community engagement meetings were held to develop concepts and ultimately the final park redevelopment plan. As part of master planning for the park the city of Shoreview has planned to reconstruct North Owasso Boulevard in 2020. Park redevelopment plans incorporated design plans for Owasso Blvd North to accommodate road design and storm water management in anticipation of the future road project. Redevelopment of the park is anticipated to be completed in two phases. Phase 1 is for the redevelopment of the main portion of the park, and Phase 2 will incorporate reconstruction of Owasso Blvd North. Construction activities for phase 1 started late in 2017 and is anticipated to be completed in 2018. Phase 2 construction activities are anticipated to begin in 2020 with a completion date in 2021.

- Develop partnerships with the city of Shoreview, Ramsey Washington Metro Watershed District (RWMWD), Lake Associations, local agencies, and private partners for funding strategies, increased recreational opportunities, and proposed improvements throughout the park.

#### 2. Trail Development

- Pedestrian access from adjacent neighborhoods and trail development is proposed within the park and has been addressed in the master plan. Access and trail development will be completed with park redevelopment activities in 2018.

#### 3. Vehicular Access

- Additional parking opportunities are proposed within the park and has been addressed in the master plan. Vehicular access and parking will be completed with park redevelopment activities in 2018. No additional development is required except pavement maintenance for asphalt, concrete and associated parking lot components.

#### 4. Wayfinding

- Additional signage for pedestrian and vehicular wayfinding is proposed within the park and has been addressed in the master plan. Signage improvements will be completed with park redevelopment activities in 2018.

## PROPOSED DEVELOPMENT

### 5. Recreation Opportunities

- **Shelter/Restroom/Beach Facility:** Redevelopment of the existing picnic shelters, restrooms, and beach facility will be completed in 2018. Additional redevelopment of these facilities will likely be required in the future to provide enhanced recreational amenities for picnic reservations, improved use with adjacent recreational amenities and comply with the Americans with Disabilities Act (ADA), and Universal Design standards.
- **Playground:** Redevelopment of the existing playground will be completed in 2018 on the north side of Owasso Blvd North. Additional playground development may be proposed near the beach area for enhanced play opportunities. Additional master planning activities would be required to develop future playgrounds.
- **Multi-Use Turf:** Multi-use turf areas for the park will be completed in 2018.
- **Court Games:** Explore additional development of court games to correspond to changing trends, demographics, and park use.
- **Public Art:** Provide the opportunity and appropriate infrastructure to accommodate public art to provide improved community connections.
- **Observation Viewing Areas:** Increase recreation and nature programming activities.
- **Fishing:** A fishing pier is proposed on Lake Wabasso. During master planning activities there was a demand for fishing access on Lake Wabasso. Provide secondary fishing access points to Lake Wabasso and Lake Owasso where existing conditions allow.

### 6. Acquisitions

- Future park easements or property acquisition is proposed when property becomes available. Acquisition would allow additional park and recreation development opportunities.

### 7. Habitat Restoration & Management

- Recent management has included some buckthorn removal within the oak woods.
- Future restoration will include further buckthorn removal within the oak and mixed woods in conjunction with park redevelopment.
- Land cover changes will include the conversion of the brome field, located in the north-east corner of the park, to native prairie, with emphasis on blooming flowers to promote pollinator habitat.



## PROPOSED DEVELOPMENT

### 8. Energy & Resilience

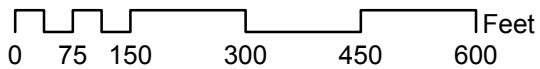
From 2017-2020 Lake Owasso park will be undergoing an extensive, phased redevelopment. Part of this redevelopment includes new beach and picnic shelters which are being designed as “net-zero.” Enough power will be generated on site, in the form of solar arrays, to offset the site’s energy use. The solar arrays will be purchased and owned by Parks & Recreation outright. This project represents the first Parks & Recreation department project incorporating this owned renewable energy component and shall serve as a model for future park redevelopment projects.

Once Parks & Recreation has data on solar generation and energy use, feasibility and benefits of on-site battery storage should be explored.

The park redevelopment project has also incorporated elements of universal design, which ensures that the park and its amenities are able to be used by all residents, regardless of race, age, gender, language, and physical ability.

Additionally the project utilized a collaborative approach to storm water management design. Parks & Recreation partnered with the city of Shoreview and the Ramsey Washington Metro Watershed District to incorporate rain gardens, permeable pavement, and storm water filtration systems (given the proximity of Lake Owasso and lake Wabasso), plantings, trees, and nature play areas. Stormwater utilities will be cooperatively maintained by Parks & Recreation and the city of Shoreview.

PROPOSED LAND COVER



Proposed Land Cover

- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |

## LAKE OWASSO COUNTY PARK

NATURAL RESOURCE MANAGEMENT UNIT TABLE

LAKE OWASSO COUNTY PARK							
ACRES	CURRENT LAND COVER	PROPOSED LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIORITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
0.92	OLD FIELD	PRAIRIE	MOW, HERBICIDE, RX BURN, DRILL SEED	\$2,300	3	FOLIAR SPRAY OF HERBACEOUS	\$750.00
1.08	MIXED WOODS	MIXED WOODS	INVASIVE WOODY REMOVAL AND HAUL OFF SITE	\$1,290.32	3	FOLIAR SPRAY OF BUCKTHORN	\$537.63
1.23	WETLAND	WETLAND	MONITOR	N/A	N/A	N/A	N/A
1.61	OAK WOODS	OAK WOODS	INVASIVE WOODY REMOVAL AND HAUL OFF SITE	\$1,928.32	3	FOLIAR SPRAY OF BUCKTHORN	\$803.47
2.40	OPEN WATER	OPEN WATER	N/A	N/A	N/A	N/A	N/A
6.55	ACTIVE USE	ACTIVE USE	N/A	N/A	N/A	N/A	N/A
<b>PARK TOTAL</b>							
13.79				\$3,218.65			\$1,341.10

# POPLAR LAKE COUNTY PARK

## EXISTING SITE CONDITIONS



### LOCATION AND SIZE

Poplar Lake County Park is located in the center along the north of Ramsey County, in the city of Shoreview and White Bear Township. The 430-acre park is bounded by Sherwood Road on the south, the city of North Oaks on the east, County Road J on the north and Turtle Lake Road on the west.



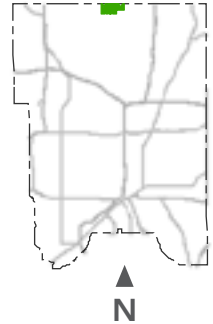
### SITE CHARACTERISTICS

The western half of the park is primarily wetlands, including the 40-acre Poplar Lake, which is classified as a deep marsh. Interspersed within this large wetland area are small wooded islands. The eastern half of the park is predominantly upland, consisting of former agricultural fields, woods, and evergreen plantations.

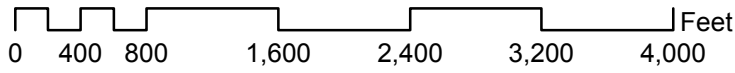
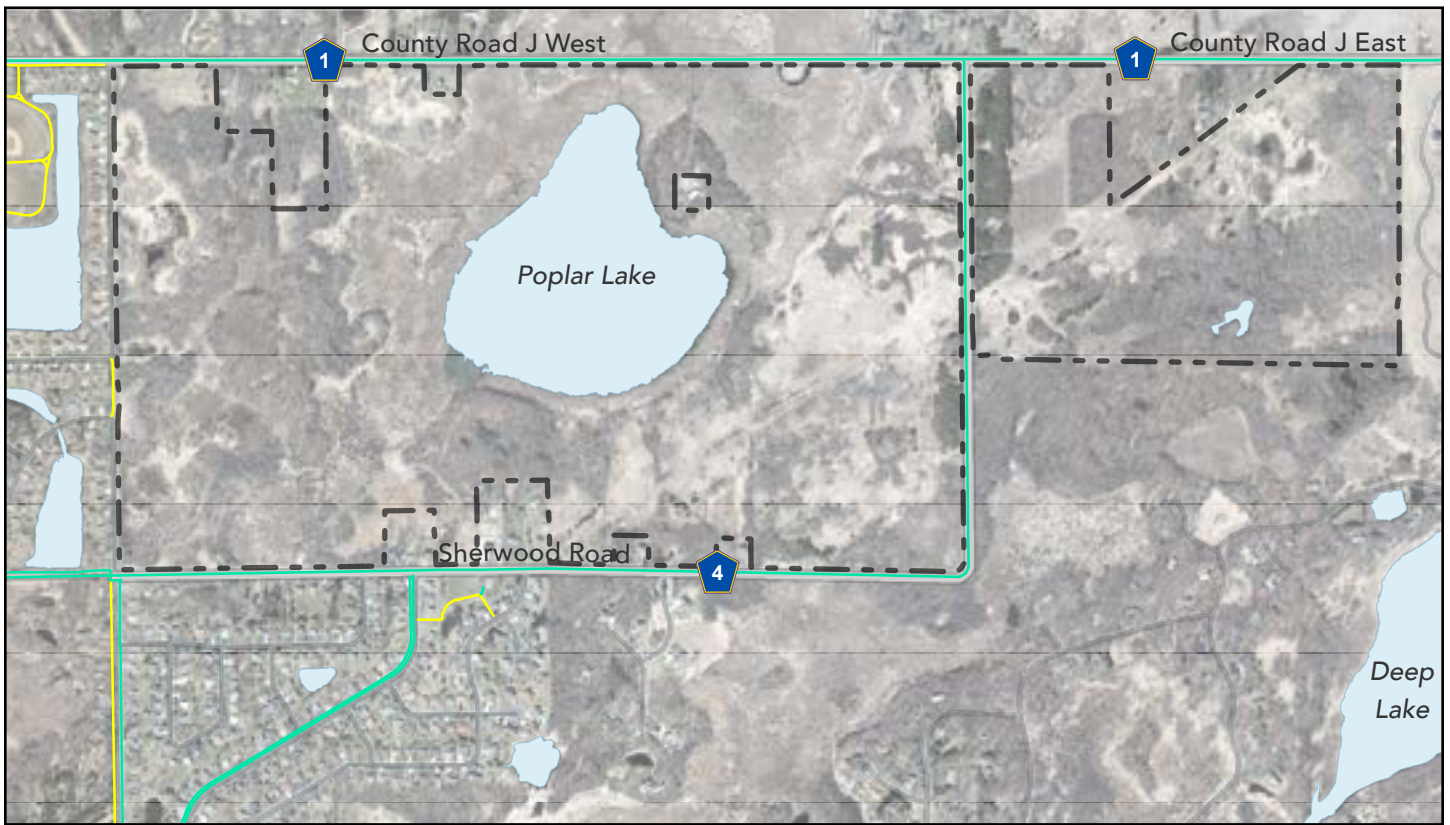


### RECREATION DEVELOPMENT

Ramsey County maintains a yard waste composting site on Sherwood Road, south of County Road J. This facility is an interim-use until such time as the park is developed.



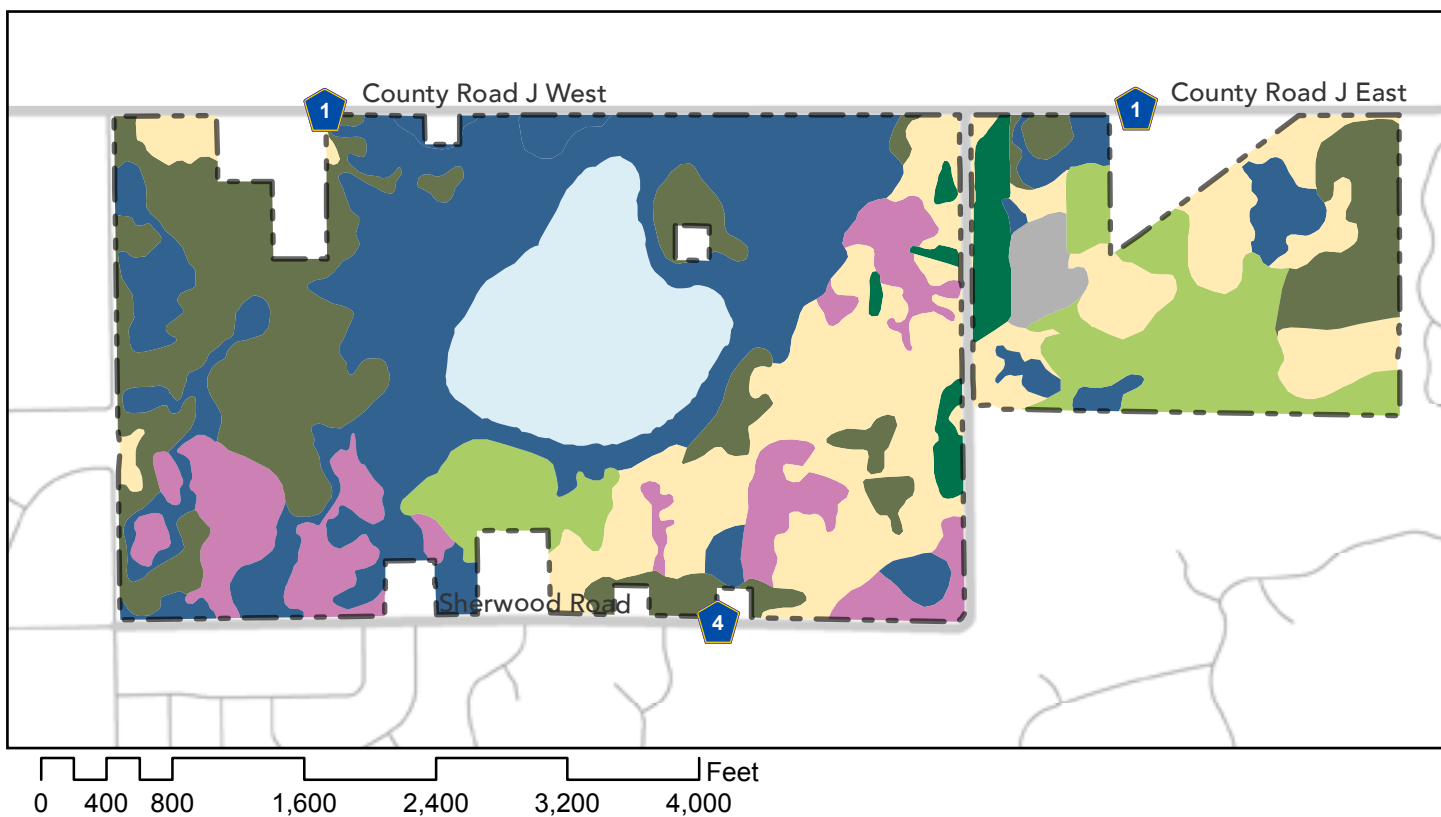
EXISTING CONDITIONS



Legend

- Park Border
- Park Entrance
- Regional Trail
- County Paved Trail
- Municipal Trail
- Municipal Sidewalk

EXISTING LAND COVER



Existing Land Cover

- |                     |                   |            |                 |
|---------------------|-------------------|------------|-----------------|
| Active Use          | Floodplain Forest | Oak Woods  | Remnant Prairie |
| Impervious          | Mesic Forest      | Old Field  | Savanna         |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp     |
| Tamarack Swamp      | Wetland           | Open Water |                 |

## POPLAR LAKE COUNTY PARK

### **LAND COVER AND HABITAT**

The native habitats of Poplar Lake are a mixture of high quality mixed oak-aspen woods, high quality wetlands surrounding a shallow high-quality lake and oak woodlands. The western portion of the park has the highest quality habitats and should be preserved over future development. Other land cover types include old fields and cultivated conifer stands. There is also an active compost site in the eastern portion of the park.

### **WILDLIFE**

The park has a variety of nesting songbirds, raptors and waterfowl that frequent the wetland and open water complexes. Nesting sandhill cranes inhabit the park and there is an active osprey nest on the south side of the lake. Larger mammals include white-tailed deer, otter, coyotes, red fox, and raccoons.

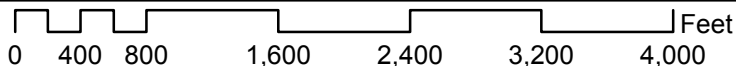
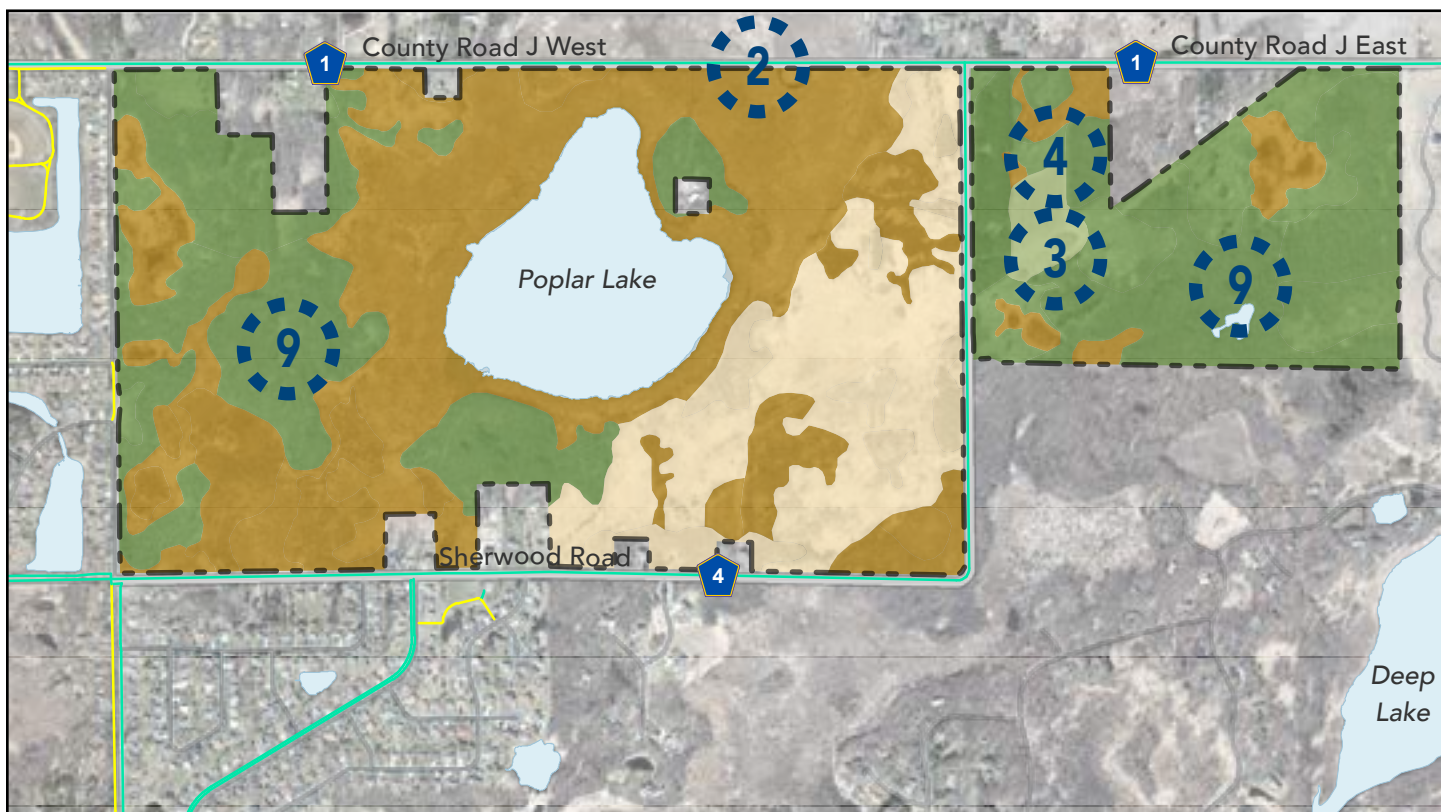
### **WILDLIFE MANAGEMENT**

Deer populations in the area are surveyed annually to determine the need and location for special archery hunts. Deer management has been occurring in the park since 2000 through special archery hunts under the Ramsey County Cooperative Deer Management Plan in partnership with White Bear Township and the city of Shoreview. Nest boxes are provided for wood ducks throughout the park in addition to the active osprey pole.

### **SURFACE WATER RESOURCES**

Poplar Lake County Park surrounds a large wetland complex and Poplar Lake which is a shallow 42-acre lake with excellent waterfowl habitat.

PROPOSED DEVELOPMENT



Legend

Park Border		Park Paved Trail		Regional Trail	
Proposed Development		Park Turf Trail		Proposed Regional Trail	
Proposed Development Node		Municipal Trail		Proposed Paved Park Trail	
Metro Tranist Stop		Municipal Ped/Bike Facility			



## PLANNING CONSIDERATIONS

The site will be reserved to address future recreational needs. Plans for the area will be prepared in consultation with affected municipalities.

### PROPOSED DEVELOPMENT

#### 1. Master Planning

No master plan has been prepared for Poplar Lake County Park. Poplar Lake County Park is currently an undeveloped county park. Master planning activities are anticipated to begin in 2019. The master plan will inform future park development, partnerships, and funding efforts.

- Develop partnerships with the city of Shoreview, city of North Oaks, and Vadnais Lakes Area Watershed Management Organization (VLAWMO), other local agencies, and private entities for increased recreational opportunities and funding.
- Future improvements to the park will require a master planning process to address park and recreational opportunities, partnerships, and funding strategies.

#### 2. Regional Park & Trail

- Investigate opportunities for inclusion into the regional park and trail system as part of an East to West regional trail corridor along County Road J.

#### 3. Multi-use Soccer Complex

- There has been a demand for soccer complexes within the East portion of Poplar Lake County Park by adjacent municipalities. The East section of the park would be more conducive to this activity, but currently houses the Ramsey County Compost site. Master planning activities would address required infrastructure improvements, partnerships, funding strategies, and determine if a soccer complex is compatible with park development.

#### 4. Ramsey County Compost Site

- The compost site is currently located in the eastern portion of the park. Master planning would be required to determine if this use is compatible with the park in the future.

#### 5. Trail Development & Access

- Pedestrian access from adjacent neighborhoods and trail development is proposed within the park. Trail development would likely consist of paved trails, natural surface trails, interpretive and educational programming areas, and observation areas.

#### 6. Vehicular Access

- Parking opportunities are proposed within the park. Dependant upon park and recreation needs it is likely to have both primary and secondary parking areas.

## PROPOSED DEVELOPMENT

### 7. Wayfinding

- Pedestrian signage is proposed within the park to improve wayfinding to trail access points, park and recreation amenities, and interpretive education in natural areas.
- Vehicular signage is proposed for future parking lot development and access points.

### 8. Recreation Opportunities

- **Shelter/Restroom:** Building development may consist of restrooms, program buildings, and storage. Buildings shall comply with the Americans with Disabilities Act (ADA) and Universal Design standards.
- **Playground:** Development may be proposed for increased play opportunities.
- **Multi-Use Turf:** Multi-use turf areas may be proposed for recreational and turf sport game opportunities. Additional master planning activities would be required to determine if this use is compatible with the park, and address required infrastructure improvements, partnerships, and funding strategies.
- **Court Games:** Explore development of court games to correspond with changing trends, demographics, and park use.
- **Public Art:** Provide the opportunity and appropriate infrastructure to accommodate public art to improve community connections.
- **Programming:** Increase recreation and nature programming activities.
- **Observation/Viewing Areas:** Observation areas are proposed for Poplar Lake and adjacent natural areas.

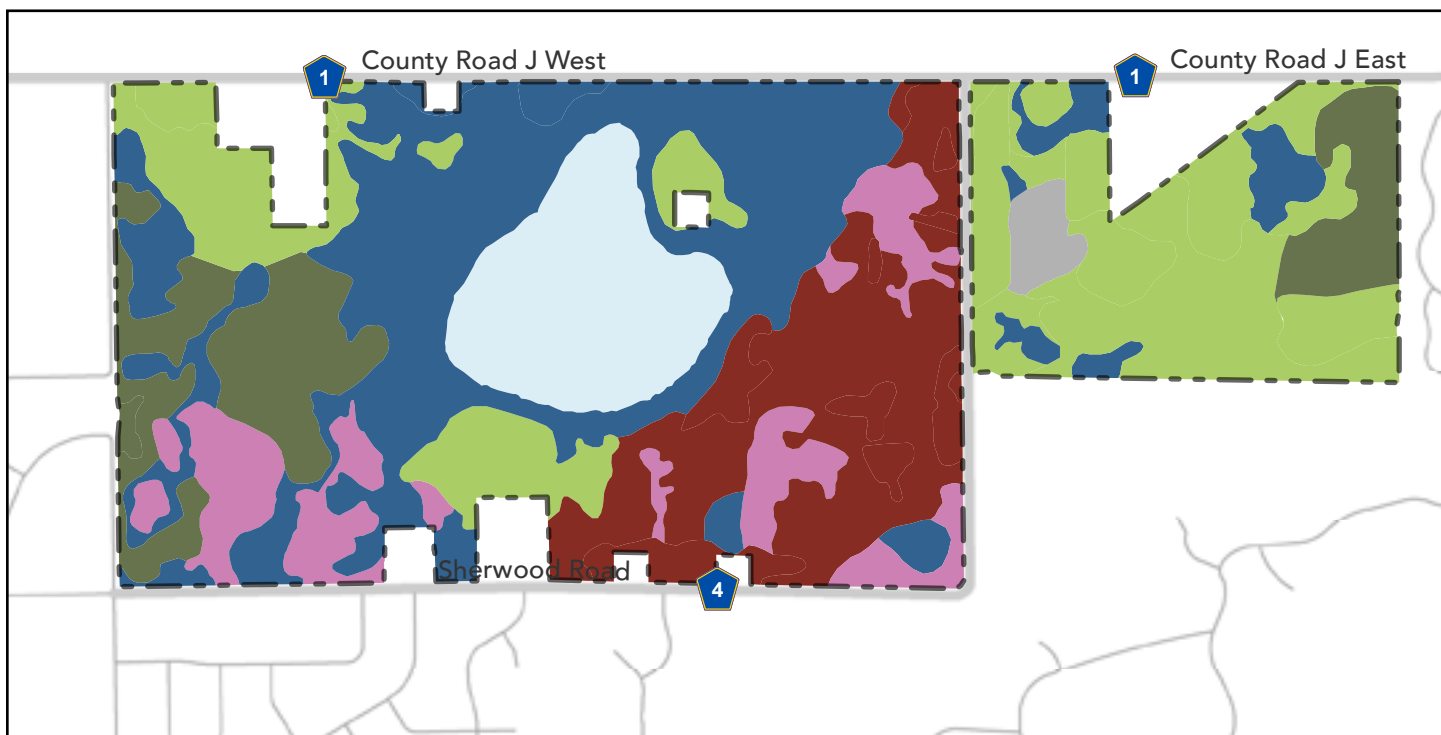
### 9. Habitat Restoration & Management

- There is currently no management within the park.
- Future land cover and restoration is planned for the park and includes maintaining the high diversity of the western woods and managing the eastern portion of the park toward oak woods.
- Other large priority restoration will include conversion of old field to prairie.

### 10. Acquisitions

Future park easements or property acquisition is proposed when properties or easements become available. Acquisition would allow additional park and recreation development.

PROPOSED LAND COVER

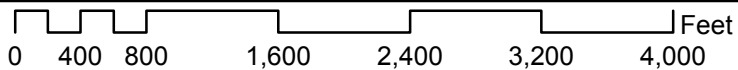


0 400 800 1,600 2,400 3,200 4,000 Feet

Proposed Land Cover

- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |

NATURAL RESOURCE MANAGEMENT UNITS



Legend

Management Unit #

Management Unit Border 

NATURAL RESOURCE MANAGEMENT UNIT TABLE

MANAGEMENT UNIT 1 - POPLAR LAKE COUNTY PARK							
ACRES	CURRENT LAND COVER	PRO-POSED LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIOR-ITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
3.76	CULTIVATED CONIFERS	PRAIRIE	INVASIVE WOODY REMOVAL AND HAUL OFF SITE, MOW, HERBICIDE, RX BURN, DRILL SEED	\$7,523.8	3	RX BURN, FOLIAR SPRAY OF HERBACEOUS	\$2,821.43
12.50	OAK WOODS	OAK WOODS	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN	\$24,995.06	2	FOLIAR SPRAY OF BUCKTHORN	\$6,248.77
38.33	SHRUB SWAMP	SHRUB SWAMP	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN	\$76,667.16	3	FOLIAR SPRAY OF BUCKTHORN	\$19,166.79
41.85	OPEN WATER	OPEN WATER	N/A	N/A	N/A	N/A	N/A
59.54	OLD FIELD	MIXED WOODS 0.95 ACRES	PLANT MIXED WOODS	\$500.00	3	FOLIAR SPRAY OF HERBACEOUS	\$600.00
		OAK WOODS 3.11 ACRES	FOLIAR SPRAY OF HERBACEOUS, PLANT OAKS	\$2,488.00	3	FOLIAR SPRAY OF HERBACEOUS	\$1,866.00
		PRAIRIE 55.47 ACRES	MOW, HERBICIDE, RX BURN, DRILL SEED	\$110,940.00	2	RX BURN, FOLIAR SPRAY OF HERBACEOUS	\$41,602.50

NATURAL RESOURCE MANAGEMENT UNIT TABLE

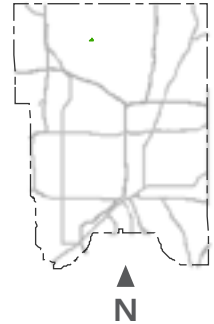
MANAGEMENT UNIT 1 - POPLAR LAKE COUNTY PARK							
ACRES	CURRENT LAND COVER	PRO-POSED LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIOR-ITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
67.45	MIXED WOODS	PRAIRIE 11.96 ACRES	INVASIVE WOODY RE-MOVAL, CUT, STUMP TREAT, STACK & BURN, MOW, HERBICIDE, RX BURN, DRILL SEED	\$29,900.00	2	RX BURN, FOLIAR SPRAY OF HERBACEOUS	\$8,970.00
		OAK WOODS 22.1 ACRES	INVASIVE WOODY RE-MOVAL, CUT, STUMP TREAT, STACK & BURN	\$44,200.00	2	FOLIAR SPRAY OF BUCK-THORN	\$5,525.00
		MIXED WOODS 33.39 ACRES	INVASIVE WOODY RE-MOVAL, CUT, STUMP TREAT, STACK & BURN	\$66,780.00	2	FOLIAR SPRAY OF BUCK-THORN	\$8,347.50
115.29	WETLAND	WETLAND	MONITOR	N/A	N/A	N/A	N/A
MANAGEMENT UNIT 1 TOTAL							
338.72				\$363,994.03			\$95,147.98

POPLAR LAKE COUNTY PARK

NATURAL RESOURCE MANAGEMENT UNIT TABLE

MANAGEMENT UNIT 2 - POPLAR LAKE COUNTY PARK							
ACRES	CURRENT LAND COVER	PROPOSED LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIORITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
5.30	ACTIVE USE	ACTIVE USE	N/A	N/A	N/A	N/A	N/A
6.28	CULTIVATED CONIFERS	OAK WOODS	INVASIVE WOODY REMOVAL AND HAUL OFF SITE, PLANT OAKS	\$7,536.83	3	FOLIAR SPRAY OF HERBACEOUS	\$1,570.17
10.64	WETLAND	WETLAND	MONITOR	N/A	N/A	N/A	N/A
16.04	MIXED WOODS	OAK WOODS 2.06 ACRES	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN, SAVE OAKS	\$4,120.00	3	FOLIAR SPRAY OF BUCKTHORN	\$515.00
		MIXED WOODS 13.98 ACRES	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN	\$27,960.00	2	FOLIAR SPRAY OF BUCKTHORN	\$3,495.00
28.34	OLD FIELD	OAK WOODS	RX BURN, FOLIAR SPRAY OF HERBACEOUS, PLANT OAKS	\$56,680.00	2	FOLIAR SPRAY OF HERBACEOUS	\$17,004.68
29.52	OAK WOODS	OAK WOODS	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN, RX BURN, NATIVE SEED	\$103,318.78	2	FOLIAR SPRAY OF BUCKTHORN	\$7,379.91
MANAGEMENT UNIT 2 - POPLAR LAKE COUNTY PARK							
96.12				\$199,615.61			\$29,964.77
PARK TOTAL							
434.84				\$563,609.64			\$125,112.75

## TURTLE LAKE COUNTY PARK



### EXISTING SITE CONDITIONS

MASTER PLAN DATE: 2011



#### LOCATION AND SIZE

Turtle Lake County Park is located in the north-central part of Ramsey County in the city of Shoreview. The 11-acre park is generally bounded by Schifsky Road on the south, Highway 49 on the east, Sunset Court on the north, and Turtle Lake on the west.



#### SITE CHARACTERISTICS

The park includes 680 feet of shoreline on Turtle Lake, a 444-acre lake. The park is moderately to heavily wooded and slopes from Highway 49 to Turtle Lake. The park is narrow and positioned between residential properties.



#### RECREATION DEVELOPMENT

The park is fully developed and includes a boat launch with parking for 22 car/boat trailers, 5 car-top boat parking spaces, a 200-foot swimming beach, restroom building, play area, one medium picnic shelter, game field area, and parking for 117 cars split up in two different lots. The boat launch facility is located on 2 acres of land owned by the Minnesota Department of Natural Resources. Funding for development of the facility was provided by Ramsey County and the city of Shoreview. Ramsey County is responsible for ongoing operations and maintenance of the boat launch facility. A city trail parallels Hodgson Road and connects into the city and Hwy 96 Regional Trail systems in the area.



#### MAINTENANCE

##### Winter Maintenance:

- Maintain access to the boat launch.
- Plow boat launch parking lot.

##### Special maintenance items:

- Additional mowing and cleaning of the park is conducted prior to the Turtleman Triathlon in July of each year.
- The park takes considerable time to get ready in the spring due to the amount of mature oak trees dropping foliage.



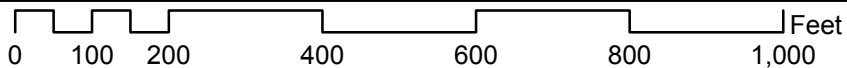
EXISTING CONDITIONS



Legend

Park Border		County Paved Trail		Restrooms		Beach	
Park Entrance		Municipal Trail		Carry In		Parking Lot	
Municipal Sidewalk		Metro Transit Stops		Playground		Boat launch	
Regional Trail							

EXISTING LAND COVER



Existing Land Cover

- |                     |                   |            |                 |
|---------------------|-------------------|------------|-----------------|
| Active Use          | Floodplain Forest | Oak Woods  | Remnant Prairie |
| Impervious          | Mesic Forest      | Old Field  | Savanna         |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp     |
| Tamarack Swamp      | Wetland           | Open Water |                 |

## TURTLE LAKE COUNTY PARK

### LAND COVER AND HABITAT

Turtle Lake County Park consists of mainly active use spaces with a small section of oak woods on the south side of the park. Grass grows under the oak woods and is currently mowed. There are a series of rain gardens that are planted with established native grasses and forbs which capture storm water runoff from the parking lots.



### WILDLIFE

The park hosts a variety of common wildlife including nesting songbirds and waterfowl.

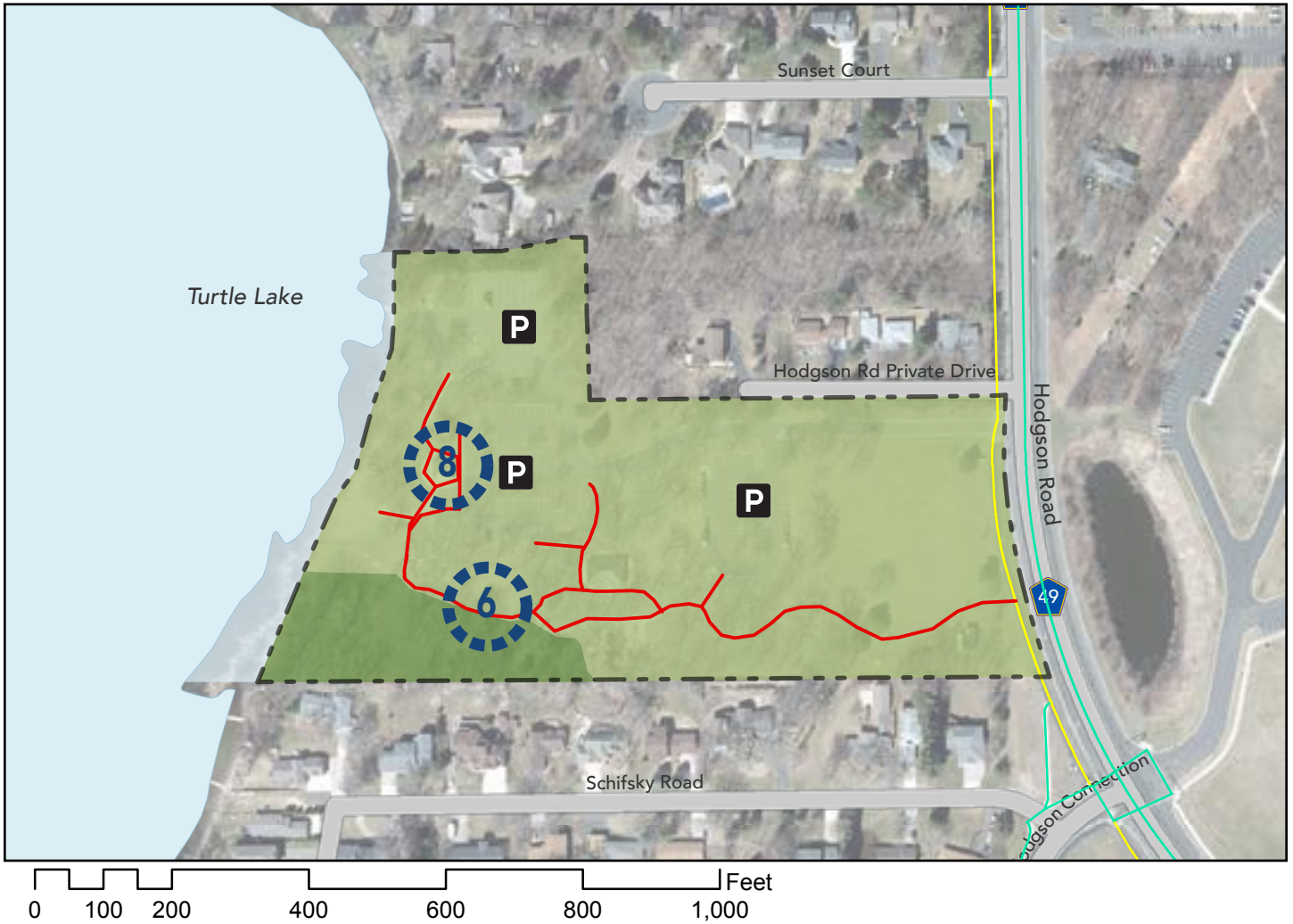
### WILDLIFE MANAGEMENT

The Canada goose population is monitored and goose removal is completed as needed.

### SURFACE WATER RESOURCES

The park has over 650 feet of shoreline along Turtle Lake, consisting of mostly natural shoreline, a swimming beach, and boat launch. Turtle lake is a popular recreational lake with excellent water quality.

PROPOSED DEVELOPMENT



Legend

- |                           |  |                             |  |                           |  |
|---------------------------|--|-----------------------------|--|---------------------------|--|
| Park Border               |  | Park Paved Trail            |  | Regional Trail            |  |
| Proposed Development      |  | Park Turf Trail             |  | Proposed Regional Trail   |  |
| Proposed Development Node |  | Municipal Trail             |  | Proposed Paved Park Trail |  |
| Metro Transit Stop        |  | Municipal Ped/Bike Facility |  |                           |  |

## PROPOSED DEVELOPMENT

### 1. Master Planning

Master planning for park redevelopment activities started in 2011 and the park was redeveloped in 2012. Community engagement meetings were held with the public to develop a park redevelopment concept. Future improvements to the park will require a future master planning process to address improvements for recreational needs due to changing trends, demographics, improved recreational amenities, storm water management best practices, and coordination with local agencies as the need arises.

- Develop partnerships with the city of Shoreview, and Rice Creek Watershed District (RCWD) for funding strategies, increased recreational opportunities, and improvements throughout the park.

### 2. Trail Development

- Existing Trails were constructed in 2012, no additional development is proposed for the park at this time. Trail maintenance will need to occur on an as needed basis.

### 3. Parking Lots

Parking lots were developed along with park infrastructure in 2012. No additional parking lot development is proposed. Parking lots will continue to be monitored for any maintenance issues that may arise and addressed on an ongoing basis.

### 4. Wayfinding

- Improve pedestrian signage for improved wayfinding to trail accesses and other amenities. Provide interpretive signage in natural areas for increased nature education opportunities.
- Improve internal vehicular signage for better wayfinding to access park amenities. The existing entrance park ID sign and rules sign were replaced in 2013 as part of park redevelopment.

### 5. Recreation Opportunities

- **Shelter/Restroom/Beach Facility:** Redevelopment of the existing picnic shelters, restrooms, and beach facility was completed in 2012. Redevelopment of these facilities will likely be required in the future to provide enhanced recreational amenities for picnic reservations, to improve use with adjacent recreational amenities, and to comply with any changes to the Americans with Disabilities Act (ADA) as well as Universal Design standards.
- **Playground:** Future improvements would consist of the replacement of playground components, existing playground surfacing materials, and improve accessibility as well as maintenance operations.
- **Court Games:** explore the development of court games that comply with beach and park use to correspond with changing trends, demographics, and park use.
- **Public Art:** Provide the opportunity and appropriate infrastructure to accommodate public art to improve community connections.
- **Programming:** Increase recreation and nature programming activities.
- **Fishing:** There are no fishing piers or secondary fishing areas provided at Turtle Lake County Park. Most fishing activity occurs from shore, but shallow water and a heavy weed bed prevents a majority of fishing activity. Additional master planning activities are required to determine appropriate locations for fishing piers and secondary fishing access points.
- **Water Access:** Provide access for small water craft within the park. Increase variety of rental amenities for potential small watercraft rental.

## PROPOSED DEVELOPMENT

### 6. Habitat Restoration & Management

- The rain gardens are managed with weeding and supplemental planting to provide pollinator habitat.
- Future restoration could include the conversion of turf grass to native grasses and forbs within the oak woods.

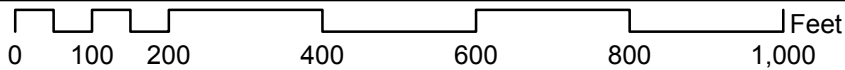
### 7. Acquisitions

Identify properties for future park acquisition and inclusion into Turtle County Park as properties become available.

### 8. Energy & Resilience

The current orientation, location, and design of the picnic shelter is moderately conducive to a small rooftop solar array which would potentially provide 2.1 MWh/year of energy to offset the site's energy use. The capital cost of such a system would have a payback period of around 26 years.

PROPOSED LAND COVER



Proposed Land Cover

- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |

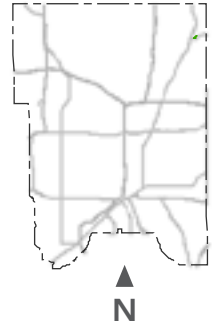
TURTLE LAKE COUNTY PARK

NATURAL RESOURCE MANAGEMENT UNIT TABLE

TURTLE LAKE COUNTY PARK							
ACRES	CURRENT LAND COVER	PRO-POSED LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIOR-ITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
1.25	OAK WOODS	OAK WOODS	MOW, HERBICIDE, RX BURN, DRILL SEED	\$2,500.00	3	FOLIAR SPRAY OF HERBACEOUS	\$750.00
9.86	ACTIVE USE	ACTIVE USE	N/A	N/A	N/A	N/A	N/A
PARK TOTAL							
11.11				\$2,500.00			\$750.00



## WHITE BEAR LAKE COUNTY PARK



### EXISTING SITE CONDITIONS



#### LOCATION AND SIZE

White Bear Lake County Park is located in the northeast corner of Ramsey County. The 12-acre park lies in a triangle between Highway 96 and White Bear Lake.



#### SITE CHARACTERISTICS

The park includes 1,000 feet of shoreline on White Bear Lake. White Bear Lake is 2,400 acres in size and is the second largest lake in the Twin Cities Metropolitan Area. The lake is a significant resource for all types of water-based recreation. The park is very flat and relatively open, giving it a very lake-oriented feeling.



#### RECREATION DEVELOPMENT

The park is fully developed and includes a boat launch with parking for 37 car/boat trailers, picnic area, play area, 200-foot swimming beach, beach building, and parking for 250 cars. The boat launch accommodates two lanes for launching boats and hosts 42 car/trailer parking stalls.



#### MAINTENANCE

##### Winter Maintenance:

- Maintain access to the boat launch
- Plow boat launch parking lot

##### Special Maintenance items:

- The city of White Bear lake uses part of the parking lot to store snow
- The beach was reopened in 2017 and needs considerable maintenance in the swim area to remove the aquatic vegetation and restore it to an inviting and usable beach

EXISTING CONDITIONS



Legend

Park Border		County Paved Trail		Restrooms		Fishing	
Park Entrance		Municipal Trail		Picnic Area		Carry In	
Municipal Sidewalk		Metro Transit Stops		Playground		Beach	
Regional Trail				Boat launch		Parking Lot	

EXISTING LAND COVER



Existing Land Cover

- |                     |                   |            |                 |
|---------------------|-------------------|------------|-----------------|
| Active Use          | Floodplain Forest | Oak Woods  | Remnant Prairie |
| Impervious          | Mesic Forest      | Old Field  | Savanna         |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp     |
| Tamarack Swamp      | Wetland           | Open Water |                 |

## WHITE BEAR LAKE COUNTY PARK

### LAND COVER AND HABITAT

White Bear Lake County Park consists of mainly active use space. There is a large rain garden with established native grasses and forbs, which captures storm water runoff from the parking lot.

### WILDLIFE

The park hosts a variety of common wildlife including nesting songbirds and waterfowl.



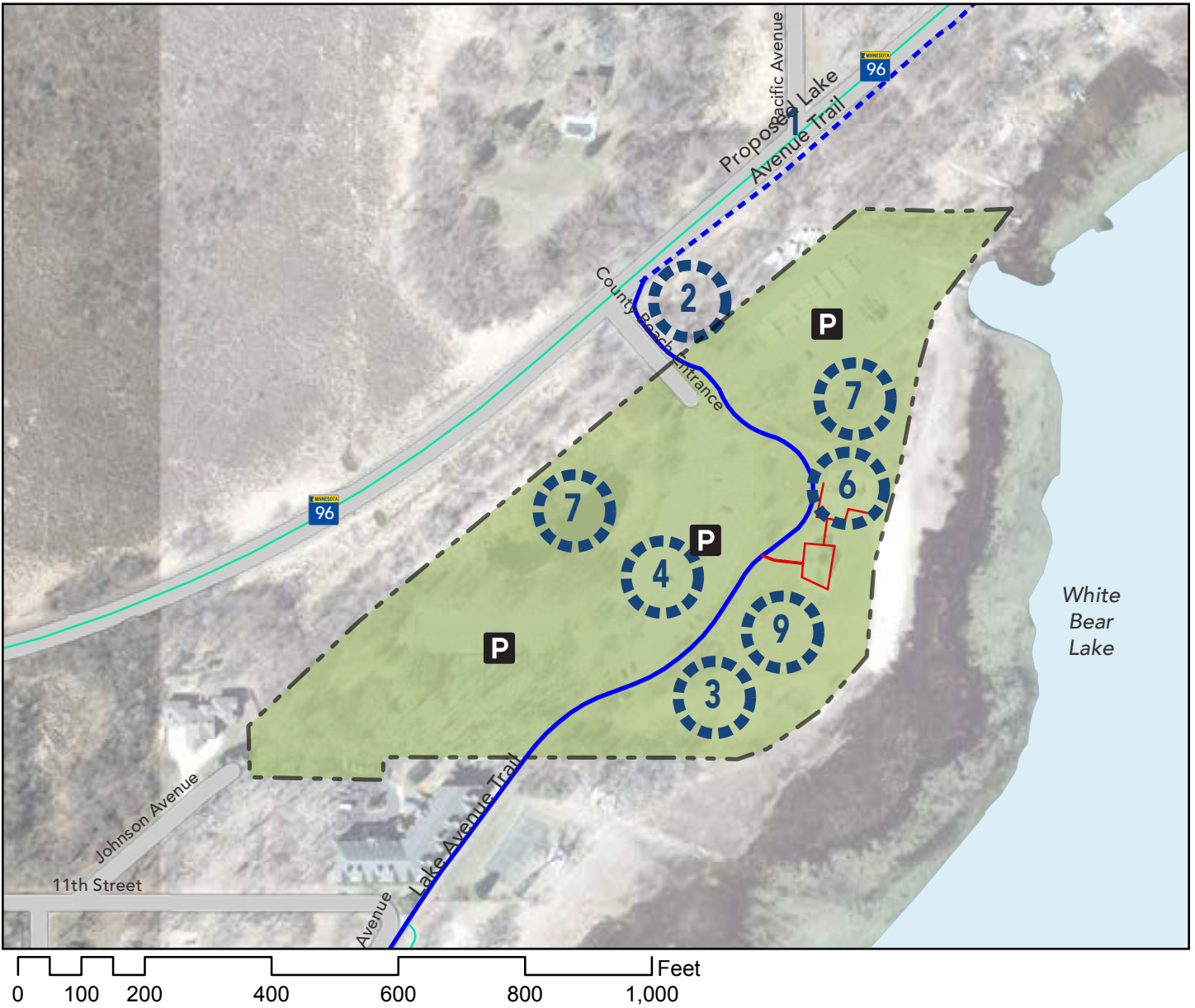
### WILDLIFE MANAGEMENT

The Canada goose population is monitored and goose removal is completed as needed.

### SURFACE WATER RESOURCES

The park has around 1,000 feet of shoreline consisting of a natural shoreline buffer, swimming beach, and boat launch. White Bear Lake is a popular recreational lake with excellent water quality.

PROPOSED DEVELOPMENT



Legend

- |                           |                 |                             |            |                           |                   |
|---------------------------|-----------------|-----------------------------|------------|---------------------------|-------------------|
| Park Border               | --- --          | Park Paved Trail            | — (red)    | Regional Trail            | — (blue)          |
| Proposed Development      | 3 (yellow grid) | Park Turf Trail             | — (green)  | Proposed Regional Trail   | - - - - (blue)    |
| Proposed Development Node | 1 (blue circle) | Municipal Trail             | — (yellow) | Proposed Paved Park Trail | - . - . - . (red) |
| Metro Tranist Stop        | T (red square)  | Municipal Ped/Bike Facility | — (cyan)   | Trail                     |                   |

## PLANNING CONSIDERATIONS

The park is located on the Lake Links Trail Network. It will serve as a primary trailhead for this regional trail. The trail, which extends from Lake Avenue through the park, will continue east along the north side of Highway 96 to Highway 244.

### PROPOSED DEVELOPMENT

#### 1. Master Planning

Detailed master planning activities will be addressed in the future as redevelopment needs arise for park and recreation improvements. Master planning activities would address improvements for recreational needs due to changing trends, demographics, recreational amenities, and storm water management best practices. Coordination with other local agencies and private parties should also be a priority in any master planning process.

- Develop partnerships with the city of White Bear Lake, Minnesota Department of Natural Resources (MNDNR), Rice Creek Watershed District (RCWD), Lake Associations, other local agencies, and private parties for funding strategies, increased recreational opportunities, and improvements.

#### 2. Regional Park and Trail

Investigate opportunities for inclusion into the regional park and trail system as part of the Lakes Links Regional Trail.

#### 3. Community Events

There is a need for future improvements to accommodate community events such as the Art Shanty Festival and Polar Plunge. Development may consist of improved vehicular and pedestrian access, event areas, and recreational amenities that would be conducive for these types of events.

#### 4. Vehicle Access

Parking lot pavement maintenance was last completed in 2010. A mill and overlay will be required for improved use and maintenance operations. During any parking lot redevelopment additional parking should be considered along with improved pedestrian connections, signage, stormwater management best practices, and site amenities.

#### 5. Wayfinding

- Improve pedestrian signage for improved wayfinding to trail accesses, and other amenities. Provide interpretive signage in natural areas for improved wayfinding to nature education opportunities.

#### 6. Recreation Opportunities

- **Shelter/Restroom:** Develop a picnic shelter with an adjacent restroom facility. Improvements shall comply with the Americans with Disabilities Act (ADA), Universal Design standards, and enhance use with adjacent recreation amenities.

## PROPOSED DEVELOPMENT

- **Beach House Facility:** Redevelopment of the existing beach house facility shall comply with the Americans with Disabilities Act (ADA), Universal Design standards, and improve use with adjacent recreation amenities.
- **Playground:** Redevelop existing playground to provide improved play features and connections to the beach and adjacent turf areas.
- **Multi-Use Turf:** Improve turf areas to increase recreational opportunities.
- **Court Games:** Develop an area for additional recreation opportunities that comply with beach and general park use.
- **Public Art:** Provide the opportunity and appropriate infrastructure to accommodate public art for improved community connections.
- **Programming:** Increase recreation and nature programming activities.
- **Fishing:** Increase fishing opportunities within the park. Additional planning activities will be required to determine the most appropriate fishing amenities.
- **Water Access:** Due to shallow water conditions and shoreline weeds, improvements to the shoreline and beach are proposed. Additional planning activities will be required to determine the most appropriate improvements.
  - Improve beach sand area, adjacent turf, beach amenities, and water play opportunities.
  - Provide access for small water craft within the park. Increase variety of rental amenities for potential small watercraft rental.

### 7. Habitat Restoration & Management

- The stormwater and infiltration basins are managed with weeding and supplemental planting to provide pollinator habitat.

### 8. Acquisitions

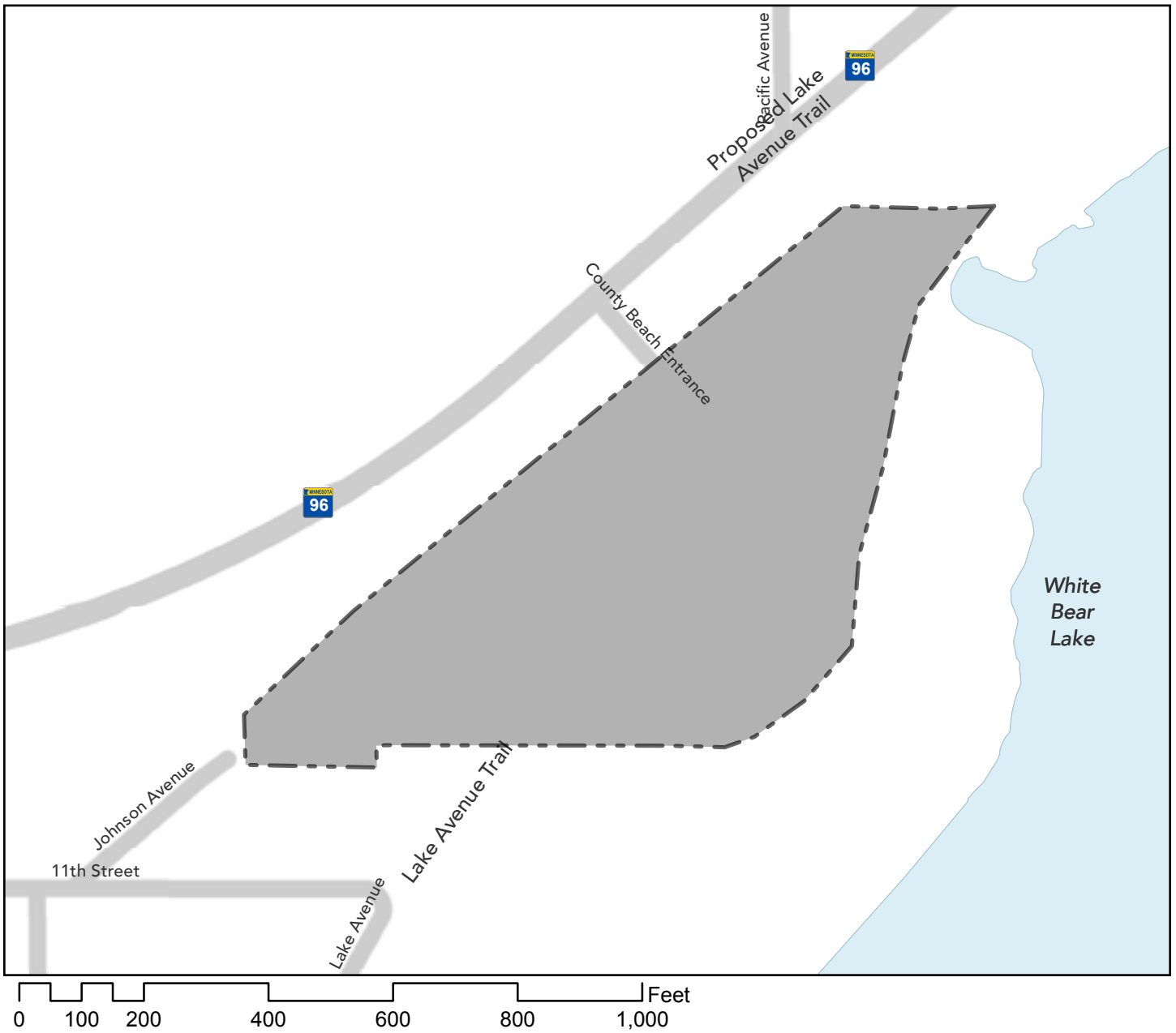
Identify properties for future acquisition and inclusion into White Bear Lake County Park when properties become available.

### 9. Energy & Resilience

The current orientation, location, and design of the park shelter is moderately conducive to a small rooftop solar array which would potentially provide 5.0 MWh/year of energy to offset the site's energy use. However, due to the capital cost of such a system, and current regulations which do not allow for on-site solar arrays to generate more energy than the site uses, the energy cost savings over the estimated life of a solar system would not offset the capital cost.

As a result of 2017 litigation surrounding the lake levels of White Bear Lake, it is likely that water use for property owners in the vicinity of the lake will be subject to regulation in the future. Therefore it is critical for Parks & Recreation to implement measure to reduce water use for maintenance.

PROPOSED LAND COVER



Proposed Land Cover

- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |



WHITE BEAR LAKE COUNTY PARK

NATURAL RESOURCE MANAGEMENT UNIT TABLE

WHITE BEAR LAKE COUNTY PARK							
ACRES	CURRENT LAND COVER	PRO-POSED LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIOR-ITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
11.64	ACTIVE USE	ACTIVE USE	N/A	N/A	N/A	N/A	N/A
PARK TOTAL							
11.64				N/A			N/A

## PROTECTION OPEN SPACE

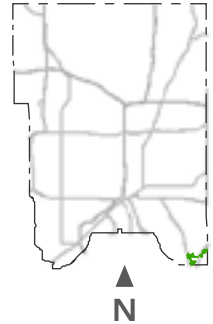
Outstanding landscape amenities, critical natural systems and vulnerable natural resources are characteristics of Protection Open Spaces. These characteristics contribute to public health, outdoor education, aesthetic enjoyment and ecosystem stability. Stewardship of these spaces is the charge for the Parks & Recreation department. This is a primary objective of the county's goal of community health and well-being.

### Objectives:

- To protect unique features of aesthetic, educational, or scientific value for public enrichment.
- To protect natural areas and manage the resources within these areas to support appropriate natural vegetation.
- To manage areas of suitable size and character in order to provide adequate food and shelter for significant wildlife populations within the urban environment.
- To protect a system of drainageways and holding basins critical to the surface movement, storage and treatment of storm water runoff.
- To provide public access for trails, nature appreciation, and outdoor education.

There are currently nine protection open space sites under the jurisdiction of Ramsey County. These sites total 650.56 acres.

## FISH CREEK OPEN SPACE



### EXISTING SITE CONDITIONS

MASTER PLAN DATE: 2016



#### LOCATION AND SIZE

Fish Creek Protection Open Space is located in the southeast corner of Ramsey County neighboring the cities of Saint Paul and Maplewood. The 130-acre site is bounded by the Ramsey County line on the south and east, Carver Avenue on the north, and Highway 61 on the west.



#### SITE CHARACTERISTICS

The defining characteristic of Fish Creek Open Space is Fish Creek, flowing for 1-1/2 miles from Carver Lake on the east side of I-494 to Pigs Eye Lake on the west side of Highway 61. From Carver Lake to I-494 the creek has a flat gradient and passes through wetlands, wooded slopes, and grasslands. From I-494 to Highway 61 the creek undergoes a large elevation drop and passes through a deep wooded valley with steep slopes. A wooded bluff runs parallel to the creek as it descends the Mississippi River valley.

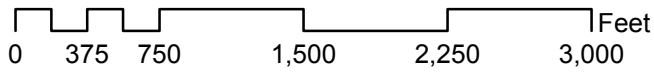
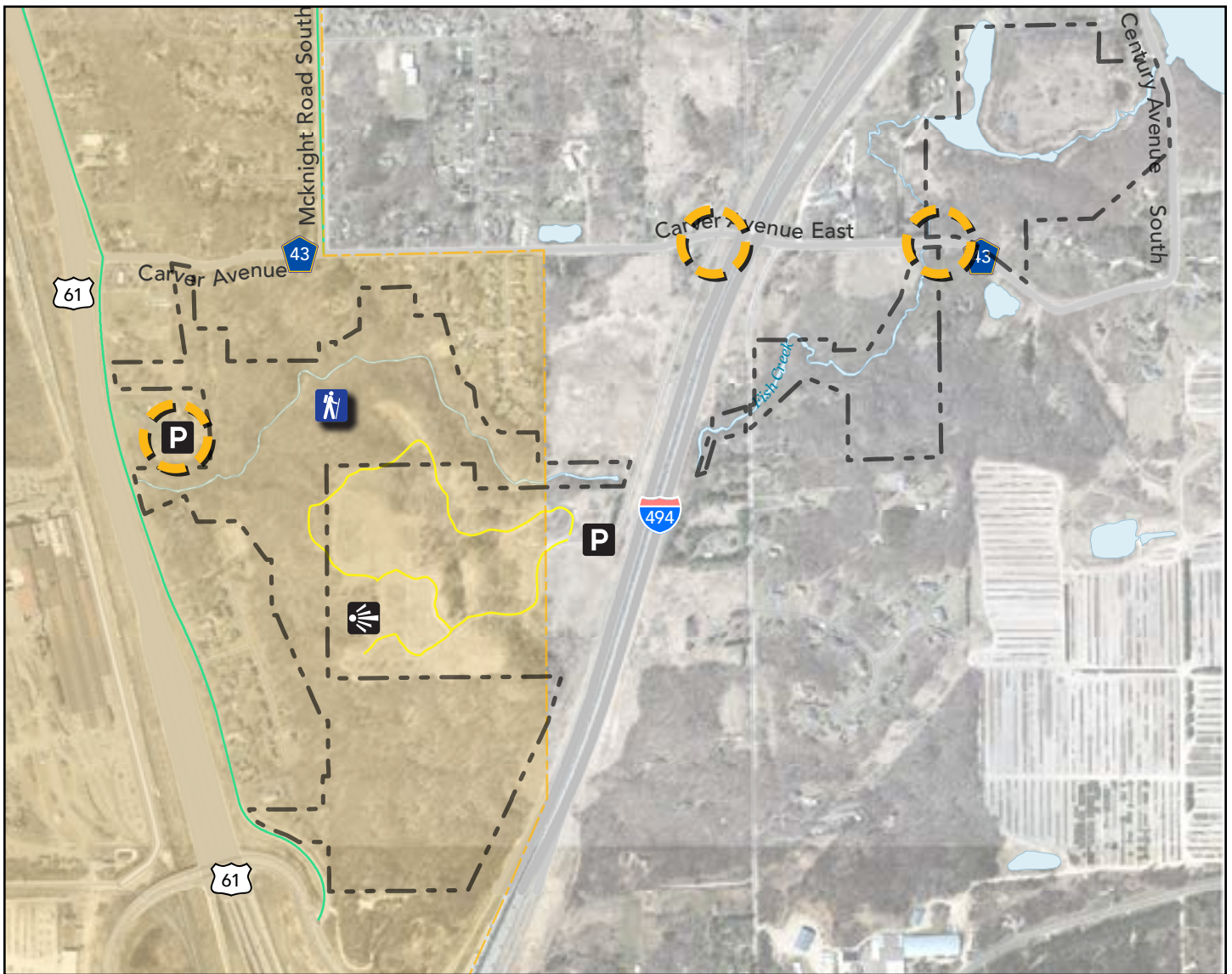
The city of Maplewood owns land abutting fish creek open space that contains a short paved trail network sitting on a flatter area above the bluffs and creek valley. The city made improvements consisting of the paved trail and parking lot development utilizing both city and county owned property in 2016. The city also completed improvements to the existing access road off of Carver Avenue entering Fish Creek Open Space.



#### RECREATION DEVELOPMENT

Fish Creek Open Space has a limited number of unpaved trails. The city of Maplewood has developed a paved trail system on its property adjacent to county property.

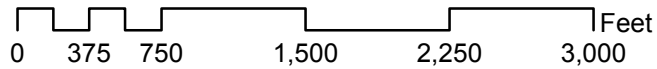
EXISTING CONDITIONS



Legend

- |                    |  |                             |  |  |  |
|--------------------|--|-----------------------------|--|--|--|
| Park Border        |  | Park Paved Trail            |  | Parking Lot                              |  |
| Park Entrance      |  | Park Turf Trail             |  | Scenic Viewpoint                         |  |
| Metro Transit Stop |  | Municipal Trail             |  | Hiking                                   |  |
| Regional Trail     |  | Municipal Ped/Bike Facility |  | Mississippi River Corridor Critical Area |  |

EXISTING LAND COVER



Existing Land Cover

- |                     |                   |            |                 |
|---------------------|-------------------|------------|-----------------|
| Active Use          | Floodplain Forest | Oak Woods  | Remnant Prairie |
| Impervious          | Mesic Forest      | Old Field  | Savanna         |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp     |
| Tamarack Swamp      | Wetland           | Open Water |                 |

## LAND COVER AND HABITAT

The native vegetation of Fish Creek Open Space was predominantly oak woods on steep slopes with scattered oak savannas. Current habitat includes small sections of savanna, mature oak woods, mixed woods, some smaller old fields, and a wetland complex in the eastern section of the open space. Several areas of old fields are found on the east end of the property. Common invasive species within the park include buckthorn, garlic mustard, and Japanese hedge parsley, which was found aggressively spreading since 2011. There are high quality habitats that exist in the park that are unique to the region and warrant preservation over future development. These include north facing slopes of mesic woods along the creek that house high quality herbaceous plants including ferns, bloodroot, ginger, columbine and other shade loving plants, small sections of savanna, and larger tracts of mature oak woods, including the oak woods along the bluff in the western portion of the park, which is located within the Mississippi River Corridor Critical Area (MRCCA). This section of park is subject to MRCCA regulations (State statute under Minnesota Rule 6106) which is in place to protect the unique natural and cultural resources and values within this corridor. The MRCCA, which shares its boundary with the Mississippi National River and Recreation Area, includes most of the western section of park, including prairie land restored by the city of Maplewood. The city of Maplewood owns a 46 acre and 22-acre parcel of land abutting the western portion of Fish Creek Open Space. Around 33 acres of the 46-acre parcel was converted to prairie in 2016 and is surrounded by management unit (MU) 1 of Fish Creek Open Space. The other 22-acre parcel is currently an open old field, west of Interstate 494. At the south end of this parcel, adjacent to the creek, archaeological artifacts have been found on both city and abutting county property.

## WILDLIFE

The open space hosts diverse wildlife including a variety of nesting songbirds. Larger mammals include white-tailed deer, coyotes, red fox, and raccoons.

## WILDLIFE MANAGEMENT

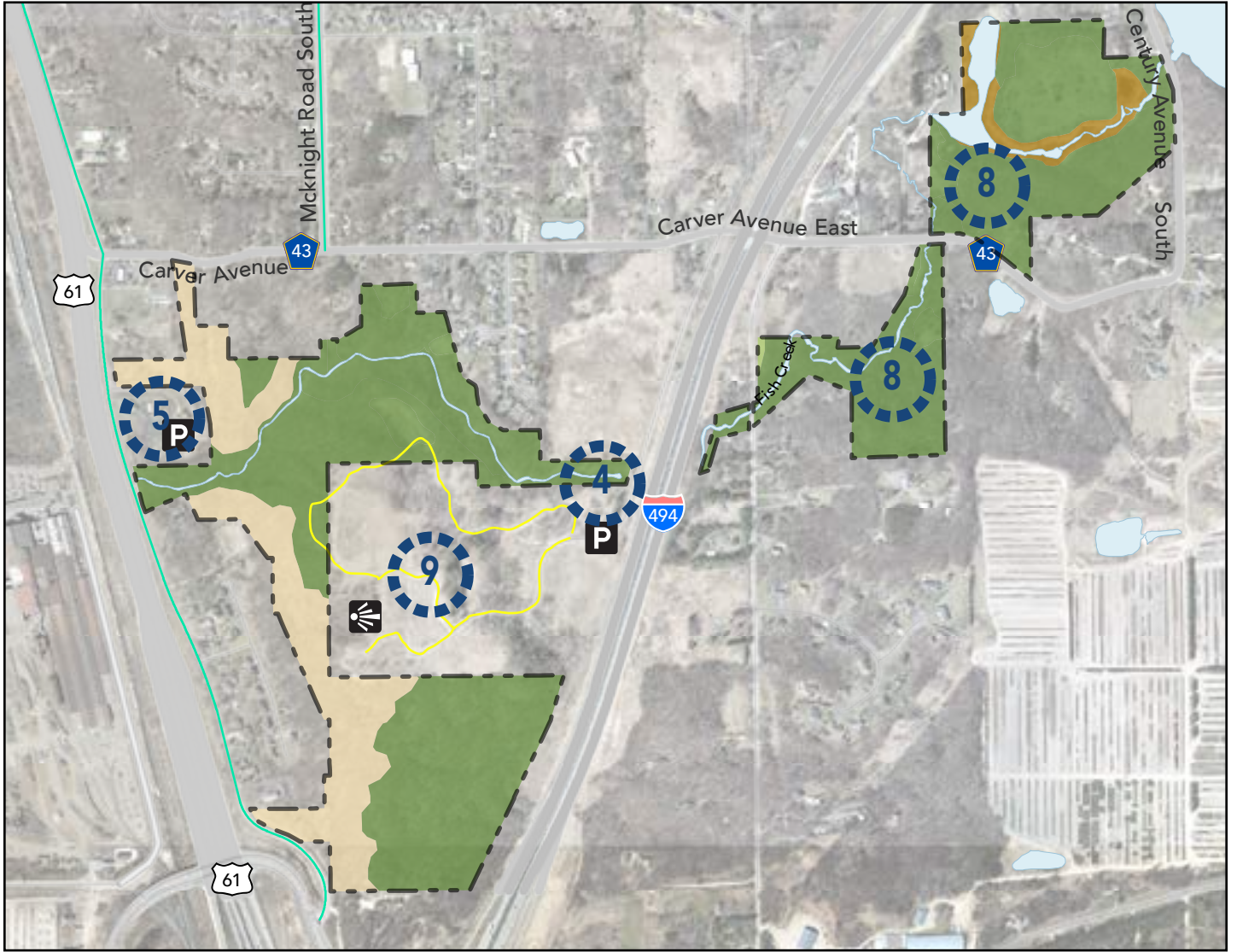
Fish Creek Open Space has been the location for several special archery deer hunts since 2000 and a location for baiting when sharpshooting removal practices are required, under the provisions of the Ramsey County Cooperative Deer Management Plan in partnership with the cities of Maplewood and Saint Paul.

## SURFACE WATER RESOURCES

The majority of Fish Creek, which flows east to west from Carver Lake to the Mississippi River, is surrounded by Ramsey County Parks & Recreation open space. Historically, Fish Creek experienced significant streambed erosion caused by increased stormwater flows. In the late 1980s, the Ramsey Washington Metro Watershed District (RWMWD) undertook a significant restoration project that included installation of several flood control structures in the steeper sections of the creek. RWMWD maintains an access area through the park to conduct maintenance on the creek and a flood control system in this area. RWMWD also completes water quality monitoring of Fish Creek.



PROPOSED DEVELOPMENT



0 375 750 1,500 2,250 3,000 Feet

Legend

- |                           |  |                             |  |                           |  |
|---------------------------|--|-----------------------------|--|---------------------------|--|
| Park Border               |  | Park Paved Trail            |  | Regional Trail            |  |
| Proposed Development      |  | Park Turf Trail             |  | Proposed Regional Trail   |  |
| Proposed Development Node |  | Municipal Trail             |  | Proposed Paved Park Trail |  |
| Metro Tranist Stop        |  | Municipal Ped/Bike Facility |  |                           |  |

## PLANNING CONSIDERATIONS

Ramsey County Parks & Recreation should continue to coordinate improvements to Fish Creek Open Space with the city of Maplewood and the Ramsey Washington Metro Watershed District. The access road from Carver Avenue may be required in the future for additional parking and recreational opportunities.

A subdivision borders Fish Creek Open Space on three sides, maintenance service and trail access should be provided through this subdivision.

Management of the steep slopes and storm water are also critical to maintaining the integrity of the site.

## PROPOSED DEVELOPMENT

- 1. Master Planning** - A concept master plan for Fish Creek Open Space was developed in coordination with the city of Maplewood in 2016 and was approved by the Ramsey County Board of Commissioners. This master plan addressed improvements to a portion of Fish Creek owned by the city of Maplewood and sections owned by Ramsey County on the west side of Interstate 494. Further master planning of Fish Creek will be required for specific development and portions located east of Interstate 494 due to changing trends, demographics, and improved recreational amenities. Coordination with multiple local and state agencies will be required for long-term master planning of improvements throughout Fish Creek.
  - Develop partnerships with the city of Maplewood, city of Woodbury, Minnesota Department of Transportation (MNDOT), and Ramsey Washington Metro Watershed District (RWMWD) for funding strategies, increased recreational opportunities, and proposed improvements.
  - **Fish Creek Open Space (West Section):** A concept master plan was prepared in 2016 in coordination with the city of Maplewood for vehicular access, trails, access to Fish Creek, and programming activities through both the city of Maplewood and Ramsey County properties. The city of Maplewood property currently has a conservation easement which limits the amount of building development per funding requirements used to acquire the property. Improvements to the west section of Fish Creek are proposed to be passive recreation consisting of paved and natural surface trail, observation areas, interpretive and education programming areas, a shared parking lot, access to Fish Creek, recreation programming areas for day camp opportunities, and a future interpretive and education facility. Additional master planning will be required for recreation.
  - **Fish Creek Open Space (East Section):** A concept master plan for this section has not been prepared. Improvements to the east section of Fish Creek are proposed to be passive recreation consisting of paved and natural surface trails, observation areas, interpretive and education areas, trailhead parking, access to Fish Creek, and programming areas for day camp opportunities. Future connections are proposed to Carver Lake Park for additional recreation opportunities. Additional land acquisition on the east side of I-494 would allow for recreational development.
  - **Regional Park Opportunities:** Due to its size and proximity to Battle Creek, a long-term plan is proposed to include Fish Creek Open Space in the regional park system. Additional planning activities are scheduled with the city of Maplewood for possible regional park expansion of Fish Creek Open Space to include land owned by the city of Maplewood. Another long term plan is to include Carver Lake Park into the regional park system as well. Future planning activities required also include a comprehensive study with the Metropolitan Council, city of Maplewood, and city of Woodbury to assess the viability of the open space as a regional park component.



## PROPOSED DEVELOPMENT

### 2. Site Access

- **Additional Access Points:** Additional access points are proposed from adjacent neighborhoods on the east and west sections of Fish Creek and along Carver Road for access into Fish Creek Open Space. These access points would be constructed with future trail connections into Fish Creek Open Space.
- **Point Douglass Road:** An access point is proposed on the north side of Oakwood Church. There is a possibility for a shared parking facility with Oakwood Church in this location. Another proposed trailhead location is a planned land purchase from MNDOT on the southwest corner of Fish Creek. This would allow for trailhead parking and trail access into Fish Creek Open Space.

### 3. Trail Development

- Additional development of paved and natural surface trails is proposed for areas throughout the Fish Creek Open Space.

### 4. City of Maplewood Trailhead

- The city of Maplewood recently completed development of a parking lot facility in Fish Creek Open Space in 2016 at the end of the entrance road adjacent to I-494.
- Redevelopment of the parking lot may be required if development occurs in this area for a proposed interpretive and educational facility.
- During any parking lot redevelopment additional parking should be considered along with improved pedestrian connections, signage, storm water management best practices, and site amenities.

### 5. Point Douglass Road Trailhead

- A trailhead parking facility is proposed on the north side of Oakwood Church. There is a possibility for a shared parking facility with Oakwood Church in this location. Another proposed trailhead location is a planned a land purchase from MNDOT on the southwest corner of Fish Creek. This would allow for potential trailhead parking and trail access into Fish Creek Open Space.

### 6. Wayfinding

- **Pedestrian:** Improve pedestrian signage for enhanced wayfinding to trail accesses and other amenities. Provide interpretive signage in natural areas to increase nature education opportunities.
- **Vehicular:** Improve vehicular entrance signage for better wayfinding to the park access. Ramsey County proposes appropriate signage according to the Wayfinding Master plan new access points and parking lots.

### 7. Recreation Opportunities

- **Interpretive/Education Facility:** Development of an interpretive and educational facility is proposed on the property owned by the city of Maplewood. It anticipated this facility provide recreation programming for Fish Creek Open Space and possibly consist of education and recreation programming, an open lobby area with interpretive education, restrooms, and necessary site improvement. Any building development would comply with the Americans with Disabilities Act (ADA), and Universal Design standards.

## PROPOSED DEVELOPMENT

- **Playground:** Development of playground facilities is proposed for Fish Creek Open Space. Opportunities may include playground equipment or nature play components dependent public engagement.
- **Public Art:** Provide the opportunity and appropriate infrastructure to accommodate public art for improved community connections.
- **Culturally Significant Areas:** Provide connections and interpretive education for culturally significant areas within Fish Creek Open Space. Proposed improvements would consist of observation areas, interpretive and educational signage, and pedestrian connections.
- **Wildlife Areas:** Provide visual and interpretive educational signage and pedestrian connections to wildlife areas. If federally or state listed protected plants or animals are discovered, statutes and guidelines will be followed.
- **Programming:** Increase recreation and nature programming activities for additional recreation opportunities.
- **Fish Creek Access:** Provide access to fish creek from paved or natural surface trails. Interpretive/education areas are proposed for additional programming opportunities.

## 8. Habitat Restoration & Management

- Current restored and maintained habitat includes the oak woods in management unit (MU) 1 and mesic woods in MU 2. This restoration work started in 2015 and has included removal of invasive woody species, primarily buckthorn, a prescribed burn, and casting of native woodland seed across most of MU1.
- Ongoing vegetation management activities include buckthorn removal, foliar spraying and prescribed burns of these restored areas.
- The oak woods are also being managed to contain and control oak wilt, especially in the south section of MU1
- Future priority restoration will include the conversion of mixed woods in MU 2, MU 3, MU 4 to oak woods and the potential for old field to oak woods conversion in all management units.
- The city of Maplewood will continue to maintain the 33-acre prairie site owned by the city.

## 9. Acquisitions

Future park acquisition is proposed for adjacent residential properties and long-term expansion for inclusion into Fish Creek Open Space when properties become available. Further master planning activities would be required and be part of regional park planning activities to determine potential recreation uses for expansion areas.

- Fish Creek Property owned by city of Maplewood for future park acquisition
- Fish Creek Property owned by the city of Maplewood located on the north side of Carver Road for future park acquisition.
- Several residential properties adjacent to Fish Creek Open Space may be of interest when properties become available.

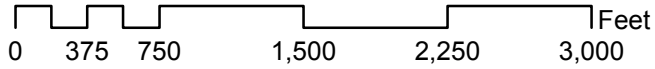
PROPOSED LAND COVER



Proposed Land Cover


- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |

NATURAL RESOURCE MANAGEMENT UNITS



Legend

Management Unit #

Management Unit Border 

NATURAL RESOURCE MANAGEMENT UNIT TABLE

MANAGEMENT UNIT 1 - FISH CREEK OPEN SPACE							
ACRES	CURRENT LAND COVER	PROPOSED LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIORITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
1.54	OLD FIELD	OAK WOODS	RX BURN, FOLIAR SPRAY OF HERBACEOUS, PLANT OAKS	\$1,617.00	2	RX BURN, FOLIAR SPRAY OF BUCKTHORN	\$1,463.00
73.09	OAK WOODS	SAVANNA 27.50 ACRES	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN, RX BURN, NATIVE SEED	\$96,250.00	2	RX BURN, FOLIAR SPRAY OF BUCKTHORN	\$26,125.00
		OAK WOODS 45.59 ACRES	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN, RX BURN, NATIVE SEED	\$159,565.00	2	RX BURN, FOLIAR SPRAY OF BUCKTHORN	\$43,310.50
<b>MANAGEMENT UNIT 1 TOTAL</b>							
74.63				\$257,432.00			\$70,898.50

NATURAL RESOURCE MANAGEMENT UNIT TABLE

MANAGEMENT UNIT 2 - FISH CREEK OPEN SPACE							
ACRES	CURRENT LAND COVER	PRO-POSED LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIOR-ITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
1.123	OLD FIELD	OAK WOODS	RX BURN, FOLIAR SPRAY OF HERBACEOUS, PLANT OAKS	\$1,179.15	2	RX BURN, FOLIAR SPRAY OF BUCK-THORN	\$1,066.85
5.58	MESIC FOREST	MESIC FOR-EST	INVASIVE WOODY RE-MOVAL, CUT, STUMP TREAT, STACK & BURN	\$5,580.00	2	RX BURN, FOLIAR SPRAY OF BUCK-THORN	\$5,301.00
10.6	MIXED WOODS	OAK WOODS	INVASIVE WOODY REMOV-AL, CUT, STUMP TREAT, STACK & BURN, RX BURN, NATIVE SEED	\$37,100.00	2	RX BURN, FOLIAR SPRAY OF BUCK-THORN	\$10,070.00
<b>MANAGEMENT UNIT 2 TOTAL</b>							
17.303				\$43,859.15			\$16,437.85

MANAGEMENT UNIT 3 - FISH CREEK OPEN SPACE							
ACRES	CURRENT LAND COVER	PRO-POSED LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIOR-ITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
1.23	OLD FIELD	OAK WOODS	RX BURN, FOLIAR SPRAY OF HERBACEOUS, PLANT OAKS	\$1,291.50	2	RX BURN, FOLIAR SPRAY OF BUCK-THORN	\$1,168.50
14.33	MIXED WOODS	OAK WOODS	INVASIVE WOODY REMOV-AL, CUT, STUMP TREAT, STACK & BURN, RX BURN, NATIVE SEED	\$50,155.00	2	RX BURN, FOLIAR SPRAY OF BUCK-THORN	\$13,613.50
2.21	OAK WOODS	OAK WOODS	INVASIVE WOODY RE-MOVAL, CUT, STUMP TREAT, STACK & BURN	\$4,420.00	2	RX BURN, FOLIAR SPRAY OF BUCK-THORN	\$2,099.50
<b>MANAGEMENT UNIT 3 TOTAL</b>							
17.77				\$55,866.50			\$16,881.50

## NATURAL RESOURCE MANAGEMENT UNIT TABLE

MANAGEMENT UNIT 4 - FISH CREEK OPEN SPACE							
ACRES	CURRENT LAND COVER	PROPOSED LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIORITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
9.51	OLD FIELD	OAK WOODS	RX BURN, FOLIAR SPRAY OF HERBACEOUS, PLANT OAKS	\$9,985.50	2	RX BURN, FOLIAR SPRAY OF BUCKTHORN	\$9,034.50
4.87	MIXED WOODS	OAK WOODS	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN, RX BURN, NATIVE SEED	\$17,045.00	2	RX BURN, FOLIAR SPRAY OF BUCKTHORN	\$4,626.50
14.21	OAK WOODS	OAK WOODS	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN	\$28,420.00	2	RX BURN, FOLIAR SPRAY OF BUCKTHORN	\$13,499.50
7.67	WETLAND	WETLAND	N/A	N/A	N/A	N/A	N/A
MANAGEMENT UNIT 4 TOTAL							
36.26				\$55,450.50			\$27,160.50
FISH CREEK OPEN SPACE TOTAL							
145.963				\$412,608.15			\$131,378.35

# HOLLOWAY MARSH OPEN SPACE

## EXISTING SITE CONDITIONS



### LOCATION AND SIZE

Holloway Marsh Protection Open Space is located along the eastern boundary of Ramsey County in the city of Maplewood. The 38-acre site is bounded on the south by Hill-Murray High School and the Priory, on the east by Century Avenue, on the north by Holloway Avenue and on the west by Sterling Street.



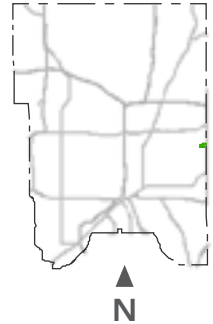
### SITE CHARACTERISTICS

The site is primarily a cattail marsh with a narrow fringe of upland surrounding the marsh.



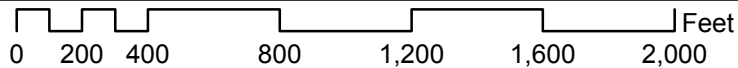
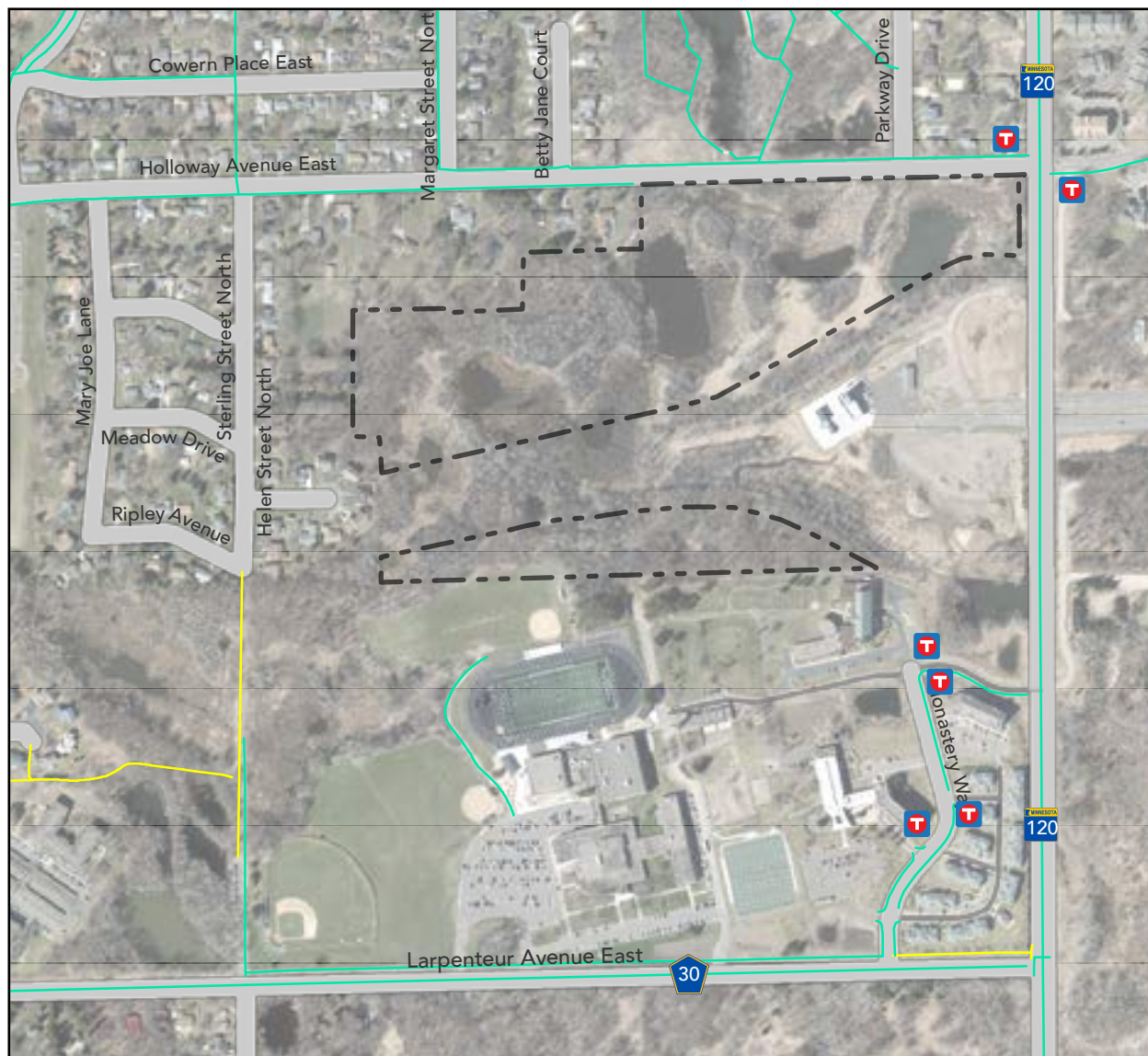
### RECREATION DEVELOPMENT

The city of Maplewood has developed a turf trail from Holloway Avenue East to the Hill-Murray School campus.





EXISTING CONDITIONS



Legend

- |                    |  |                  |  |                             |  |
|--------------------|--|------------------|--|-----------------------------|--|
| Park Border        |  | Park Paved Trail |  | Municipal Ped/Bike Facility |  |
| Park Entrance      |  | Park Turf Trail  |  | Regional Trail              |  |
| Metro Tranist Stop |  | Municipal Trail  |  |                             |  |

EXISTING LAND COVER



Existing Land Cover

- |                     |                   |            |                 |
|---------------------|-------------------|------------|-----------------|
| Active Use          | Floodplain Forest | Oak Woods  | Remnant Prairie |
| Impervious          | Mesic Forest      | Old Field  | Savanna         |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp     |
| Tamarack Swamp      | Wetland           | Open Water |                 |

## HOLLOWAY MARSH OPEN SPACE

### **LAND COVER AND HABITAT**

Holloway Marsh Open Space consists of two parcels separated by city of Maplewood open land. The habitat is mainly wetland surrounded by mixed woods and a section of mature oak woods within the south parcel. All upland habitat is highly infested with buckthorn.

### **WILDLIFE**

The park hosts a variety of common wildlife, including nesting songbirds and waterfowl. Deer use the open space as a travel corridor.

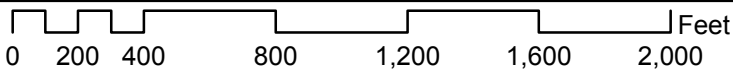
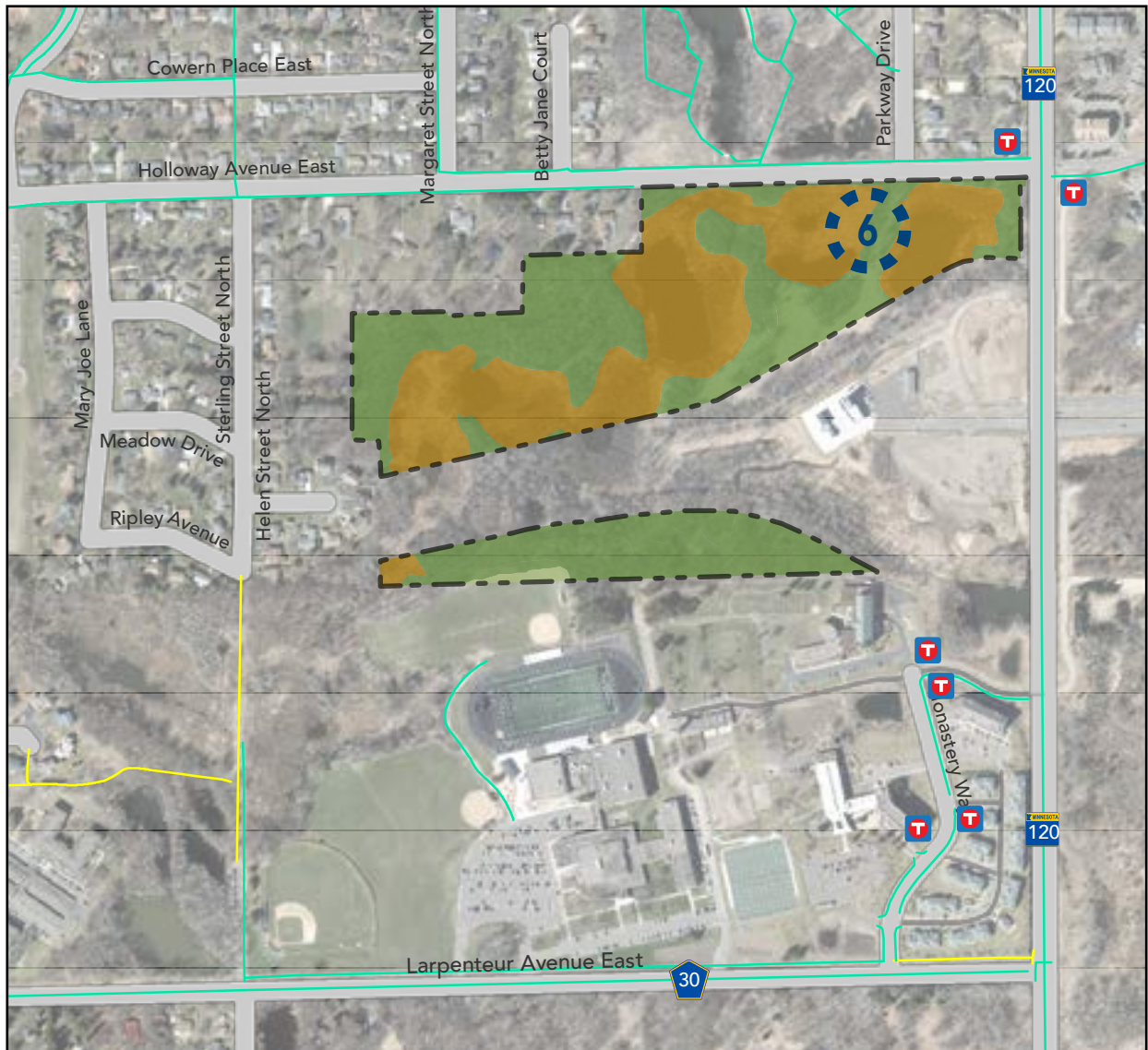
### **WILDLIFE MANAGEMENT**

Deer populations are annually surveyed and management will be conducted under the Ramsey County Cooperative Deer Management Plan in partnership with the city of Maplewood if warranted.

### **SURFACE WATER RESOURCES**

There are several open water surface features within the wetland area that provide excellent waterfowl habitat. The wetlands receive water runoff from the surrounding neighborhood via overland flow and storm water conveyance systems.

PROPOSED DEVELOPMENT



Legend

- |                           |  |                             |  |                           |  |
|---------------------------|--|-----------------------------|--|---------------------------|--|
| Park Border               |  | Park Paved Trail            |  | Regional Trail            |  |
| Proposed Development      |  | Park Turf Trail             |  | Proposed Regional Trail   |  |
| Proposed Development Node |  | Municipal Trail             |  | Proposed Paved Park Trail |  |
| Metro Tranist Stop        |  | Municipal Ped/Bike Facility |  |                           |  |

## PLANNING CONSIDERATIONS

A portion of Holloway Marsh Open Space was filled in the early 1970s to create an intersection for the proposed Highway 212 intersection. The property is currently owned by the Minnesota Department of Transportation and the highway was never constructed. Land exchanges have been proposed by interested parties to consolidate the wetland ownership and management. The land exchange would allow the county to develop a trail on the site and allow expanded use of the adjacent MNDOT property.

## PROPOSED DEVELOPMENT

**1. Master Planning** - No master plan has been prepared for Holloway Marsh Open Space. The only development that has occurred on the site is a natural surface trail that was constructed by the city of Maplewood per an agreement with Ramsey County. Master planning activities will be addressed in the future as needs arise for open space improvements.

- Develop partnerships with the city of Maplewood, Ramsey-Washington Metro Watershed District (RMMWD), other local agencies, and private parties for funding strategies, increased recreational opportunities, storm water management best practices, and proposed improvements.
- Potential recreational development opportunities would include passive recreation uses such as natural surface trails, interpretive and educational programming, observation areas, and a parking facility.

### 2. Trail Development

There are no developed access points or trails. Access points and trails will be addressed in future master planning activities and may consist of natural surface trails and boardwalks.

### 3. Vehicle Access

There are no developed vehicular access points or parking lots. Vehicular access points or parking lots would be located off of adjacent roadways and designed to have a low impact on the environment.

### 4. Wayfinding

- **Pedestrian:** Interpretive signage in natural areas for increased nature education opportunities.
- **Vehicular:** Entrance signs at access points.
- All Wayfinding signage should conform to the Ramsey County Parks & Recreation Wayfinding Master Plan

### 5. Recreation Opportunities

- **Observation Areas:** Develop observation areas along future trail systems and access points for interpretive education of natural areas and wildlife. If federally or state listed protected plants or animals are discovered, statutes and guidelines will be followed.
- **Programming:** Increase recreation and nature programming.

**PROPOSED DEVELOPMENT****6. Habitat Restoration & Management**

- Recent management has included some buckthorn removal within the mixed woods along Holloway Avenue.
- Future restoration will include further buckthorn removal within the oak and mixed woods and the conversion of old field to oak woods.

**7. Acquisitions**

Future open space acquisition is proposed for several adjacent properties when properties become available. Master planning activities would be required to determine potential uses for acquired properties.

- The city of Maplewood owns land connected to Holloway Marsh Open Space that may be identified for future acquisition or partnership.

PROPOSED LAND COVER



Proposed Land Cover

- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |

HOLLOWAY MARSH OPEN SPACE

NATURAL RESOURCE MANAGEMENT UNIT TABLE

HOLLOWAY MARSH OPEN SPACE							
ACRES	CURRENT LAND COVER	PRO-POSED LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIOR-ITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
0.23	ACTIVE USE	ACTIVE USE	N/A	N/A	N/A	N/A	N/A
2.06	OLD FIELD	OAK WOODS	RX BURN, FOLIAR SPRAY OF HERBACEOUS, PLANT OAKS	\$4,120.00	3	FOLIAR SPRAY OF HERBACEOUS	\$1,236.00
3.26	OAK WOODS	OAK WOODS	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN, RX BURN, NATIVE SEED	\$11,410.00	3	FOLIAR SPRAY OF BUCKTHORN	\$1,630.00
12.03	MIXED WOODS	MIXED WOODS	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN, RX BURN, NATIVE SEED	\$24,060.00	3	FOLIAR SPRAY OF BUCKTHORN	\$6,015.00
14.19	WETLAND	WETLAND	MONITOR	N/A	N/A	N/A	N/A
<b>PARK TOTAL</b>							
31.77				\$39,590.00			\$8,881.00



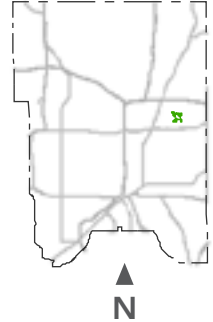
# KOHLMAN CREEK OPEN SPACE

## EXISTING SITE CONDITIONS



### LOCATION AND SIZE

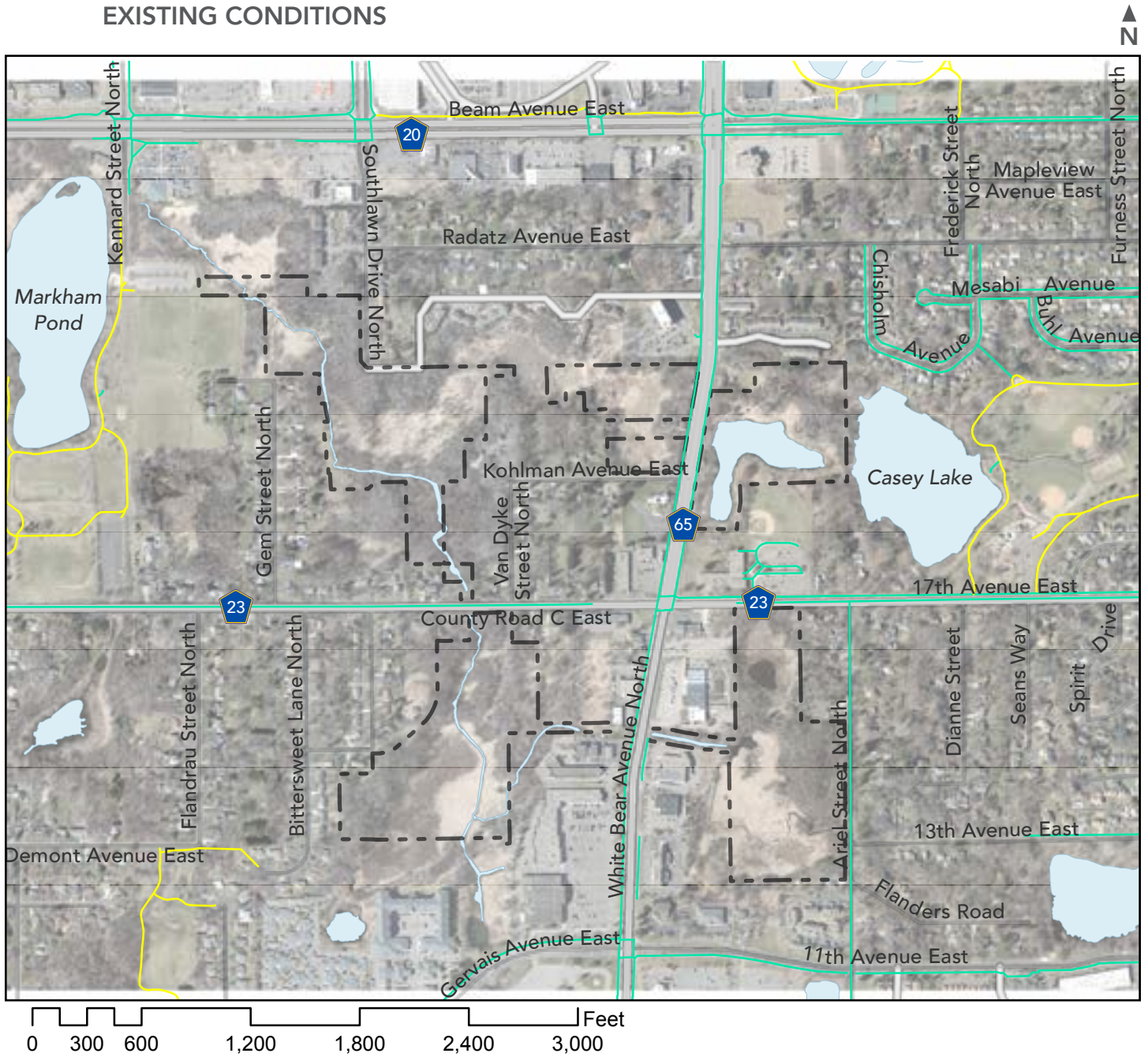
Kohlman Creek Protection Open Space is located in the east-central part of Ramsey County in the city of Maplewood. The 86-acre site is generally bounded by Gervais Avenue on the south, Ariel Street on the east, Radatz Avenue on the north, and Kennard Street on the west.



### SITE CHARACTERISTICS

The site includes an approximate 1-mile segment of the natural drainage corridor known as County Ditch 18. In addition to the ditch the site includes the adjacent wetlands. Part of the site includes a fringe of upland adjacent to the drainage corridor. The area surrounding the open space is heavily developed by residential and commercial real estate. The corridor is interrupted by major street crossings.

EXISTING CONDITIONS



Legend

- |                    |  |                  |  |                             |  |
|--------------------|--|------------------|--|-----------------------------|--|
| Park Border        |  | Park Paved Trail |  | Municipal Ped/Bike Facility |  |
| Park Entrance      |  | Park Turf Trail  |  | Regional Trail              |  |
| Metro Tranist Stop |  | Municipal Trail  |  |                             |  |

EXISTING LAND COVER



Existing Land Cover

- |                     |                   |            |                 |
|---------------------|-------------------|------------|-----------------|
| Active Use          | Floodplain Forest | Oak Woods  | Remnant Prairie |
| Impervious          | Mesic Forest      | Old Field  | Savanna         |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp     |
| Tamarack Swamp      | Wetland           | Open Water |                 |

## KOHLMAN CREEK OPEN SPACE

### LAND COVER AND HABITAT

Kohlman Creek Open Space consists mainly of wetlands fragmented by roads and surrounded by mixed woods with a small section of oak woods and old field. The open space is highly degraded by invasive species, common invasives include buckthorn, reed canary grass, invasive cattails and garlic mustard. Kohlman Creek runs southeast to northwest through the majority of the Kohlman Creek Open Space and an unnamed open water lake is located within the eastern section of the open space.

### WILDLIFE

The park hosts diverse wildlife including a variety of nesting songbirds and waterfowl.

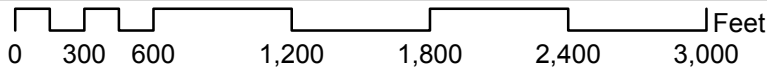
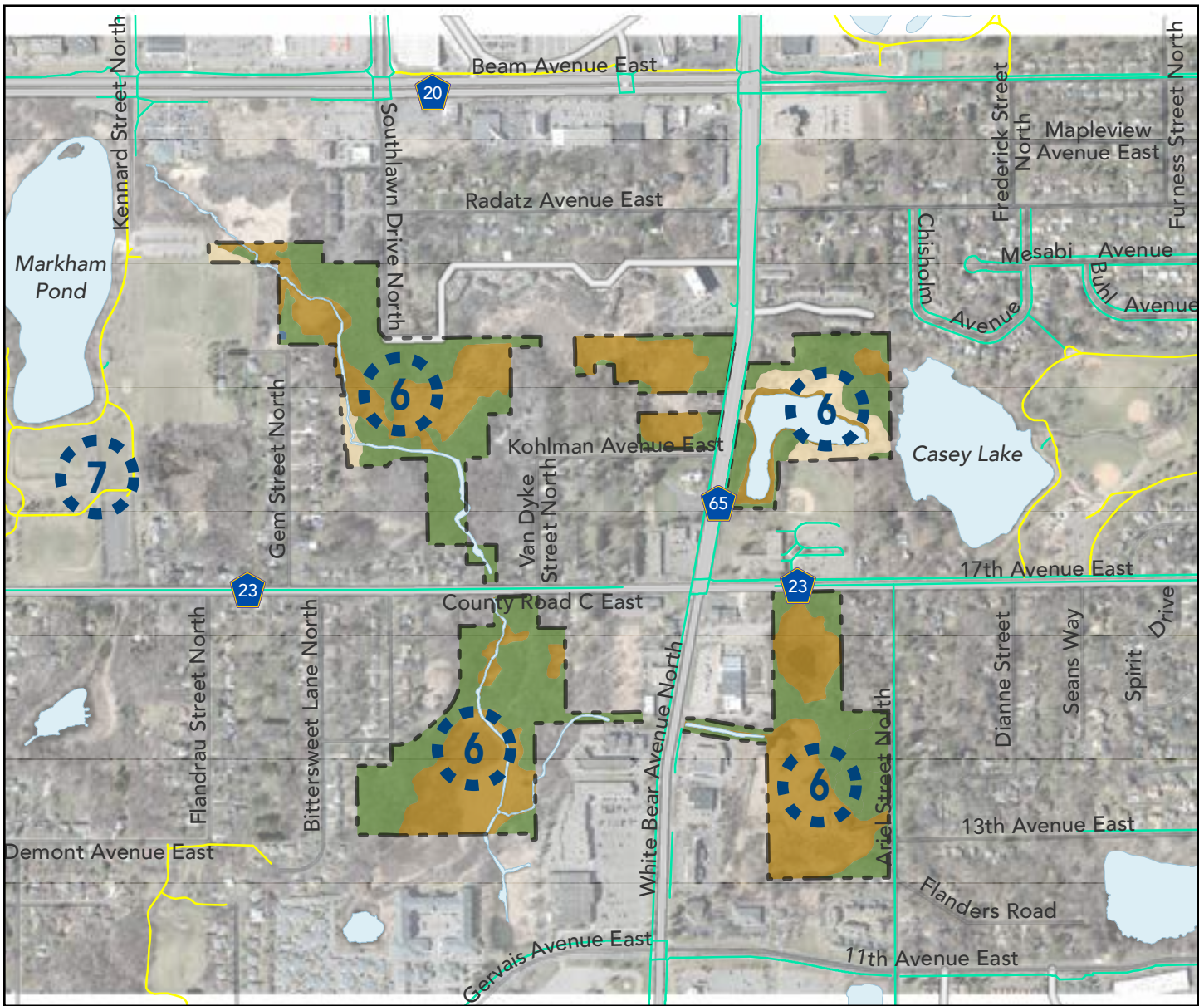
### WILDLIFE MANAGEMENT

There is no active wildlife management in this open space.

### SURFACE WATER RESOURCES

Kohlman Creek is an intermittent stream that was previously considered a county ditch (County Ditch 18 South). Kohlman Creek generally flows from southeast to northwest and eventually discharges into Kohlman Basin in the Kohlman Lake subwatershed. The Ramsey Washington Metro Watershed District monitors the water quality and manages the creek as a storm water conveyance system. Most of the creek remains in its natural state.

PROPOSED DEVELOPMENT



Legend

Park Border	--- --	Park Paved Trail	— (red)	Regional Trail	— (blue)
Proposed Development	[3] (yellow dashed)	Park Turf Trail	— (green)	Proposed Regional Trail	- - - (blue)
Proposed Development Node	(1) (blue dashed circle)	Municipal Trail	— (yellow)	Proposed Paved Park Trail	- - - (red)
Metro Tranist Stop	(T) (red square)	Municipal Ped/Bike Facility	— (cyan)	Trail	

## PLANNING CONSIDERATIONS

Kohlman Creek is a significant tributary to the Lake Phalen Watershed. Ramsey County will coordinate management of the site with the Ramsey-Washington Metro Watershed District.

## PROPOSED DEVELOPMENT

### 1. Master Planning

No master plan has been prepared for Kohlman Creek Open Space. Master planning will be addressed in the future as needs arise for passive park improvements.

- Develop partnerships with the city of Maplewood and Ramsey-Washington Metro Watershed District (RWMWD) for funding strategies, increased recreation opportunities, storm water management best practices, and improvements.
- Improvements to Kohlman Creek Open Space will require a master planning process to address proposed park and recreation opportunities. Recreational development opportunities could include passive recreation such as paved and natural surface trails, interpretive and educational programming, observation areas, and a parking facility.

### 2. Trail Development

There are no developed access points or trail systems. Access points and trail development will be addressed in future master planning activities and may consist of paved trails, natural surface trails, and boardwalks.

### 3. Vehicle Access

There are no developed vehicular access points or parking lots. Potential vehicular access points or parking lots would be located adjacent to roadways and designed to have a low impact on the environment.

### 4. Wayfinding

- **Pedestrian:** Signage would consist of interpretive signs in natural areas for increased nature education opportunities.
- **Vehicular:** Signage would consist of entrance signs at access points.
- All Wayfinding signage should conform to the Ramsey County Parks & Recreation Wayfinding Master Plan.

### 5. Recreation Opportunities

- **Observation Areas:** Develop observation areas along future trails or access points along with interpretive and educational signs for natural areas and wildlife. If federally or state listed protected plants or animals are discovered, statutes and guidelines will be followed.
- **Programming:** Increase recreation and nature programming activities.

### 6. Habitat Restoration & Management

- There is no current active management or planned land cover changes within this open space.
- Future restoration could include removal of invasive woody species throughout the mixed and oak

**PROPOSED DEVELOPMENT**

woods in select areas.

**7. Acquisitions**

Future acquisition is proposed for adjacent properties for inclusion into Kohlman Creek Open Space when properties become available. Further master planning activities would be required to determine potential uses for acquired properties.

- **Residential & Commercial Properties:** There are several properties adjacent to Kohlman Creek Open Space that may be identified for acquisition. Many of these properties are either completely undeveloped or have portions of undeveloped land that is connected to Kohlman Creek.
- **City of Maplewood Property:** The city of Maplewood has several properties that are connected to Kohlman Creek Open Space that may be identified for future acquisition or partnership.

PROPOSED LAND COVER



Proposed Land Cover

- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |



KOHLMAN CREEK OPEN SPACE

NATURAL RESOURCE MANAGEMENT UNIT TABLE

KOHLMAN CREEK OPEN SPACE							
ACRES	CURRENT LAND COVER	PRO-POSED LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIOR-ITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
1.86	OAK WOODS	OAK WOODS	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN	\$3,723.65	3	FOLIAR SPRAY OF BUCK-THORN	\$930.91
35.61	WETLAND	WETLAND	MONITOR	N/A	N/A	N/A	N/A
3.52	OLD FIELD	OLD FIELD	N/A	N/A	N/A	N/A	N/A
37.43	MIXED WOODS	MIXED WOODS	INVASIVE WOODY RE-MOVAL, CUT, STUMP TREAT, STACK & BURN	\$74,861.13	3	FOLIAR SPRAY OF BUCK-THORN	\$18,715.28
<b>PARK TOTAL</b>							
78.42				\$78,584.79			\$19,646.20

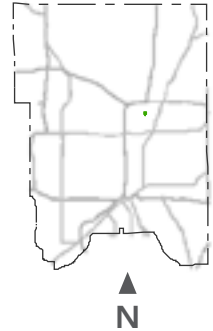
# KOHLMAN MARSH OPEN SPACE

## EXISTING SITE CONDITIONS



### LOCATION AND SIZE

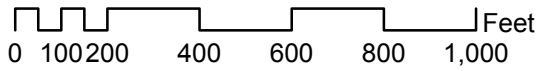
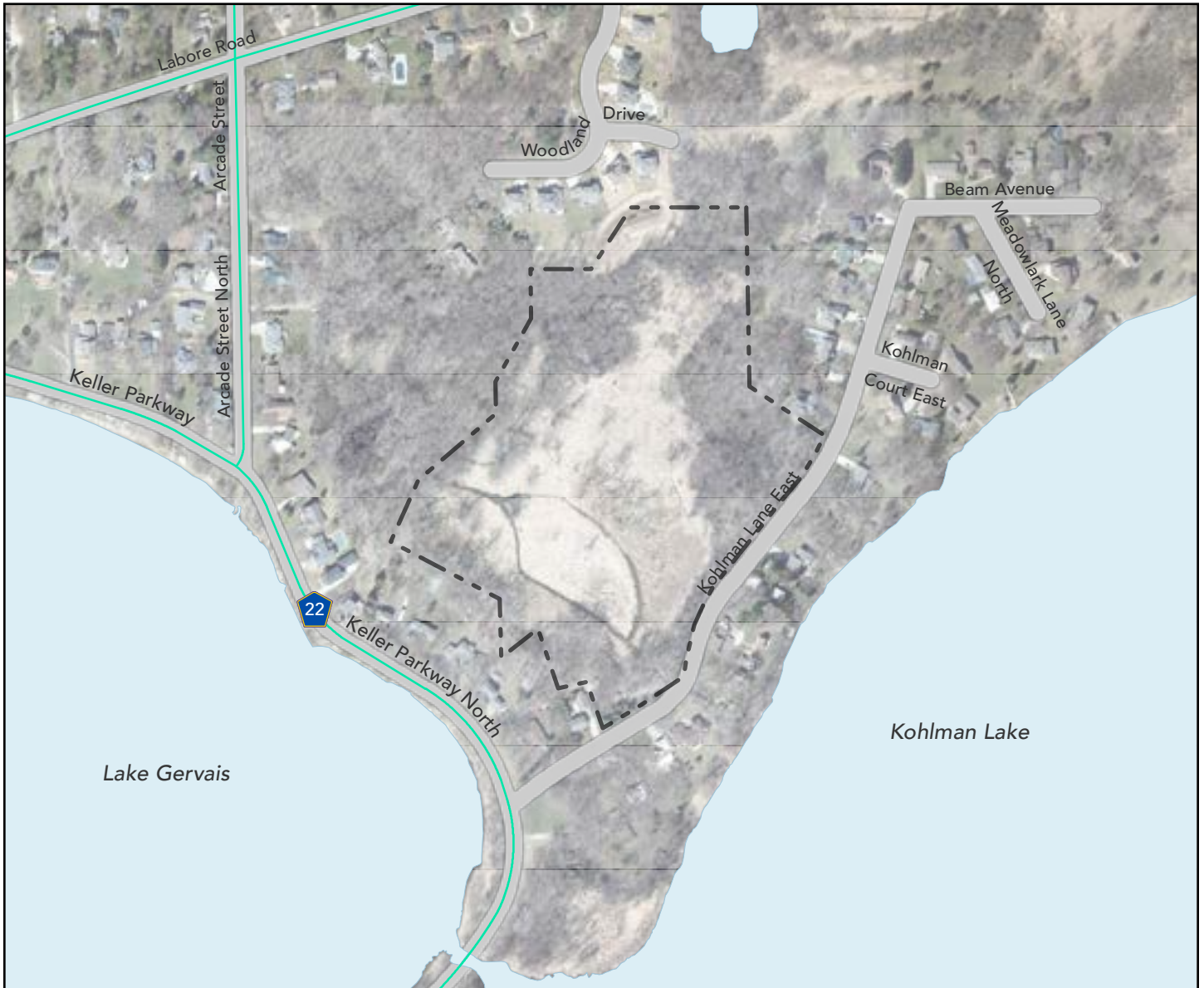
Kohlman Marsh Protection Open Space is located in the east-central part of Ramsey County along the Maplewood-Little Canada border. The 18-acre site is generally bounded by Keller Parkway to the south, Kohlman Lane to the east, LaBore Avenue to the north, and Arcade Street on the west.



### SITE CHARACTERISTICS

The site is a low area of marshland with some open water. The drier areas have trees. The area surrounding the site is residential housing. The southeast corner of the property abuts Kohlman Lane, and the rest of the property borders residential lots.

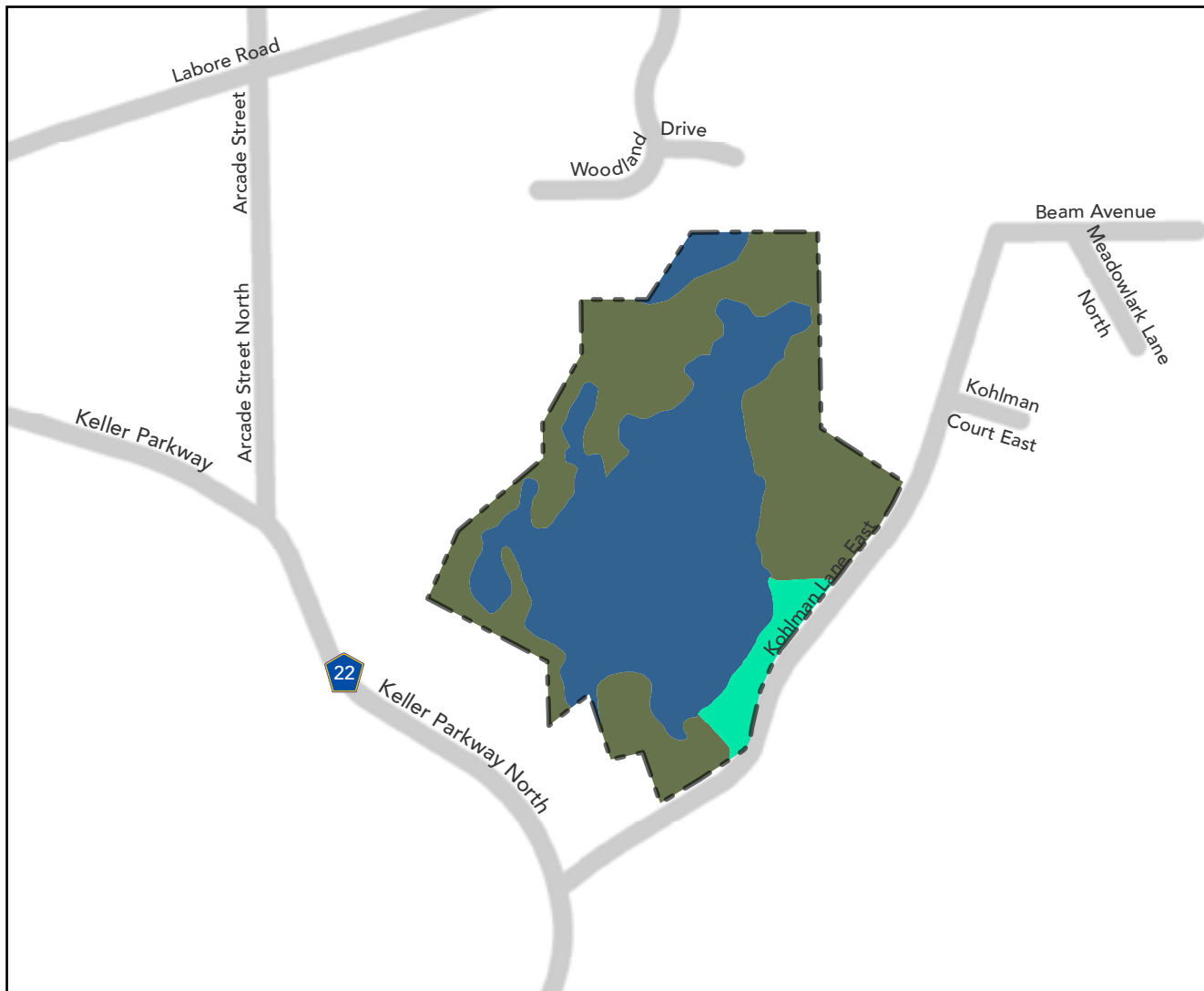
EXISTING CONDITIONS



Legend

- |                    |  |                  |  |                             |  |
|--------------------|--|------------------|--|-----------------------------|--|
| Park Border        |  | Park Paved Trail |  | Municipal Ped/Bike Facility |  |
| Park Entrance      |  | Park Turf Trail  |  | Regional Trail              |  |
| Metro Tranist Stop |  | Municipal Trail  |  |                             |  |

EXISTING LAND COVER



0 100 200 400 600 800 1,000 Feet

Existing Land Cover

- |                     |                   |            |                 |
|---------------------|-------------------|------------|-----------------|
| Active Use          | Floodplain Forest | Oak Woods  | Remnant Prairie |
| Impervious          | Mesic Forest      | Old Field  | Savanna         |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp     |
| Tamarack Swamp      | Wetland           | Open Water |                 |

## KOHLMAN MARSH OPEN SPACE

### **LAND COVER AND HABITAT**

North Kohlman Marsh is a mixture of box elder and ash woods, areas of open wetland dominated by cattails, and a small section of floodplain forest along Kohlman Lane East.

### **WILDLIFE**

The park hosts a diverse variety of wildlife. The park has a variety of nesting songbirds and waterfowl.

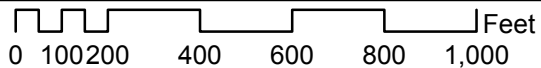
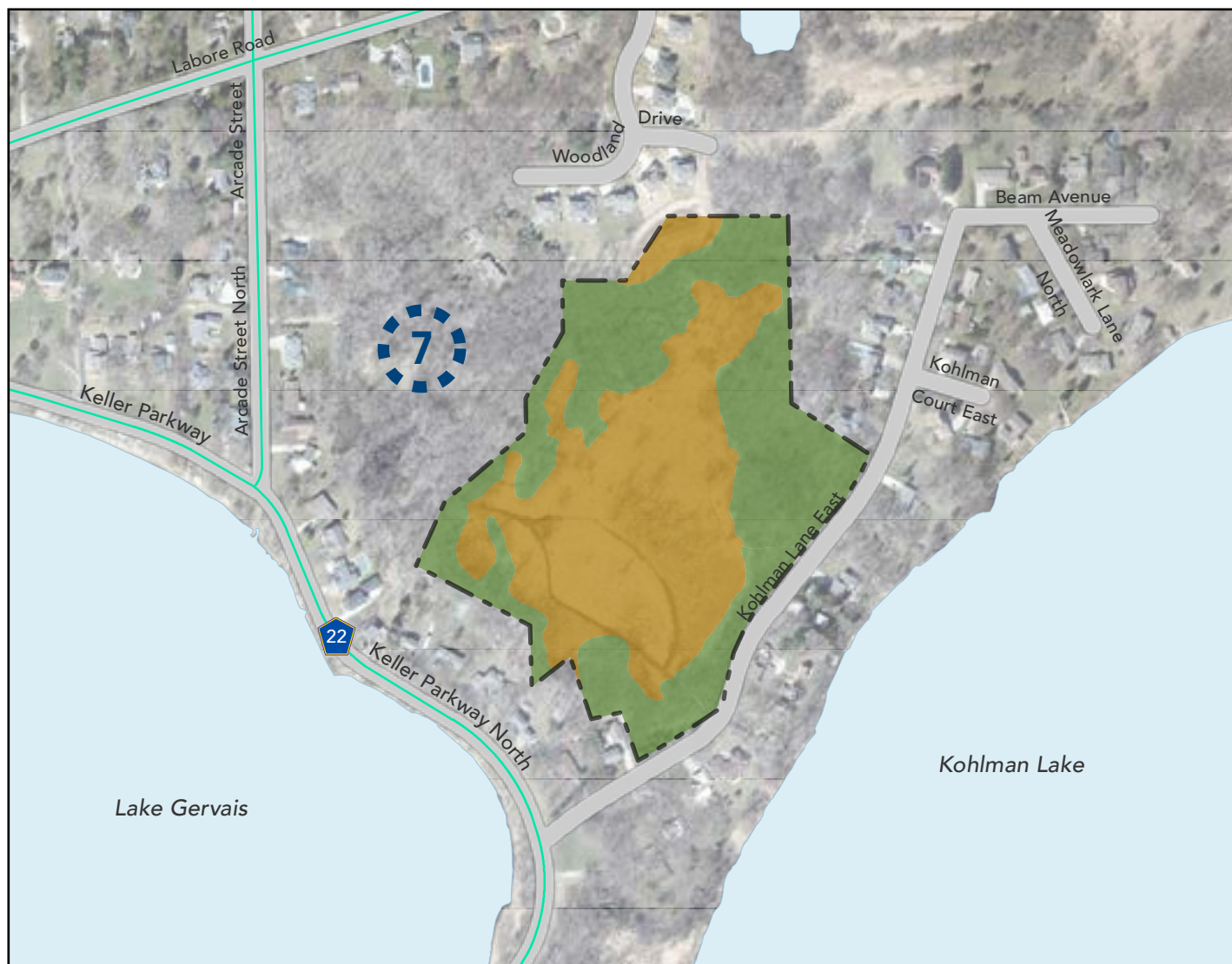
### **WILDLIFE MANAGEMENT**

Deer populations in the area are surveyed annually to determine the need and location for special archery hunts. If needed the deer herd will be managed with special hunts under the Ramsey County Cooperative Deer Management Plan in partnership with the Cities of Maplewood and Little Canada.

### **SURFACE WATER RESOURCES**

North Kohlman Marsh is mainly a wetland complex that receives surface water runoff from the neighboring watershed.

PROPOSED DEVELOPMENT



Legend

- |                           |                 |                             |            |                           |                 |
|---------------------------|-----------------|-----------------------------|------------|---------------------------|-----------------|
| Park Border               | — · — · —       | Park Paved Trail            | — (red)    | Regional Trail            | — (blue)        |
| Proposed Development      | 3 (grid icon)   | Park Turf Trail             | — (green)  | Proposed Regional Trail   | — (dashed blue) |
| Proposed Development Node | 1 (circle icon) | Municipal Trail             | — (yellow) | Proposed Paved Park Trail | — (dashed red)  |
| Metro Tranist Stop        | T (square icon) | Municipal Ped/Bike Facility | — (cyan)   |                           |                 |

## PLANNING CONSIDERATIONS

Kohlman Marsh is a stormwater storage area for the Lake Phalen Watershed Area. Ramsey County will coordinate management of the site with the Ramsey-Washington Metro Watershed District.

## PROPOSED DEVELOPMENT

### 1. Master Planning

No master plan has been prepared for Kohlman Marsh Open Space. Master planning activities will be addressed in the future as needs arise.

- Develop partnerships with the city of Maplewood and Ramsey-Washington Metro Watershed District (RWMWD) for funding strategies, increased recreational opportunities, storm water management best practices, and proposed improvements.
- Potential recreational development would include passive recreation such as natural surface trails, interpretive and educational programming, observation areas, and a parking facility.

### 2. Trail Development

There are no developed access points or trail systems. Access points and trail development will be addressed in future master planning and may consist of paved trails, natural surface trails, and boardwalks.

### 3. Vehicle Access

There are no developed vehicular access points or parking lots. Potential vehicular access points or parking lots would be located adjacent to roadways and designed to have a low impact to the natural environment.

### 4. Wayfinding

- **Pedestrian:** Wayfinding would consist of interpretive signage in natural areas for increased nature education opportunities.
- **Vehicular:** Wayfinding would consist of entrance signage at access points.
- All Wayfinding signage should conform to the Ramsey County Parks & Recreation Wayfinding Master Plan.

### 5. Recreation Opportunities

- **Observation Areas:** Develop observation areas along future trails or access points along with interpretive education of natural areas and wildlife. If federally or state listed protected plants or animals are discovered, statutes and guidelines will be followed.
- **Programming:** Increase recreation and nature programming activities for additional recreation opportunities.

### 6. Habitat Restoration & Management

- There is no current or planned active management within this open space.

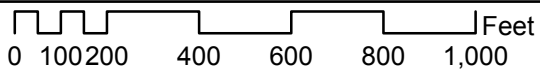
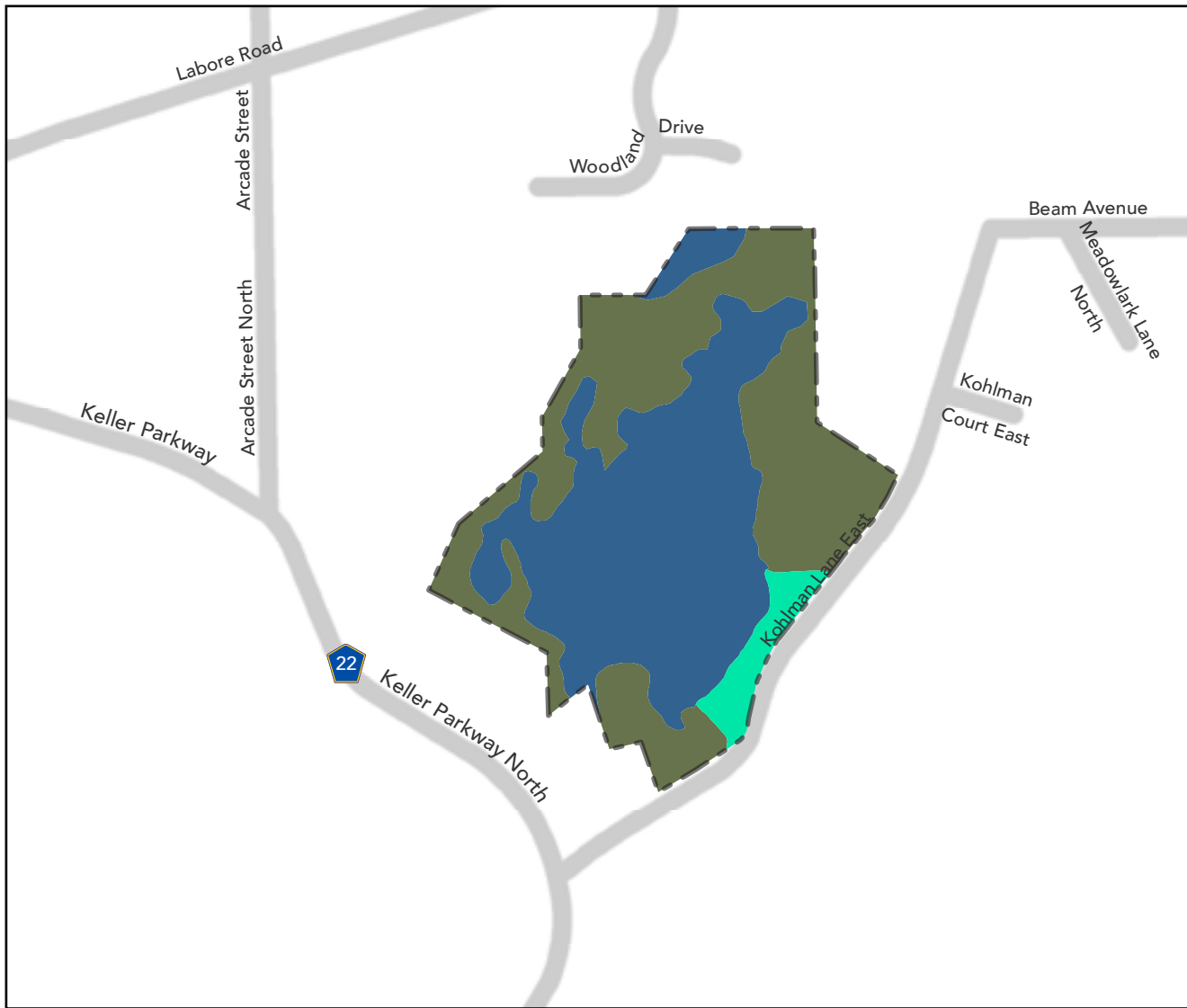
**PROPOSED DEVELOPMENT****7. Acquisitions**

Future acquisition is proposed for adjacent properties for inclusion into Kohlman Marsh Open Space as properties become available. Further master planning activities would be required to determine potential uses for acquired property.

- **Residential & Commercial Properties:** There are several properties adjacent to Kohlman Marsh Open Space that may be identified for acquisition. Many of these properties have portions of undeveloped land that is connected to Kohlman Marsh.
- **City of Maplewood Property:** The city of Maplewood has land that is connected to Kohlman Marsh Open Space that may be available for future acquisition or partnership.



PROPOSED LAND COVER



Proposed Land Cover

- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |

KOHLMAN MARSH OPEN SPACE

NATURAL RESOURCE MANAGEMENT UNIT TABLE

KOHLMAN MARSH OPEN SPACE							
ACRES	CURRENT LAND COVER	PRO-POSED LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIOR-ITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
0.86	FLOODPLAIN FOREST	FLOOD-PLAIN FOR-EST	MONITOR	N/A	N/A	N/A	N/A
8.56	MIXED WOODS	MIXED WOODS	MONITOR	N/A	N/A	N/A	N/A
9.56	WETLAND	WETLAND	MONITOR	N/A	N/A	N/A	N/A
PARK TOTAL							
18.98				\$0.00			\$0.00

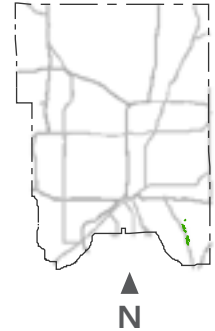
# MISSISSIPPI RIVER BLUFFS OPEN SPACE

## EXISTING SITE CONDITIONS



### LOCATION AND SIZE

The Mississippi River Bluffs Protection Open Space is located in the southeast part of Ramsey County in the city of Saint Paul. The site is a 2-mile long narrow strip of steep sloped bluff line, paralleling the east side of Highway 61 between Battle Creek Regional Park on the north and Fish Creek Protection Open Space site on the south. Ramsey County currently owns 69 platted lots totaling 12 acres in the area. These lots constitute about 25% of the total site and are scattered throughout without much continuity of owned space.



### SITE CHARACTERISTICS

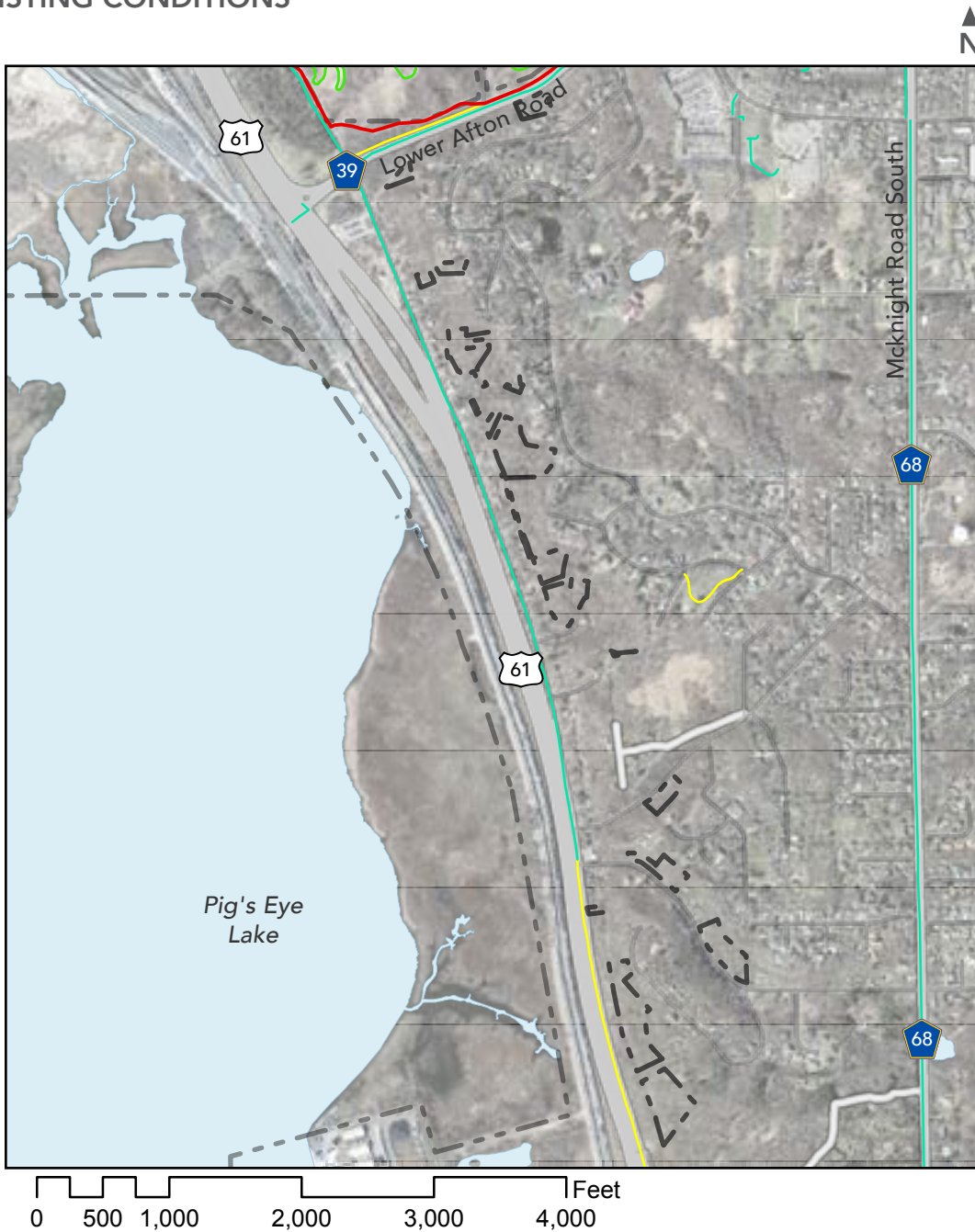
The site is entirely a steep, wooded slope in excess of 30 percent. The site generally lies between residential properties at the top and bottom of the bluff.



### RECREATION DEVELOPMENT

There are no existing or proposed recreation improvements for the site.

EXISTING CONDITIONS



Legend

- |                    |  |                  |  |                             |  |
|--------------------|--|------------------|--|-----------------------------|--|
| Park Border        |  | Park Paved Trail |  | Municipal Ped/Bike Facility |  |
| Park Entrance      |  | Park Turf Trail  |  | Regional Trail              |  |
| Metro Tranist Stop |  | Municipal Trail  |  |                             |  |

EXISTING LAND COVER



Existing Land Cover

- |                     |                   |            |                 |
|---------------------|-------------------|------------|-----------------|
| Active Use          | Floodplain Forest | Oak Woods  | Remnant Prairie |
| Impervious          | Mesic Forest      | Old Field  | Savanna         |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp     |
| Tamarack Swamp      | Wetland           | Open Water |                 |

## MISSISSIPPI RIVER BLUFFS OPEN SPACE

### **LAND COVER AND HABITAT**

The Mississippi River Bluffs Open Space consists of 19 separate parcels totaling 19.55 acres, located along steep bluff terrain on the east side of US Highway 61 and south of Lower Afton Road. This open space is all located within the Mississippi River Corridor Critical Area (MRCCA) which shares its boundary with the Mississippi National River and Recreation Area. The open space is subject to MRCCA regulations (state statute under Minnesota Rule 6106) which is in place to protect the unique natural and cultural resources and values within this corridor. The habitat within all parcels consists of mixed woods, dominated by oak trees.

### **WILDLIFE**

The park hosts a variety of common wildlife, including nesting songbirds. Mammals that use the open space and surrounding area include white-tailed deer and raccoons.

### **WILDLIFE MANAGEMENT**

Deer populations in the area are surveyed annually to determine the need and location for deer management. The parcels that make up the open space are too small for deer management through special archery hunts, however sharp shooting deer removal has occurred in surrounding county and city lands under the Ramsey County Cooperative Deer Management Plan in partnership with the Cities of Saint Paul and Maplewood.

### **SURFACE WATER RESOURCES**

Some of the open space bluff lands overlook the Mississippi River.

PROPOSED DEVELOPMENT



Legend

- |                           |  |                             |  |                         |  |
|---------------------------|--|-----------------------------|--|-------------------------|--|
| Park Border               |  | Park Paved Trail            |  | Regional Trail          |  |
| Proposed Development      |  | Park Turf Trail             |  | Proposed Regional Trail |  |
| Proposed Development Node |  | Municipal Trail             |  | Proposed Paved Park     |  |
| Metro Tranist Stop        |  | Municipal Ped/Bike Facility |  | Trail                   |  |

## PLANNING CONSIDERATIONS

The 69 lots which make up the Mississippi River Bluffs Open Space have been acquired by Ramsey County through tax-forfeiture or donations. Ramsey County does not plan to purchase any of the remaining lots, but will continue to accept tax-forfeited or donated property.

The city of Saint Paul has secured grants to accelerate acquisition of selected lots. Ramsey County will work cooperatively with the city to manage these properties in a uniform manner.

## PROPOSED DEVELOPMENT

### 1. Master Planning

No master plan has been prepared for this open space. Master planning activities will be addressed in the future as needs arise.

- Develop partnerships with the Cities of Saint Paul, Maplewood, Ramsey Washington Metro Watershed District (RWMWD), the Minnesota Department of Transportation (MNDOT), other local agencies, and private parties for funding strategies, increased recreational opportunities, storm water management best practices, and improvements.

### 2. Regional Park & Trail

Investigate opportunities for inclusion into the regional park and trail system as part of Battle Creek Regional Park. Future planning activities will require a comprehensive study with the Metropolitan Council, city of Maplewood, and city of Saint Paul for viability as a Regional Park component.

### 3. Pedestrian Trail Connections

There are no access points or trail systems. Access points and trail development will be addressed in future master planning activities and may consist of paved trails, natural surface trails, and observation areas with interpretive and educational programming.

### 4. Vehicular Access

There are no vehicular access points or parking lots. Vehicular access points or parking lots will be addressed in future master planning activities and may consist of parking areas located adjacent to roadways or through partnerships with other land holders.

### 5. Wayfinding:

- **Pedestrian:** Interpretive signage in natural areas for increased wayfinding to nature education opportunities.
- **Vehicular:** Entrance signage at access points.
- All Wayfinding signage should conform to the Ramsey County Parks & Recreation Wayfinding Master Plan.



## PROPOSED DEVELOPMENT

### 6. Recreation Opportunities

- **Observation Areas:** Develop observation areas along future trail systems and access points for interpretive education of natural areas and wildlife. If federally or state listed protected plants or animals are discovered, statutes and guidelines will be followed
- **Public Art:** Provide the opportunity and appropriate infrastructure to accommodate public art to improve community connections.
- **Culturally Significant Areas:** Provide connections and interpretive education for culturally significant areas within Mississippi River Bluffs Protection Open Space. Proposed improvements would consist of observation areas, interpretive educational signage, and pedestrian connections.
- **Wildlife Areas:** Provide visual and interpretive educational signage and pedestrian connections to wildlife areas. If federally or state listed protected plants or animals are discovered, statutes and guidelines will be followed.

### 7. Habitat Restoration & Management

- Currently there is no active management within these sections of open space.
- Future restoration may include removal of invasive wood species from the mixed woods.

### 8. Acquisitions

Acquisition is proposed for adjacent properties for inclusion into Mississippi River Bluff Protection Open Space as they become available. Further master planning activities would be required to determine potential uses for acquired properties. Ramsey County and the city of Saint Paul have been actively acquiring properties when available through tax-forfeit and or donated property.

- The city of Saint Paul has park land that is connected to the Mississippi River Bluff Protection Open Space that may be identified for future acquisition or partnership.
- There are several properties adjacent to Mississippi River Bluff Protection Open Space that may be identified for future acquisition. Many of these properties have portions of undeveloped land that is connected to the open space.

PROPOSED LAND COVER



Proposed Land Cover

- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |

MISSISSIPPI RIVER BLUFFS OPEN SPACE

NATURAL RESOURCE MANAGEMENT UNIT TABLE

MISSISSIPPI RIVER BLUFFS OPEN SPACE							
ACRES	CURRENT LAND COVER	PRO-POSED LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIOR-ITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
19.55	MIXED WOODS	MIXED WOODS	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN	\$48,875.00	3	FOLIAR SPRAY OF BUCK-THORN	\$9,775.00
PARK TOTAL							
19.55				\$48,875.00			\$9,775.00

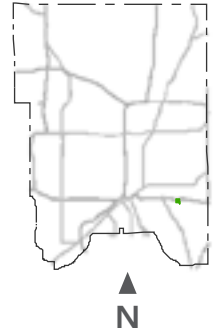
## SUBURBAN POND OPEN SPACE

### EXISTING SITE CONDITIONS



#### LOCATION AND SIZE

Suburban Avenue Pond Protection Open Space is located in southeast Ramsey County in the city of Saint Paul. The 32-acre site is bounded by Woodcrest Avenue on the south, Hazel Street on the east, Suburban Avenue on the north, and White Bear Avenue on the west.



#### SITE CHARACTERISTICS

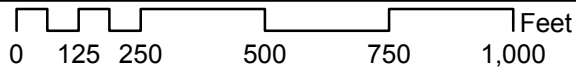
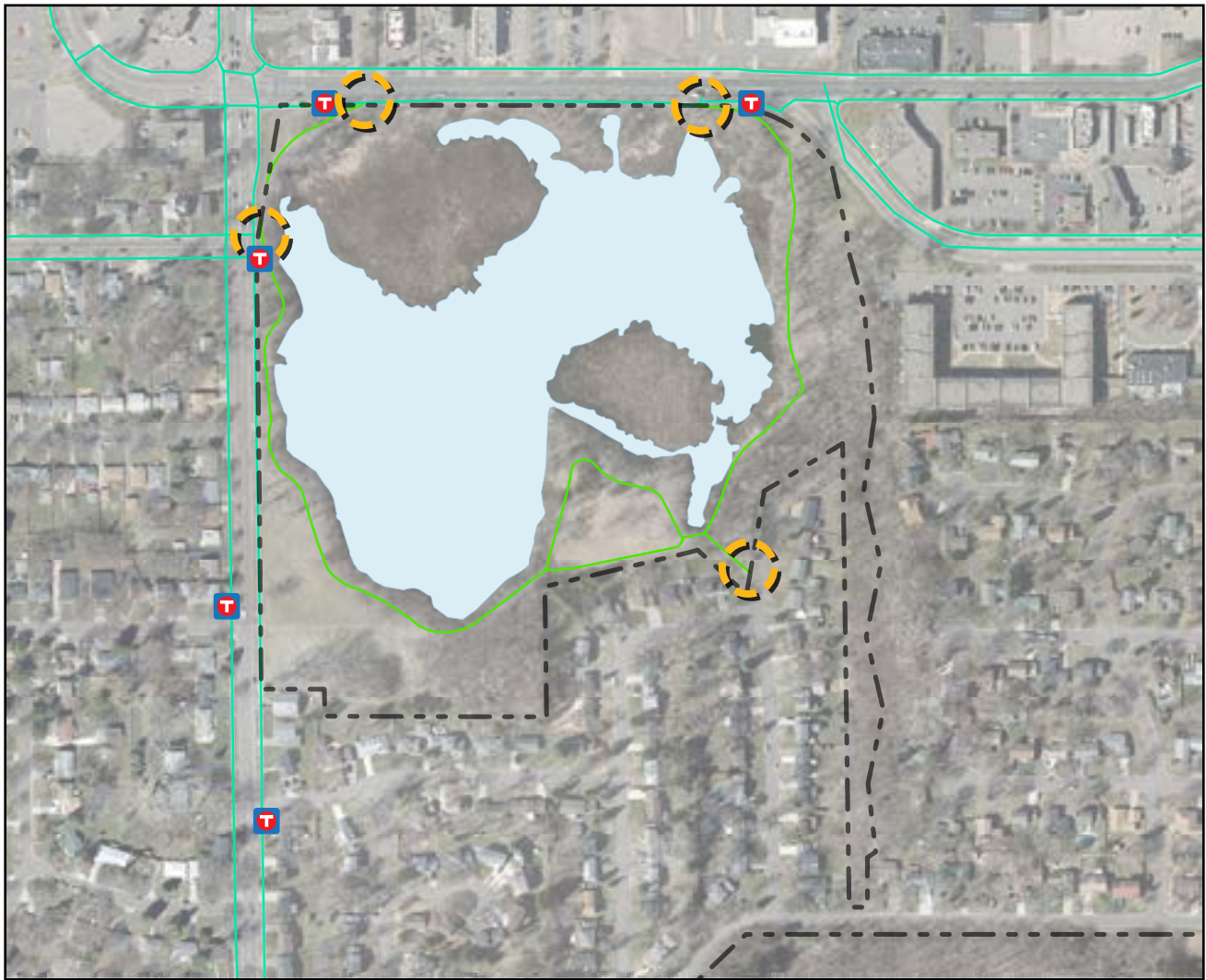
The site includes the 20-acre pond and wetland complex, as well as a 50 to 300-foot strip of upland around the entire pond. The surrounding development consists of commercial, multi-family, and single family residential real estate. The pond consists of approximately 50% open water and 50% wetland vegetation and is a significant storm water pond for Battle Creek, located ¼ mile to the south.



#### RECREATION DEVELOPMENT

A ½-mile wood chip trail circles the pond. An outlet structure controls the pond elevation.

EXISTING CONDITIONS



Legend

Park Border		Park Paved Trail		Municipal Ped/Bike Facility	
Park Entrance		Park Turf Trail		Regional Trail	
Metro Transit Stop		Municipal Trail			

EXISTING LAND COVER



Existing Land Cover

- |                     |                   |            |                 |
|---------------------|-------------------|------------|-----------------|
| Active Use          | Floodplain Forest | Oak Woods  | Remnant Prairie |
| Impervious          | Mesic Forest      | Old Field  | Savanna         |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp     |
| Tamarack Swamp      | Wetland           | Open Water |                 |

## SUBURBAN POND OPEN SPACE

### LAND COVER AND HABITAT

Suburban Avenue Pond Open Space consists mainly of a wetland complex surrounded by an old field on the south and degraded mixed woods on the east side. The wetland has open water surrounded by a heavy infestation of purple loosestrife and cattails.

### WILDLIFE

The park hosts a variety of common wildlife including nesting songbirds and waterfowl.

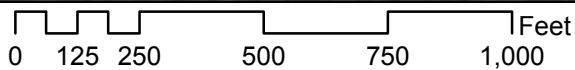
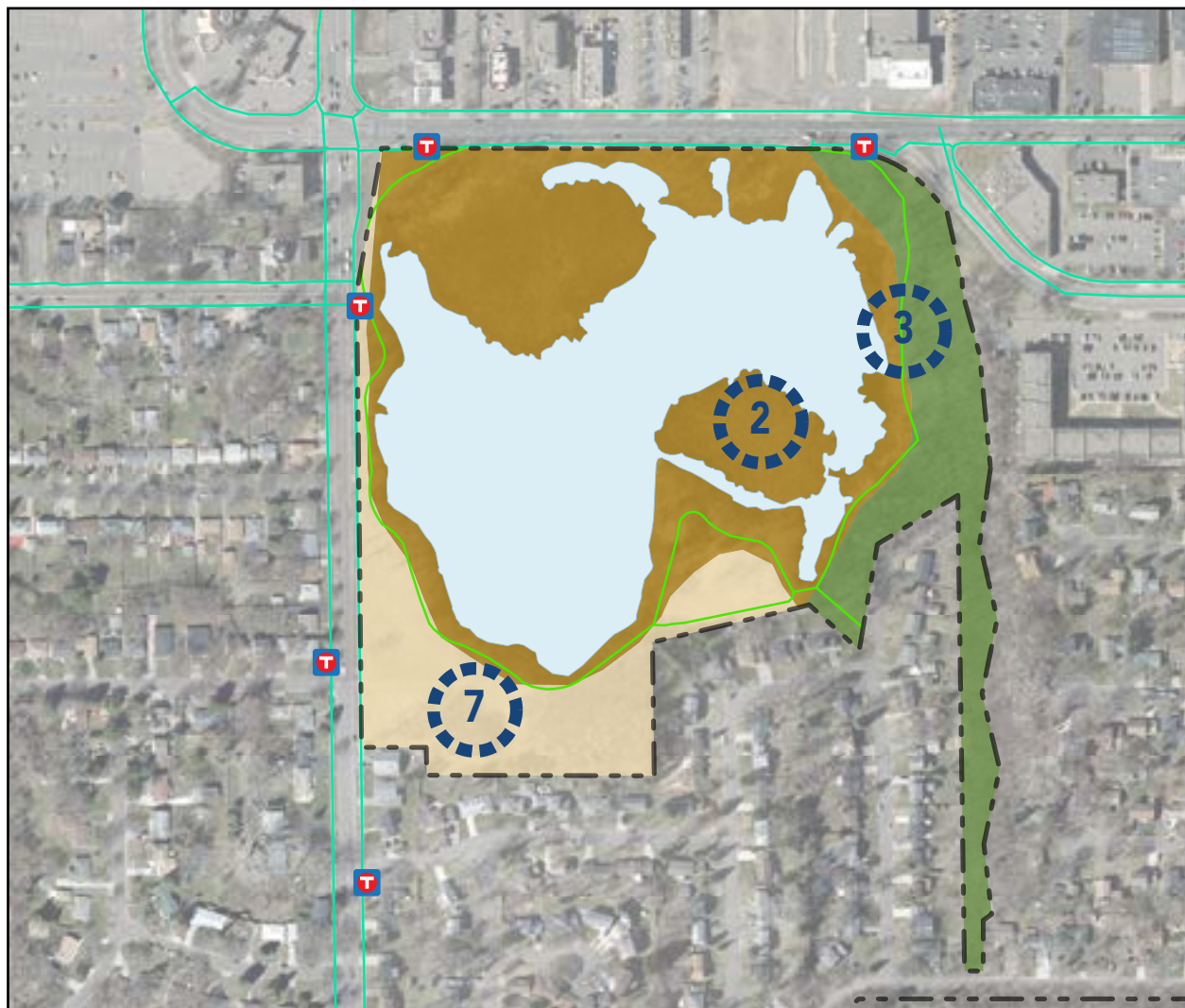
### WILDLIFE MANAGEMENT

There is no wildlife management within this open space

### SURFACE WATER RESOURCES

Suburban Avenue Pond receives storm water runoff from the neighboring watershed.

PROPOSED DEVELOPMENT



Legend

Park Border	— · — · —	Park Paved Trail	— (red)	Regional Trail	— (blue)
Proposed Development	3 (yellow grid)	Park Turf Trail	— (green)	Proposed Regional Trail	— (blue dashed)
Proposed Development Node	1 (blue dashed circle)	Municipal Trail	— (yellow)	Proposed Paved Park Trail	— (red dashed)
Metro Tranist Stop	T (red square)	Municipal Ped/Bike Facility	— (cyan)	Trail	



## PLANNING CONSIDERATIONS

Ramsey County Parks & Recreation will work with local Saint Paul Community Council (District 1) on maintenance and minor site improvement projects guided by neighborhood and public engagement.

## PROPOSED DEVELOPMENT

### 1. Master Planning

Future recreation development improvements to Suburban Pond Open Space will require a master planning process to address proposed park and recreational opportunities. Recreational development opportunities would include passive recreation for paved and natural surface trails, interpretive/education programming, observation/viewing areas, and potential parking.

- Develop partnerships with the city of Saint Paul, Ramsey Washington Metro Watershed District (RWMWD), Minnesota Department of Transportation (MNDOT), other local agencies, and private parties for increased recreational opportunities, storm water management best practices and funding strategies for proposed improvements.

### 2. Regional Park and Trail

Investigate opportunities for inclusion into the regional park and trail system as part of Battle Creek Regional Park. Future planning activities will require a comprehensive study with the Metropolitan Council and city of Saint Paul for viability as a Regional Park component.

### 3. Trail Development

Suburban Pond Open Space is accessed from adjacent residential neighborhoods. There has been a demand to redevelop the existing natural surface trail loop and access points into the open space for improved trail connectivity.

Redevelop existing natural surface trails throughout the open space for improved use and access. Possible improvements may include re-alignment of natural surface trail sections for improved connections and the reduction of sharp corners and steep slopes adjacent to trail sections. If the need arises additional access points and trail development may be proposed and will be addressed in future master planning activities. Paved trail sections as well as observation areas with interpretive and educational programming are possibilities.

### 4. Vehicular Access

There are no developed vehicular access points or parking lots. Vehicular access points or parking lots will be addressed in future master planning activities and may consist of parking areas located adjacent to roadways.

### 5. Wayfinding

- **Pedestrian:** Interpretive signage in natural areas for increased wayfinding to nature education opportunities.
- **Pedestrian:** Vehicular entrance signs at access points.
- All signage should conform to the Ramsey County Parks & Recreation Wayfinding Master Plan.

## PROPOSED DEVELOPMENT

### 6. Recreation Opportunities

- **Observation Areas:** Develop observation areas along future trail systems or access points for interpretive education of natural areas and wildlife. If federally or state listed protected plants or animals are discovered statutes and guidelines will be followed.
- **Public Art:** Provide the opportunity and appropriate infrastructure to accommodate public art to improve community connections.
- **Culturally Significant Areas:** Provide connections and interpretive education for culturally significant areas within Suburban Pond Open Space. Proposed improvements would consist of observation areas, interpretive educational signage, and pedestrian connections.
- **Wildlife Areas:** Provide visual and interpretive educational signage, and pedestrian connections. If federally or state listed protected plants or animals are discovered, statutes and guidelines will be followed.

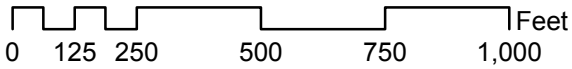
### 7. Habitat Restoration & Management

- Currently there is no active management within this open space.
- Future restoration may include conversion of the old field to native prairie.

### 8. Acquisitions

Acquisition is proposed for adjacent properties for inclusion into Suburban Pond Open Space when properties become available. Further master planning activities would be required to determine potential uses for acquired property.

PROPOSED LAND COVER



Proposed Land Cover

- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |

SUBURBAN POND OPEN SPACE

NATURAL RESOURCE MANAGEMENT UNIT TABLE

SUBURBAN POND OPEN SPACE							
ACRES	CURRENT LAND COVER	PRO-POSED LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIOR-ITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
4.88	MIXED WOODS	MIXED WOODS	N/A	N/A	N/A	N/A	N/A
5.12	OLD FIELD	PRAIRIE	MOW, HERBICIDE, RX BURN, DRILL SEED	\$10,240.00	4	RX BURN, FOLIAR SPRAY OF HERBACEOUS	\$3,840.00
24.44	WETLAND	WETLAND	MONITOR	N/A	N/A	N/A	N/A
PARK TOTAL							
34.44				\$10,240.00			\$3,840.00

# TURTLE CREEK OPEN SPACE

## EXISTING SITE CONDITIONS



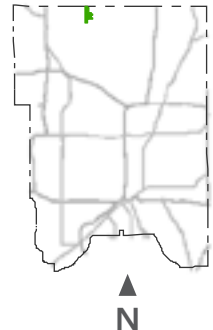
### LOCATION AND SIZE

Turtle Creek Protection Open Space is located at the northern edge of Ramsey County in the city of Shoreview. The 187-acre site is generally bounded by County Road I on the south, Highway 49 on the east, County Road J on the north, and County Ditch 8 on the west.

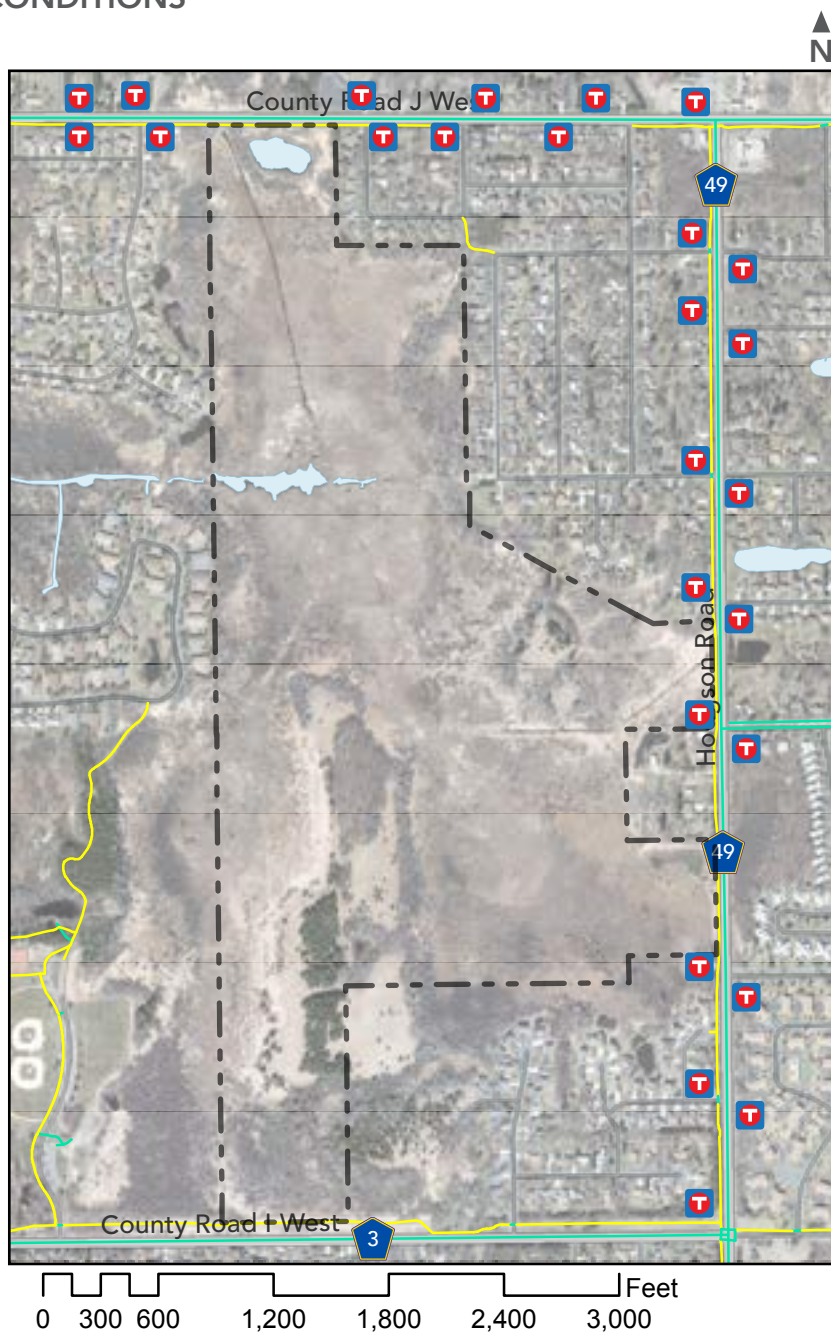


### SITE CHARACTERISTICS

The site includes a 1-mile long natural drainage corridor from Turtle Lake on the south to County Road J on the north. The drainage continues north of County Road J in Anoka County on to Rice Creek. This drainage corridor, known as County Ditch 8, includes a large cattail marsh along the ditch which varies in width from 600 feet to ½ mile. The entire site is marsh with the exception of a 20 acre island consisting of a mixture of oak woods, prairie, and pine plantation.



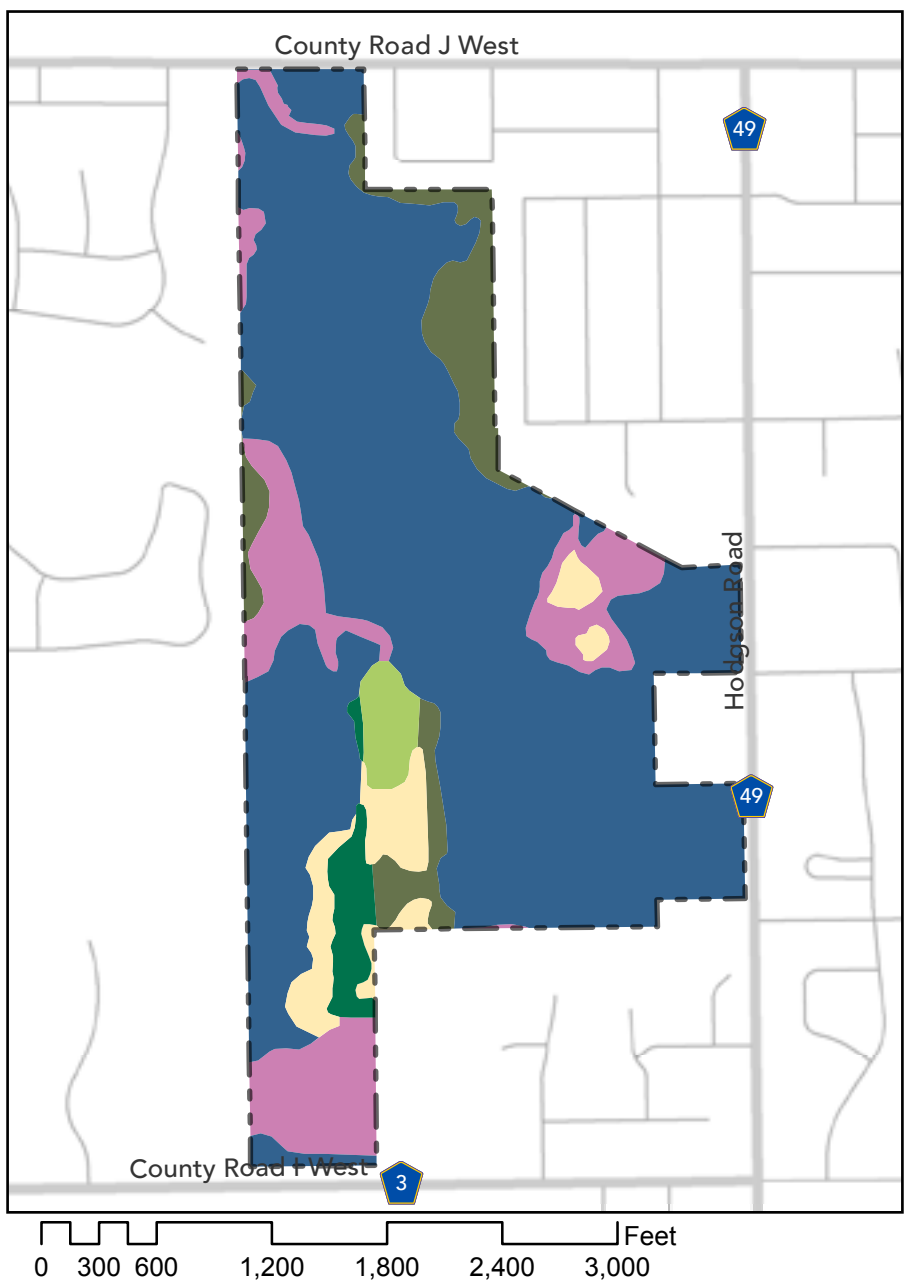
EXISTING CONDITIONS



Legend

- |                    |  |                  |  |                             |  |
|--------------------|--|------------------|--|-----------------------------|--|
| Park Border        |  | Park Paved Trail |  | Municipal Ped/Bike Facility |  |
| Park Entrance      |  | Park Turf Trail  |  | Regional Trail              |  |
| Metro Tranist Stop |  | Municipal Trail  |  |                             |  |

EXISTING LAND COVER



Existing Land Cover

- |                     |                   |            |                 |
|---------------------|-------------------|------------|-----------------|
| Active Use          | Floodplain Forest | Oak Woods  | Remnant Prairie |
| Impervious          | Mesic Forest      | Old Field  | Savanna         |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp     |
| Tamarack Swamp      | Wetland           | Open Water |                 |

## TURTLE CREEK OPEN SPACE

### **LAND COVER AND HABITAT**

The Turtle Creek Open Space habitat is a large wetland complex of cattail, shrub swamp, and tamarack. There are scattered uplands with mixed woods along the northeast boundary. There is an upland peninsula in the southern portion of the park and consists of oak woods, a degraded prairie, old field, and large cultivated conifer stands. The oak woods have an interesting understory of sedges and blueberry, but are infested with buckthorn. The prairie has some native species and is infested with leafy spurge.

### **WILDLIFE**

The park has a variety of nesting songbirds and waterfowl that frequent the wetland complex. Sandhill cranes are found within the vicinity of the parkland. Mammals include white-tailed deer, otter, coyote, red fox, raccoons, muskrat, and beaver.

### **WILDLIFE MANAGEMENT**

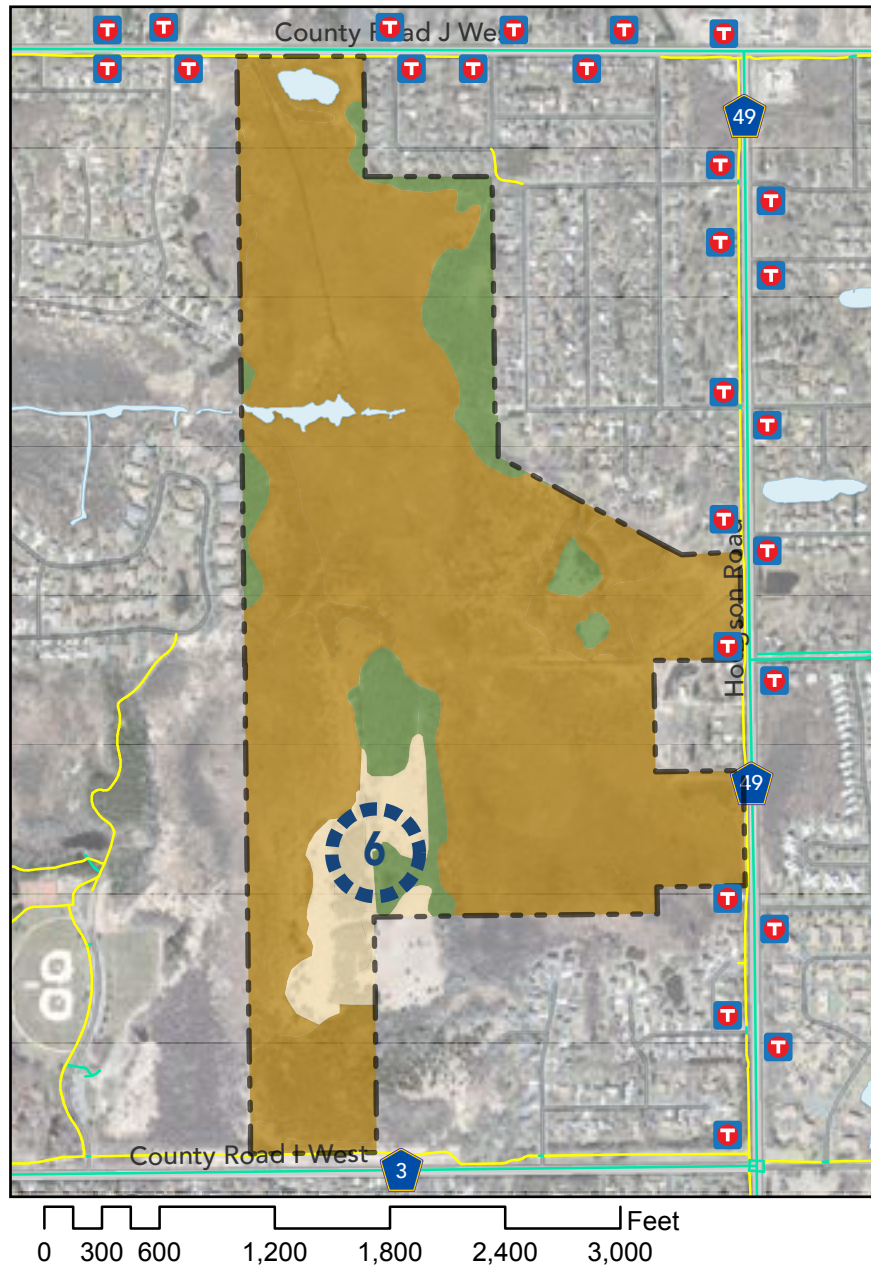
Deer populations in the area are surveyed annually to determine the need and location for special archery hunts. Deer management has been occurring in the park since 2000, through special archery hunts under the Ramsey County Cooperative Deer Management Plan in partnership with the city of Shoreview. In the past, biological control beetles have been released for leafy spurge control and future plans include re-assessing the need for further biological control.

### **SURFACE WATER RESOURCES**

Turtle Creek Open Space surface water features include a large wetland complex that surrounds Turtle Creek. Turtle Creek is a county ditch that was straightened to expand agricultural land in the early 1900s.



PROPOSED DEVELOPMENT



Legend

- |                           |  |                             |  |                           |  |
|---------------------------|--|-----------------------------|--|---------------------------|--|
| Park Border               |  | Park Paved Trail            |  | Regional Trail            |  |
| Proposed Development      |  | Park Turf Trail             |  | Proposed Regional Trail   |  |
| Proposed Development Node |  | Municipal Trail             |  | Proposed Paved Park Trail |  |
| Metro Tranist Stop        |  | Municipal Ped/Bike Facility |  |                           |  |

## PLANNING CONSIDERATIONS

The southern tip of the island extends onto vacant private property. The county has requested that the city of Shoreview secure a portion of the vacant private property necessary to preserve the integrity of the island at the time the property is proposed for development.

## PROPOSED DEVELOPMENT

### 1. Master Planning

No master plan has been prepared for Turtle Creek Open Space. Master planning activities will be addressed in the future as needs arise.

- Develop partnerships with the city of Shoreview, Rice Creek Watershed District (RCWD), other local agencies, and private parties for funding strategies, increased recreational opportunities, stormwater management best practices, and proposed improvements.
- A portion of Turtle Creek Open Space is adjacent to McCullough Park, which is owned and operated by the city of Shoreview. Master planning activities would be required in coordination with the city of Shoreview for possible access to recreation opportunities within Turtle Creek Open Space.

### 2. Trail Development

Access points and trail development will be addressed in future master planning activities and may consist of natural surface trails, ski trails, and boardwalks.

### 3. Vehicle Access

Vehicular access points or parking lots would be located adjacent to existing roadways and be designed to have a low impact on the environment. Possible parking access to the Turtle Creek Open Space may be available through a partnership with the city of Shoreview at McCullough Park. Additional parking opportunities may be available with future acquisition of surrounding property.

### 4. Wayfinding

- **Pedestrian:** Interpretive signage in natural areas for enhanced wayfinding to site amenities.
- **Vehicular:** Entrance signage at access points.
- All signage should conform to the Ramsey County Parks & Recreation Wayfinding Master Plan.

### 5. Recreation Opportunities

- **Observation Areas:** Develop observation areas along future trail systems and access points for interpretive education of natural areas and wildlife. If federally or state listed protected plants or animals are discovered, statutes and guidelines will be followed.
- **Programming:** Increase recreation and nature programming activities.

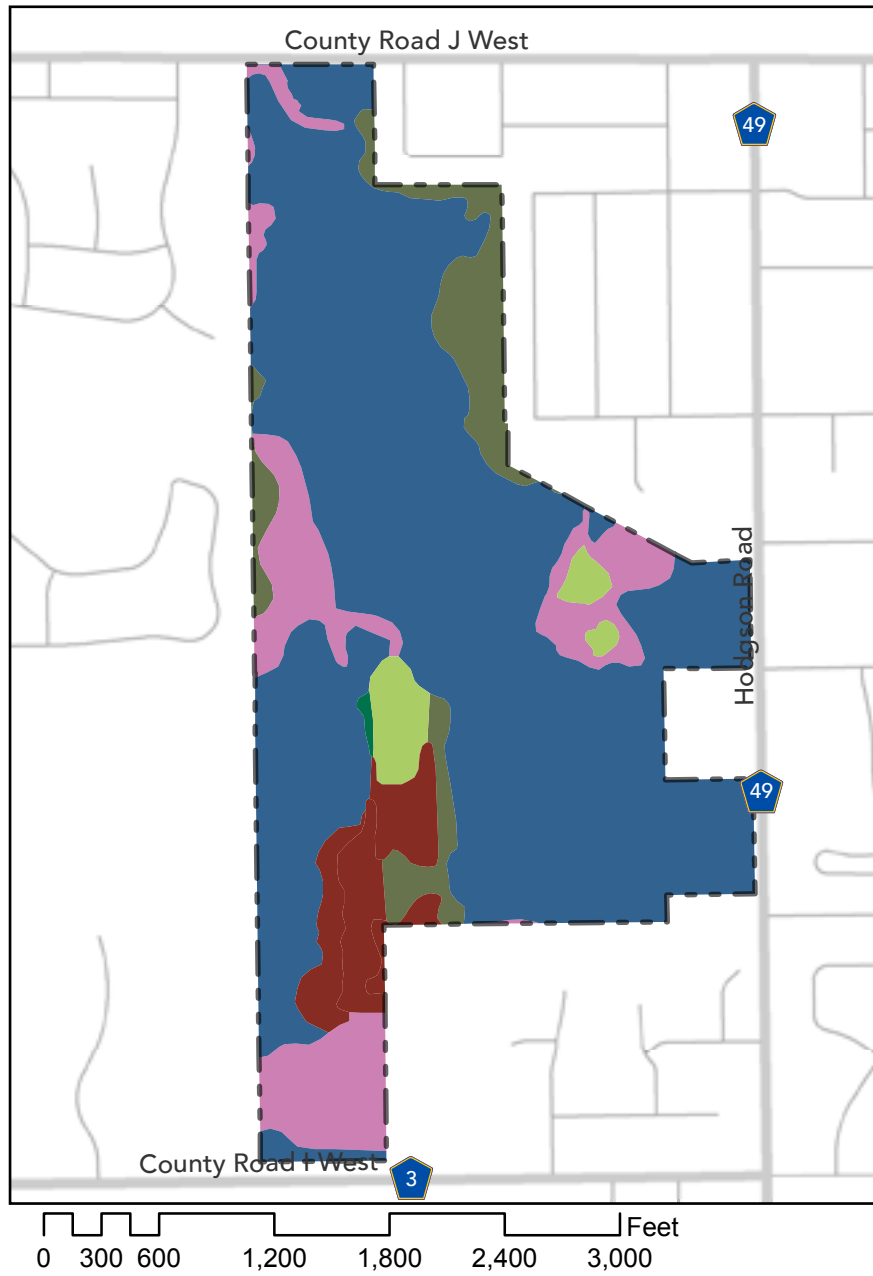
**PROPOSED DEVELOPMENT****6. Habitat Restoration & Management**

- There is currently no management within the open space.
- Future land cover and restoration would be restricted to the upland areas, with focus on the southern peninsula and include conversion of conifers and old field to prairie as well as restoration of the oak woods.

**7. Acquisitions**

Future open space acquisition is proposed for several adjacent properties as they become available. Master planning activities would be required to determine potential uses for acquired properties.

PROPOSED LAND COVER



Proposed Land Cover

- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |

TURTLE CREEK OPEN SPACE

NATURAL RESOURCE MANAGEMENT UNIT TABLE

TURTLE CREEK OPEN SPACE							
ACRES	CURRENT LAND COVER	PRO-POSED LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIOR-ITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
3.71	OAK WOODS	OAK WOODS	INVASIVE WOODY REMOVAL, CUT, STUMP TREAT, STACK & BURN, RX BURN, NATIVE SEED	\$12,972.15	2	FOLIAR SPRAY OF BUCK-THORN	\$926.58
4.66	CULTIVATED CONIFERS	PRAIRIE	INVASIVE WOODY RE-MOVAL, CUT, STUMP TREAT, STACK & BURN, MOW, HERBI-CIDE, RX BURN, DRILL SEED	\$13,978.50	3	RX BURN, FOLIAR SPRAY OF HERBA-CEOUS	\$4,892.47
9.80	OLD FIELD	OAK WOODS 1.7 ACRES	RX BURN, FO-LIAR SPRAY OF HERBACEOUS, PLANT OAKS	\$3,400.00	2	RX BURN, FOLIAR SPRAY OF HERBA-CEOUS	\$1,785.00
		PRAIRIE 8.10 ACRES	MOW, HERBI-CIDE, RX BURN, DRILL SEED	\$16,200.00	3	RX BURN FOLIAR SPRAY OF HERBA-CEOUS	\$8,505.00
15.12	MIXED WOODS	MIXED WOODS	INVASIVE WOODY RE-MOVAL, CUT, STUMP TREAT, STACK & BURN	\$30,234.10	3	FOLIAR SPRAY OF BUCK-THORN	\$7,558.53
24.99	SHRUB SWAMP	SHRUB SWAMP	INVASIVE WOODY RE-MOVAL, CUT, STUMP TREAT, STACK & BURN	\$24,989.07	3	FOLIAR SPRAY OF BUCK-THORN	\$6,247.27
139.52	WETLAND	WETLAND	MONITOR	N/A	N/A	N/A	N/A
<b>PARK TOTAL</b>							
197.79				\$101,773.82			\$29,914.85

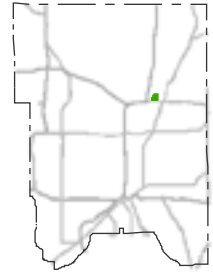
## WILLOW LAKE OPEN SPACE

### EXISTING SITE CONDITIONS



#### LOCATION AND SIZE

Willow Lake Protection Open Space is located in the northeastern part of Ramsey County in the city of Vadnais Heights. The 76-acre site owned by Ramsey County, lies immediately north of I-694, west of Highway 61, south of Wolters Boulevard and east of Labore Road. The H.B. Fuller Company has designated 56 acres of land adjacent to the Ramsey County property as a nature preserve.



N



#### SITE CHARACTERISTICS

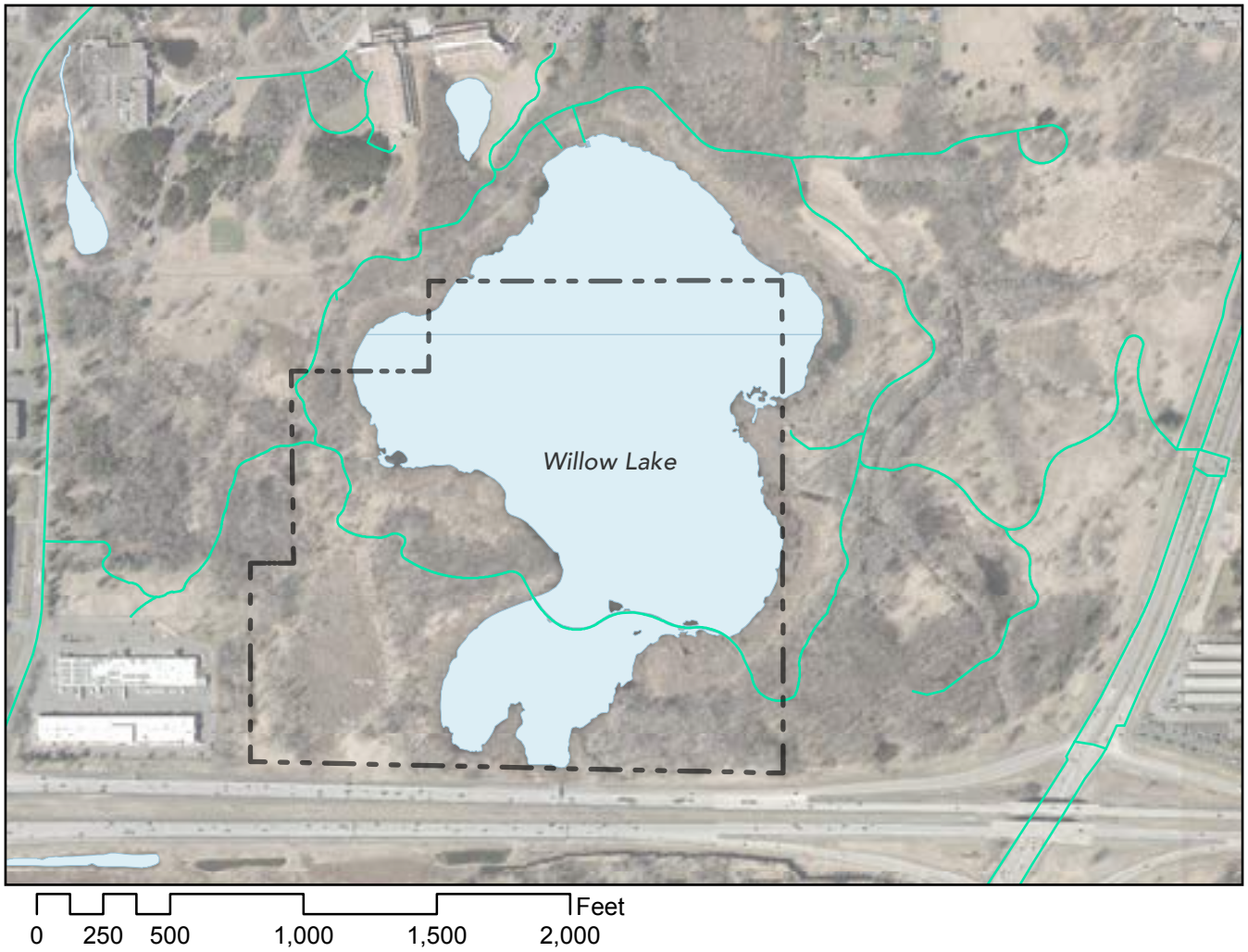
The Ramsey County property includes most of the 40-acre lake and surrounding wetland, and a small amount of wooded upland around the lake. The remaining natural area around the lake is owned by the H.B. Fuller Company. Ramsey County property and H.B. Fuller property have been combined under mutual lease agreements to the Willow Lake Nature Preserve Foundation to form a 131-acre Willow Lake Nature Preserve. The nature preserve represents a good quality natural environment including the lake, wetland, oak woods, and tamarack swamp.



#### RECREATION DEVELOPMENT

H. B. Fuller has constructed a fishing pier and boat house on the north side of Willow Lake. Hiking trails have been developed around the lake incorporating 1,500 feet of boardwalk. The trail provides access to two gazebos. Access to these facilities is currently limited to H. B. Fuller employees and guests.

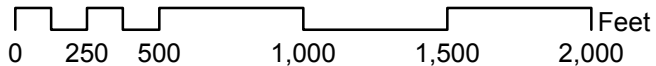
EXISTING CONDITIONS



Legend

- |                    |  |                  |  |                             |  |
|--------------------|--|------------------|--|-----------------------------|--|
| Park Border        |  | Park Paved Trail |  | Municipal Ped/Bike Facility |  |
| Park Entrance      |  | Park Turf Trail  |  | Regional Trail              |  |
| Metro Tranist Stop |  | Municipal Trail  |  |                             |  |

EXISTING LAND COVER



Existing Land Cover

- |                     |                   |            |                 |
|---------------------|-------------------|------------|-----------------|
| Active Use          | Floodplain Forest | Oak Woods  | Remnant Prairie |
| Impervious          | Mesic Forest      | Old Field  | Savanna         |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp     |
| Tamarack Swamp      | Wetland           | Open Water |                 |



## WILLOW LAKE OPEN SPACE

### **LAND COVER AND HABITAT**

The Willow Lake Open Space habitat consists of cattail wetland complexes and mixed woods, with significant oak trees surrounding Willow Lake. The opens space is part of the Willow Lake Nature Preserve that includes surrounding H.B. Fuller preserved lands.

### **WILDLIFE**

The park hosts a variety of common wildlife, including nesting songbirds and waterfowl. Mammals include white-tailed deer, red fox, muskrat, and raccoons.

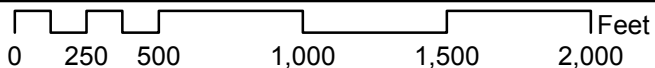
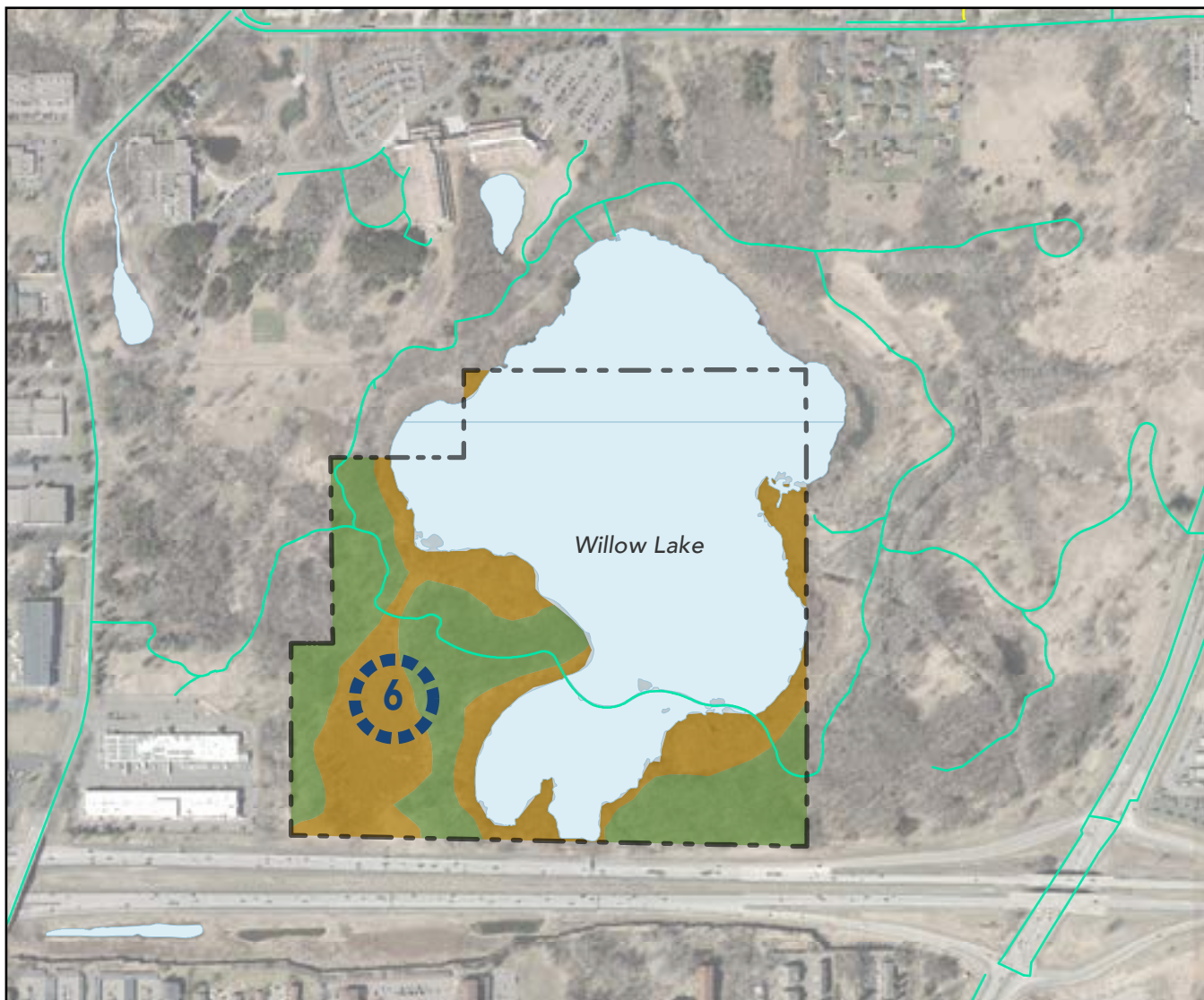
### **WILDLIFE MANAGEMENT**

Deer populations in the area are surveyed annually to determine the need for a special archery hunt. Deer management has been occurring in the park and surrounding H.B. Fuller preserve land through special archery hunts under the Ramsey County Cooperative Deer Management Plan in partnership with the city of Vadnais Heights and H.B. Fuller. H.B. Fuller coordinates the deer archery hunts on preserve and county land, in conjunction with Ramsey County Parks & Recreation department.

### **SURFACE WATER RESOURCES**

Willow Lake is surrounded by natural shoreline. The lake contains rough and game fish species and re-stocking efforts of sunfish and largemouth bass has been implemented in the past through coordinated efforts with H.B. Fuller, MN DNR, and the Ramsey- Washington Metro Watershed District.

PROPOSED DEVELOPMENT



Legend

- |                           |  |                             |  |                           |  |
|---------------------------|--|-----------------------------|--|---------------------------|--|
| Park Border               |  | Park Paved Trail            |  | Regional Trail            |  |
| Proposed Development      |  | Park Turf Trail             |  | Proposed Regional Trail   |  |
| Proposed Development Node |  | Municipal Trail             |  | Proposed Paved Park Trail |  |
| Metro Tranist Stop        |  | Municipal Ped/Bike Facility |  | Trail                     |  |

## PLANNING CONSIDERATIONS

Ramsey County and the H. B. Fuller Company have leased property to the Willow Lake Nature Preserve Foundation for a nature preserve. The Willow Lake Nature Preserve Foundation Board includes representatives from Ramsey County. Nature preserve activities are funded by the H. B. Fuller Foundation and the H. B. Fuller Company. The principal focus of the property is natural resource management and preservation. The agreement between Ramsey County and H.B. Fuller Company specifies that there will be controlled public access to the site. H.B. Fuller has indicated its intent to develop a visitors center to accommodate public access. Plans for the visitors center and its operation should be coordinated between Ramsey County and H.B. Fuller Company to insure appropriate public access.

## PROPOSED DEVELOPMENT

### 1. Master Planning

Ramsey County has formed an agreement with H.B. Fuller for inclusion of Willow Lake Open Space into the Willow Lake Nature Preserve located on the H.B. Fuller property. A joint master plan has been completed for Willow Lake Nature Preserve by the Willow Lake Nature Preserve Foundation which has members from both Ramsey County and H.B. Fuller. The principal focus of the property is for natural resource management and passive recreation. The Willow Lake Nature Preserve Foundation has developed the nature preserve per the joint master plan and has been completing ongoing maintenance activities. Access is provided to the nature preserve through the H.B. Fuller property under an agreement between Ramsey County and H.B. Fuller. H.B. Fuller has indicated plans to develop a visitor center to accommodate public access to the nature preserve. Future acquisition of adjacent properties would provide additional recreational opportunities and access to the nature preserve.

- Develop partnerships with H.B. Fuller, city of Vadnais Heights, Ramsey Washington Metro Watershed District (RWMWD), other local agencies, and private parties for funding strategies, increased recreational opportunities, storm water management best practices, and proposed improvements.

### 2. Vehicular & Pedestrian Access

There is no dedicated public trail access or parking facility for the nature preserve. Controlled access to the nature preserve is through the H.B. Fuller site. Future acquisition of adjacent properties would provide additional trail and vehicular access to the nature preserve.

### 3. Wayfinding

Pedestrian and vehicular sign improvements will follow items address in the joint master plan.

All signage should conform to the Ramsey County Parks & Recreation Wayfinding Master Plan.

## PROPOSED DEVELOPMENT

### 4. Recreation Opportunities

Additional recreation opportunities not currently identified within the existing joint master plan will need to be developed in coordination with the Willow Lake Nature Preserve Foundation.

- **Programming:** Increase recreation and nature programming activities.

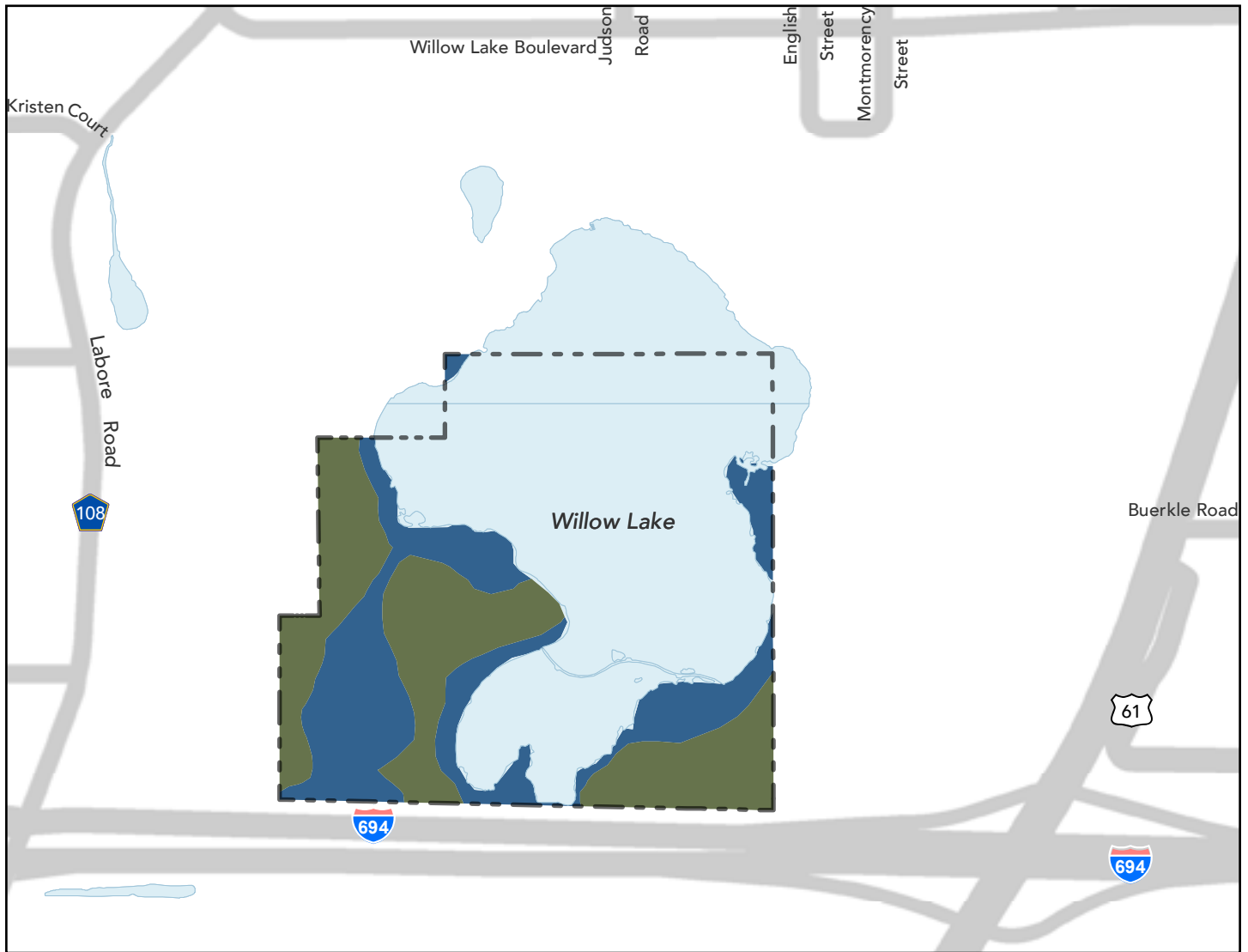
### 5. Acquisitions

- Acquisition is proposed for the expansion of Willow Lake Nature Preserve when adjacent properties become available. Further master planning activities would be required to determine potential recreation uses for acquired properties.

### 6. Habitat Restoration & Management

- H.B. Fuller manages natural resource projects and wildlife management on preserve lands and county land, in conjunction with the Ramsey County Parks & Recreation department.
- Restoration projects completed includes buckthorn removal, garlic mustard control, prairie plantings, and oak wilt management.

PROPOSED LAND COVER



Proposed Land Cover

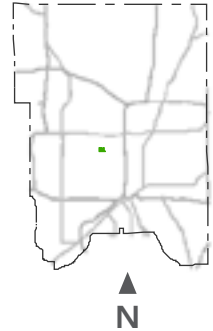
- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |

NATURAL RESOURCE MANAGEMENT UNIT TABLE

WILLOW LAKE OPEN SPACE							
ACRES	CURRENT LAND COVER	PRO-POSED LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIOR-ITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
16.05	WETLAND	WETLAND	MANAGEMENT COMPLETED BY H.B. FULLER	N/A	N/A	N/A	N/A
18.25	MIXED WOODS	MIXED WOODS	MANAGEMENT COMPLETED BY H.B. FULLER	N/A	N/A	N/A	N/A
41.49	OPEN WATER	OPEN WATER	MANAGEMENT COMPLETED BY H.B. FULLER	N/A	N/A	N/A	N/A
PARK TOTAL							
75.79				N/A			N/A

# WOODVIEW OPEN SPACE

## EXISTING SITE CONDITIONS



### LOCATION AND SIZE

Woodview Protection Open Space is located in the central part of Ramsey County in the city of Roseville. The 57-acre site is bounded by Larpenteur Avenue on the south, Farrington Avenue on the east, Wagner Street on the north, and Mackubin on the west. An off leash dog area and parking takes up 4 acres in the southwest portion of the site along Larpenteur Avenue.



### SITE CHARACTERISTICS

The entire site is a low wetland area consisting of a variety of wetland species with areas of open water. Additional public property owned by the city of Roseville, Ramsey County, and the Saint Paul Water Utility contribute to a larger site.



### RECREATION DEVELOPMENT

A paved multi-use trail extends from Reservoir Woods Park to Larpenteur Avenue as part of the city of Roseville's trail system. A 19-car parking lot serves as a trailhead and provides access to the off leash dog area. The off-leash dog area consists of a fenced area for small dogs and a 4-acre area for large dogs.

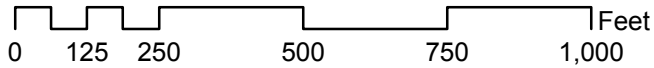


### MAINTENANCE

#### Winter Maintenance:

- Maintain access to the OLDA year-round
- Plow trail access in the park. The city of Roseville plows from Larpenteur Ave to Roselawn Ave West

EXISTING CONDITIONS

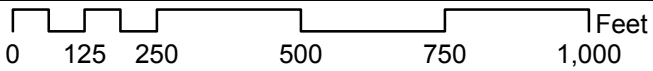


Legend

Park Border		Park Paved Trail		Parking Lot	
Park Entrance		Park Turf Trail		OLDA	
Metro Transit Stop		Municipal Trail			
Regional Trail		Municipal Ped/Bike Facility			



EXISTING LAND COVER



Existing Land Cover

- |                     |                   |            |                 |
|---------------------|-------------------|------------|-----------------|
| Active Use          | Floodplain Forest | Oak Woods  | Remnant Prairie |
| Impervious          | Mesic Forest      | Old Field  | Savanna         |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp     |
| Tamarack Swamp      | Wetland           | Open Water |                 |

## WOODVIEW OPEN SPACE

### **LAND COVER AND HABITAT**

The habitat of Woodview Open Space consists mainly of a restored wetland. The wetland makes up most of the site and is surrounded by mixed woods and a small section of oak woods on the west side. Within the wooded area on the west side is an off-leash dog park.

### **WILDLIFE**

The park hosts a variety of common wildlife including nesting songbirds and waterfowl.

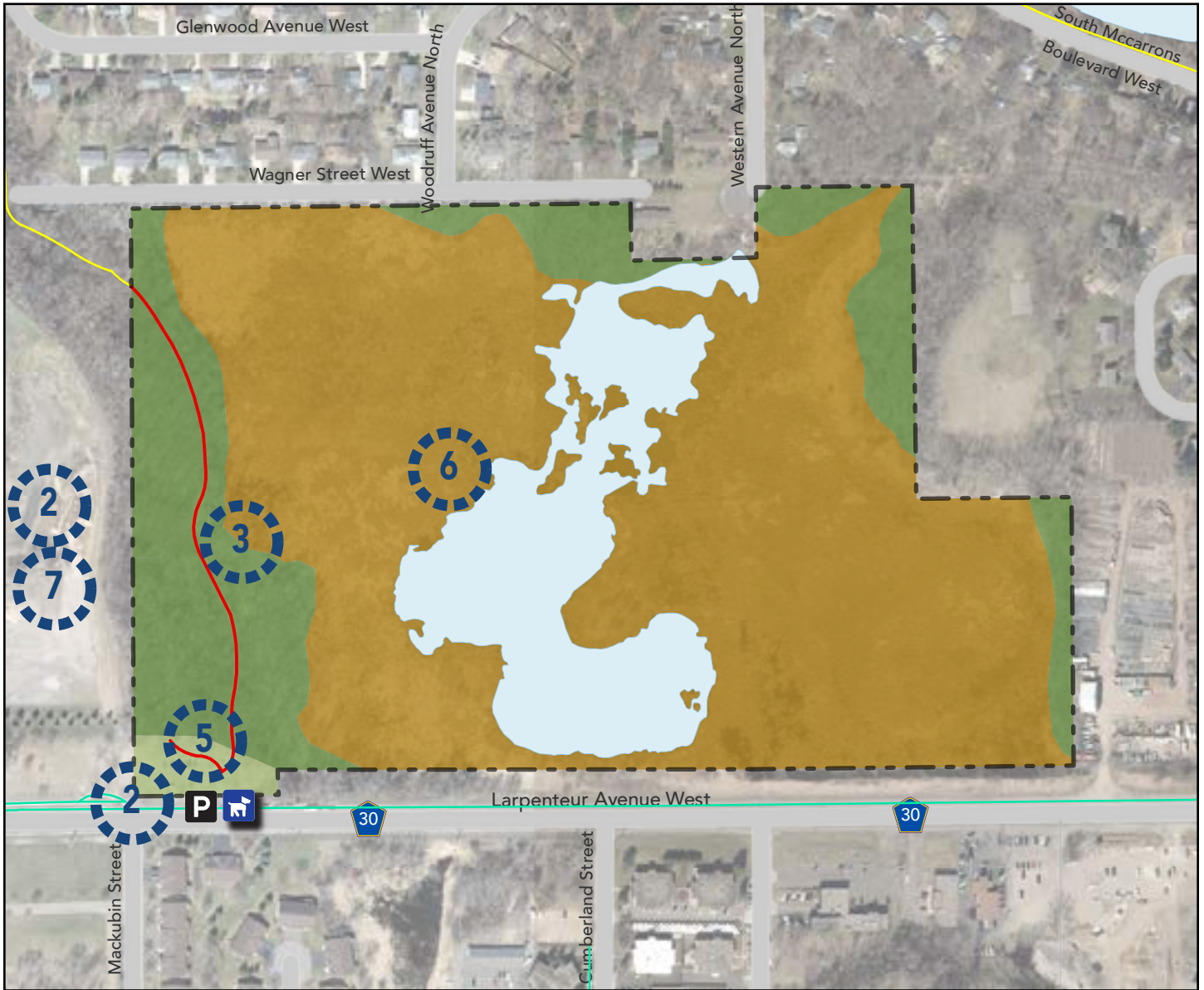
### **WILDLIFE MANAGEMENT**

The Canada goose population is monitored and will be managed with roundups if warranted.

### **SURFACE WATER RESOURCES**

Ongoing wetland plant surveys within Woodview Marsh are conducted by the Public Works department to assess the health of the restored wetland.

PROPOSED DEVELOPMENT



Legend

- |                           |                 |                             |              |                           |              |
|---------------------------|-----------------|-----------------------------|--------------|---------------------------|--------------|
| Park Border               | — · · · —       | Park Paved Trail            | — (red) —    | Regional Trail            | — (blue) —   |
| Proposed Development      | 3 (yellow grid) | Park Turf Trail             | — (green) —  | Proposed Regional Trail   | - - - (blue) |
| Proposed Development Node | 1 (blue circle) | Municipal Trail             | — (yellow) — | Proposed Paved Park Trail | - - - (red)  |
| Metro Tranist Stop        | T (red square)  | Municipal Ped/Bike Facility | — (cyan) —   | Trail                     |              |

## PROPOSED DEVELOPMENT

### 1. Master Planning

Future improvements to Woodview Open Space will require a future master planning process to address proposed park and recreation opportunities.

- Develop partnerships with the city of Roseville, Ramsey-Washington Metro Watershed District (RWMWD), and private parties for funding strategies, increased recreational opportunities, storm water management best practices, and proposed improvements.
- **Off Leash Dog Area Master Plan:** Master planning activities for the system wide Off Leash Dog Area Master Plan began in 2017 and were completed in 2018. This master plan addresses improvements to the Woodview Off Leash Dog Area.
- **Ramsey County Property:** a 29.8-acre property owned by Ramsey County located north of the Woodview Open Space. This is an undeveloped property with pedestrian trails meandering throughout the property with connections to Dale St N and Reservoir Woods Park. Potential development of this area would include passive recreation such as paved trails, natural surface trails, a parking facility, community gardens, observation areas, interpretive and education programming areas, and other similar uses.
- **Ramsey County Community Corrections property:** a 17.8-acre property owned by Ramsey County Community Corrections located west of the current Woodview Open Space. Currently this is an undeveloped property that is mainly used by Ramsey County Public Works for storage of road materials. If this property is not needed for material storage in the future, expansion of Woodview Open Space is desired. Development of this area would include passive recreation such as paved trails, natural surface trails, a parking facility, community gardens, observation areas, interpretive and education programming areas, and other similar passive recreation.

### 2. Site Access

Redevelop existing access points and provide additional access points throughout the park for improved access to recreational amenities.

- **Ramsey County Property:** Potential new access point from Dale Street North and Chandler Avenue to the existing trail system on the Ramsey County Property to the north of the existing Woodview Open Space Area.
- **Vehicular:** Redevelop and increase parking opportunities for improved access to the open space. During any parking lot redevelopment additional parking should be considered along with improved pedestrian connections, signage, storm water management best practices, and site amenities.

### 3. Trail Development

- Redevelop existing trails throughout the open space for improved access to recreational amenities. Improvements shall consist of trail repaving, re-alignment of trail sections for enhanced connections, and the reduction of sharp corners and steep slopes adjacent to trails.

## PROPOSED DEVELOPMENT

### 4. Wayfinding

- **Pedestrian:** Improve pedestrian signage for enhanced wayfinding to trail accesses and other amenities. Provide interpretive signage in natural areas for increased wayfinding to nature education opportunities.
- **Vehicular:** Improve vehicular entrance signage for better wayfinding to park accesses. Replace existing park entrance sign.
- All signage should conform to the Ramsey County Parks & Recreation Wayfinding Master Plan.

### 5. Recreation Opportunities

- **Restroom:** Develop a seasonal restroom facility and adjacent recreation amenities for use with the off-leash dog area. Building development shall comply with the Americans with Disabilities Act (ADA) and Universal Design standards.
- **Public Art:** Provide the opportunity and appropriate infrastructure to accommodate public art to improve community connections.
- **Observation Areas:** Develop observation areas along the existing trail system for interpretive education of natural areas and wildlife. If federally or state listed protected plants or animals are discovered, statutes and guidelines will be followed.
- **Programming:** Increase recreation and nature programming.

### 6. Habitat Restoration & Management

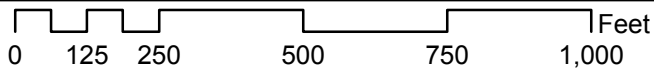
- Woodview Marsh is being restored as a wetland bank by the Ramsey County Public Works department from a low quality, highly disturbed wetland to a functioning wetland with a diversity of plants beneficial to wildlife.
- The restoration includes excavation to create open water habitat and invasive plant removal and seeding of native plants.
- The site is monitored by Ramsey County Public Works.
- No active management is planned for this site, however, future restoration could include the removal of woody invasive species throughout the woodlands.

### 7. Acquisitions

Future open space expansion is proposed for two Ramsey County properties adjacent to the existing Woodview Open Space Area.

- **Ramsey County Property:** a 29.8-acre property owned by Ramsey County located north of the current Woodview Open Space.
- **Ramsey County Community Corrections Property:** a 17.8-acre property owned by Ramsey County Community Corrections located west of the current Woodview Open Space.

PROPOSED LAND COVER



Proposed Land Cover

- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |

NATURAL RESOURCE MANAGEMENT UNIT TABLE

WOODVIEW OPEN SPACE							
ACRES	CURRENT LAND COVER	PRO-POSED LAND COVER	RESTORATION ACTIVITY	ACTIVITY COST	PRIOR-ITY	MAINTENANCE	MAINTENANCE COST/ 3 YEARS
0.74	ACTIVE USE	ACTIVE USE	N/A	N/A	N/A	N/A	N/A
5.63	MIXED WOODS	MIXED WOODS	INVASIVE WOODY RE-MOVAL, CUT, STUMP TREAT, STACK & BURN	\$11,260.00	2	FOLIAR SPRAY OF BUCK-THORN	\$2,815.00
3.74	OAK WOODS	OAK WOODS	INVASIVE WOODY RE-MOVAL, CUT, STUMP TREAT, STACK & BURN	\$7,480.00	2	FOLIAR SPRAY OF BUCK-THORN	\$1,870.00
38.39	WETLAND	WETLAND	MONITOR	N/A	N/A	N/A	N/A
PARK TOTAL							
48.5				\$18,740.00			\$4,685.00

## SPECIAL USE FACILITIES

Special-Use Facilities are areas or facilities that provide intense specialized or single-purpose indoor and/or outdoor recreation activities and require a specific resource base, location, restrictive control and management program above and beyond that associated with other general recreation activities.

### Objectives:

- To provide only that natural or artificial resource base which is necessary to accommodate the intended use.
- To provide opportunities for involvement as a participant or spectator in a controlled setting.
- To encourage multi-seasonal use when feasible to maximize return on capital investment.

There are currently 18 special-use facilities under the jurisdiction of Ramsey County. These facilities include five golf courses; 11 ice arena locations (13 rinks); a fairgrounds (including horseshoe courts and historic cemetery) and an archery range. These sites total 591.12 acres (plus Keller Golf Course which is part of Keller Regional Park; and the Island Lake Golf Center which is part of Island Lake County Park).

### Arenas

The Parks & Recreation department operates one of the largest indoor ice arena systems in the country. The system consists of 11 facilities with 13 sheets of ice, of which 7 of the 11 locations are within the city limits of Saint Paul. Nine arenas were constructed between 1971 and 1975, some utilizing state funding initiated during the Governor Wendell Anderson administration. These facilities were prioritized in a targeted area in Saint Paul.

The majority of the arenas were built as practice facilities or shelters from the elements for the local high school and youth programs. After several years of declining use at one of these single sheet facilities, the Board was forced to look at options to operate Biff Adams. In 2010 the County Board made a decision to enter into a long term lease agreement with the Frog Town Curling Club to run Biff Adams. The newest facility to the Ramsey County system is Vadnais Sports Center. The county acquired the 2010 built facility in July of 2014. Vadnais houses two sheets of ice and a 1500 sq ft dome turfed facility. There are currently 133 different user groups utilizing the Ramsey County arena system recently renting a total of 18,038 hours of ice time throughout the year, with 12,293 hours rented from November to February.

In 2014, The Ramsey County Board of Commissioners directed the County Manager to develop an Arena Task Force to study the current state of the indoor ice arena system and make recommendations for the long-term future of the system. The task force examined the history of the arena system, the current operation, user groups, explored potential user groups, analyzed related issues and briefly explored possible alternative uses. Based upon the data analysis, trends examination, information from subject matter experts, community input, and the knowledge and experience of the task force members, the following list summarizes their topics of recommendations: Ice assigning/priority of use; Conditions for consolidation; Contracted use opportunities; Ice rental rates; Refrigerant replacement recommendation; Replacement schedule; Other capital improvements; Funding; Criteria for ending the use as an ice arena; Criteria for adding an arena; Repurposing process; Plan for non-county-owned arenas; Workforce impact. While the department's primary focus is on natural resource management, the Task Force did determine that the arena system does help accomplish the vision, mission and goals of Ramsey County through the provision of geographical access to a recreational amenity that provides healthy, safe, community-building opportunities. The arenas are an important part of the overall quality of life for Ramsey County residents, but for the future, careful consideration of recreational facility development should not supersede that focus.



### Arena Maintenance

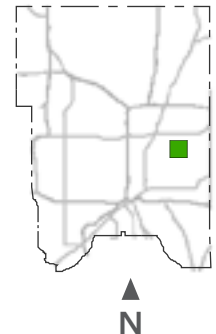
#### Building Maintenance

- The building and surrounding area are checked daily for any signs of vandalism or trash.
- Entryway area is shoveled as soon as possible. All walkways cleared of snow and ice within 24 hours after a snowfall has ended.
- Restrooms cleaned nightly and restrooms checked periodically throughout the day and cleaned as needed.
- Entire building is swept and mopped daily and periodically throughout the day as needed.
- Money received is counted and secured every night.
- Door lights, exits, parking lot and arena building lights inspected daily.
- Toilets, sinks, urinals, drinking fountains checked daily for leaks or broken fixtures.
- Soap dispensers are cleaned and filled once per week and as needed.
- Check restroom for toilet tissue supply daily.
- Restroom mirrors cleaned daily.
- Refill sanitary products in women's restroom as needed.
- Doors visually inspected daily to make sure they are latching properly.
- During snow removal, door thresholds are inspected for ice or snow build-up, rocks or other obstructions.
- Security alarm magnets are checked periodically for broken wires, loose screws, corrosion or misalignment.
- Water heater is checked periodically for leaks
- Snow Blower oil changed and all movable parts lubricated. Cutting bar adjustments are made mid-season.
- Twice per season furnace filters are changed and shafts are greased.
- Periodic visual checks on furnace belts, squirrel cages and pulley alignments.

#### Ice Operational Maintenance

- Checked daily: Ice temperature and condition of ice.
- Hockey goals are removed from ice surface prior to resurfacing.
- Ice is edged and resurfaced nightly. Creases are flooded as needed.
- Daily checks of dasher board gates latches and hinges for alignment and wear.
- Visual inspections of dasher board panels for loose screws, plastic rivets or sharp edges.
- Visual inspections on spectator shielding (plastic or glass) for movement, misalignment or cracks.
- Oil is changed once per month on the ice edger.
- Periodically cutting blades on the Zamboni are checked and set.
- Zamboni engine oil checked daily
- Zamboni hydraulic oil level checked daily
- Zamboni batteries re charged and water levels checked each night.
- Zamboni's horizontal and vertical auger brace is lubed and checked weekly.
- Zamboni hydrostatic transmission filter conditioner indicator and tire pressure checked weekly.
- Check tire pressure – 60 P.S.I.
- Zamboni ice knife changed weekly.
- Score boards control box connections checked daily for damage and cleaned as necessary.
- Score boards bulbs replaced as needed.
- Goal frames and netting inspected daily, holes or structural issues repaired.

## ALDRICH ARENA



### EXISTING SITE CONDITIONS



#### LOCATION AND SIZE

Aldrich Arena is located in Maplewood, the 15-acre site is adjacent to several County-owned properties including Goodrich Golf Course and Dome, the Ramsey County Care Facility, and the Parks & Recreation Administration Building. The site is bounded on the south by Ripley Avenue, on the east by Van Dyke Street, on the north by the Ramsey County Nursing Home, and on the west by White Bear Avenue.



#### SITE CHARACTERISTICS

The entire site is occupied by the arena and parking lot with the exception of a 2-acre grass area along Ripley Avenue. The site is owned by Ramsey County.



#### CURRENT USE & PARTNERSHIPS

Due to its history and seating capacity (approximately 3,400 for hockey, up to 4,400 for dry-floor events), Aldrich has hosted a variety of events over the years. Currently Aldrich is home to hockey, including high school sectional playoffs, figure skating, public open skating and long-blade sessions. Additionally, the arena's concrete floor offers 17,000 square feet of exhibit space for events such as craft shows, conventions, sports events, trade shows, concerts, graduations, and animal shows. The County's recent acquisition of a floor covering system will allow for dry floor events to take place during the ice season, which currently extends from October until March.

The 355,000 square foot parking lot also hosts flea markets, farmers markets, car shows, driver education training, and provides parking for 800 vehicles for the arena and adjacent events such as the annual Ramsey County Fair.

Ramsey County currently has a long-term use contract with Hill-Murray High School. In 2014 the school funded a substantial locker room expansion on the west side of the facility. The use contract provides the school exclusive use of those locker rooms in exchange for purchasing a minimum of 410 ice hours annually through 2034.

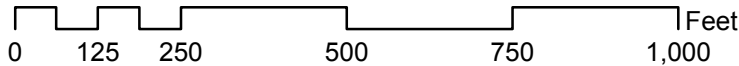


## MAINTENANCE

Current maintenance operations at the arena consist of maintaining a regulation 85' x 200' sheet of ice, locker rooms, concession stand, restrooms, a large bleacher and viewing area (max. capacity of approximately 3500 with standing room), an entry/lobby area and small office space from September through April for primarily Ice activities such as hockey, figure skating, and public open skating. The arena supports many community events on the dry floor surface (concrete or the ice deck cover during the ice season) inside the facility such as graduations, trade shows, concerts, weddings, community festivals, rodeos, and other events. The complex also has multiple outdoor parking lot events May through September such as car shows, community cleanups, community hazardous waste collections, flea markets, and a weekly farmers market.

During the ice season daily building and equipment maintenance & safety checks are required and performed daily and include checking and adjusting refrigeration controls, checking and adjusting hot water boiler plant controls, checking ice resurfacing and edging equipment, taking air quality tests if required, checking public walkways & sidewalks for safe access. The Ice surface, dasher board equipment, and related skating areas are inspected daily for ice thickness, ice temperature, and dasher board or glass damage. Additional maintenance includes checking flooding ice, operating ice resurfacing and edging equipment, cleaning building including sweeping and mopping floors, picking up and removing trash, and washing walls, windows, tables, sinks, toilets and related items, seasonal grounds work for shoveling, lawn care and exterior building projects. Off season maintenance includes annual equipment checks and repairs, minor facility repairs, seasonal deep cleaning, and painting.

EXISTING CONDITIONS



Legend

- |                           |  |                             |  |               |  |
|---------------------------|--|-----------------------------|--|---------------|--|
| Property Line             |  | Park Paved Trail            |  | Site Entrance |  |
| Proposed Development      |  | Park Turf Trail             |  | Parking Lot   |  |
| Proposed Development Node |  | Municipal Trail             |  | Golf Dome     |  |
| Metro Tranist Stop        |  | Municipal Ped/Bike Facility |  | Hockey        |  |

## PROPOSED DEVELOPMENT

### 1. Capitol Improvement Projects

In 2018 Ramsey County will begin a major project including conversion of the rink's refrigeration from R-22, production of which is being phased out by the year 2020, roof replacement, parking lot reconstruction, fire protection system and associated water service, ADA revisions, and possible east side locker room expansion. As part of this project, Parks & Recreation is also implementing its "Green Ice Initiative", a capital effort to make its traditionally energy-intensive arenas more energy efficient, through projects like LED lighting retrofits, waste heat recovery, building management systems, and others. This project will serve as a template for similar projects at other Ramsey County arenas facing the same R-22 phase-out.

While this project is being planned with a 40- to 50-year life cycle in mind, future capital improvement opportunities may arise as the recommendations of the Arena Task Force are implemented.

### 2. Energy & Resilience

The roof configuration of the arena is reasonably suited to solar arrays. Additionally, carports could provide an opportunity for further solar arrays. This combination would potentially provide 710.6 MWh/year of energy to offset the site's energy use. The capital cost of such a system would have a payback period of around 14.9 years. With a payback period under 15 years, this site should be a priority for Ramsey County's renewable energy efforts. Alternative solar financing structures, such as community solar, lease-to-own, or power purchasing agreements (PPAs), should also be considered.

The site's Energy Use Intensity (EUI), which measures energy use relative to physical building square footage, is 165, which is significantly higher than both the national average of 96.8 for similar facilities and an average EUI of 95 for County-owned arenas. An energy study would identify opportunities for reducing energy consumption, thus reducing the size of the solar array necessary to offset the site's energy use.

The 2018 renovation project provides an opportunity to incorporate stormwater management best practices, such as rain gardens and permeable pavements. The site is in the drainage area of nearby Wakefield Lake, an impaired water, so Ramsey County will coordinate this project with the Ramsey/Washington Watershed District to evaluate cost-sharing opportunities and innovative designs to mitigate the negative stormwater impacts of the large parking lot.

In 2014 an elevator was installed on the east end of the arena, providing easy access to the lower level of the arena. The 2018 renovation project provides a further opportunity to improve access to and within the arena for all users irrespective of race, age, gender, language, and physical ability.

### 3. Programming & Development Opportunities

The advancement of cultural concerts and events have increased the dry floor use at Aldrich significantly in the last two years. The purchase of an ice deck covering for the arena has allowed for the continuation of those events during ice season and for the continuation of the ice shoulder seasons, advancing the arenas ability to generate revenue. Unique opportunities for non-traditional events such as rodeos, weddings, quinceaneras, Philippine Day in Minnesota, and a beer can collector show continue to thrive in this size venue. Planned improvements to the parking lot will enhance opportunities for more community art fairs and fresh food markets.

## PROPOSED DEVELOPMENT

### 4. Partnership Opportunities

The County will continue to be open to partners interested in long term use contracts which include capital investments that benefit County residents. The complex is a good option for future growth and construction of facilities that would complement the current ice and dry-floor events such as additional ice sheets, training facilities, or a banquet and events center.

### 5. Future Maintenance & Operations

Future Maintenance operations and projects include the installation and daily operations of a new Ammonia based refrigeration and a new parking lot which will require annual maintenance and up keep.

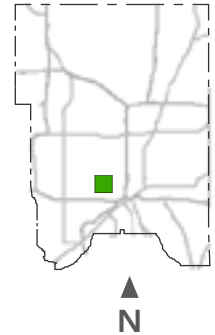
# BIFF ADAMS ARENA

## EXISTING SITE CONDITIONS



### LOCATION AND SIZE

Biff Adams Arena, which opened in 1973, is located in Saint Paul's Frogtown neighborhood. The 25,920 square foot facility is bounded on the south by Minnehaha Avenue, on the east by Western Avenue, and on the north and west by light industrial properties.



### SITE CHARACTERISTICS

Parks & Recreation owns the 2.21 acre property upon which the arena and parking lots site. The site is located in a residential neighborhood to the south, with Como Avenue and the BNSF railroad to the north. Public transit is accessible at Como Avenue.



### CURRENT USE & PARTNERSHIPS

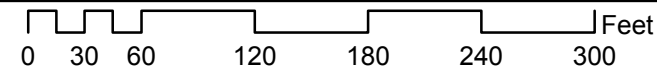
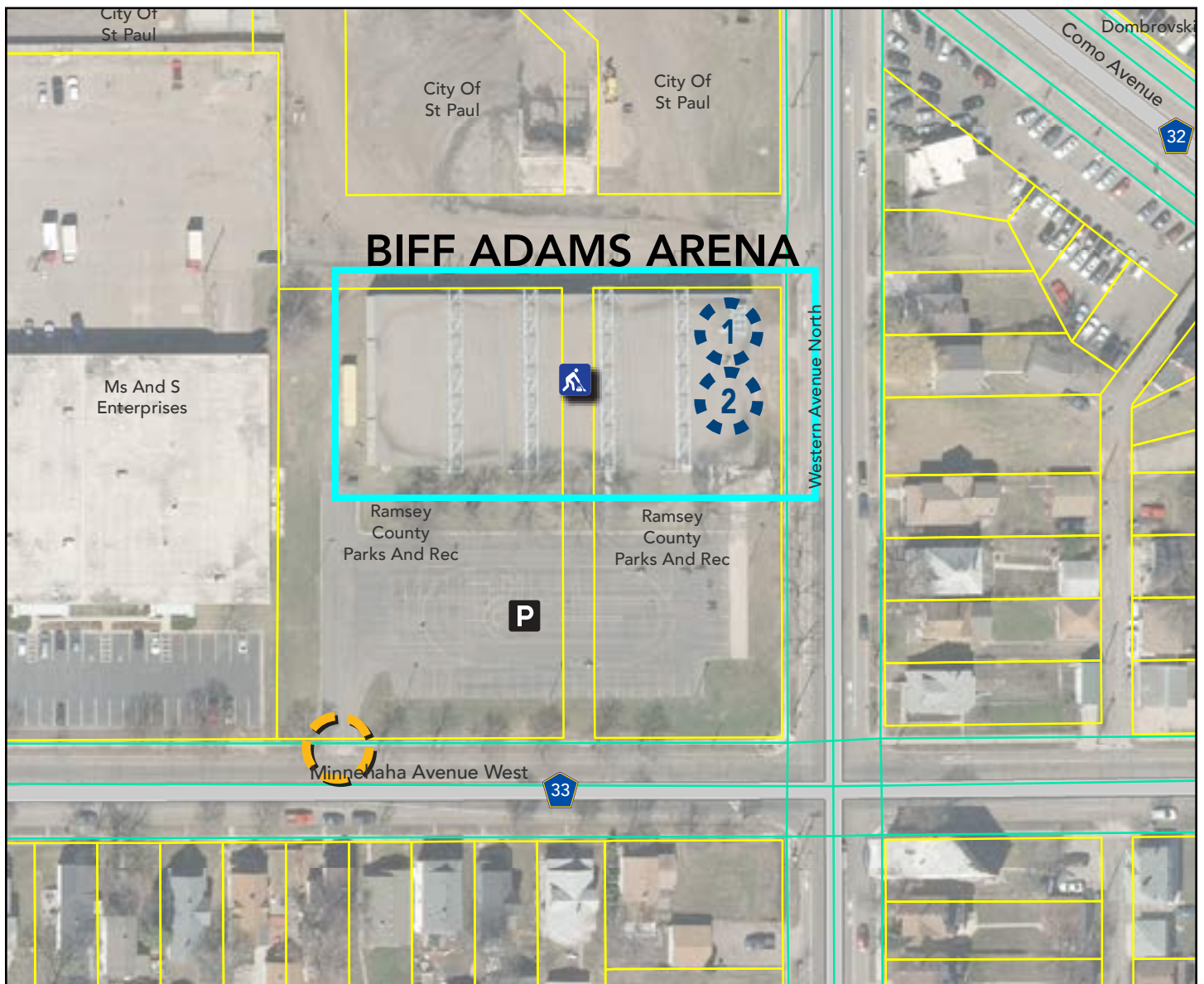
The arena, with a seating capacity of 75, is operational year-round and is currently used exclusively for curling. The current lease agreement with the Frogtown Curling Club runs through 2021.



### MAINTENANCE

All facility maintenance is managed by the curling club. Contract language requires they keep the facility and grounds clean and free from dirt and other refuse. The club is responsible for maintenance of the grounds, driveway, walks, parking areas and boulevards. The county is responsible for the exterior capital asset repair and replacement of all other elements, including the ice refrigeration system, are the responsibility of the Frogtown Curling Club.

EXISTING CONDITIONS



Legend

- |                           |  |                             |  |               |  |
|---------------------------|--|-----------------------------|--|---------------|--|
| Property Line             |  | Park Paved Trail            |  | Site Entrance |  |
| Proposed Development      |  | Park Turf Trail             |  | Parking Lot   |  |
| Proposed Development Node |  | Municipal Trail             |  | Curling       |  |
| Metro Tranist Stop        |  | Municipal Ped/Bike Facility |  |               |  |



## PROPOSED DEVELOPMENT

### 1. Capitol Improvement Projects

Since the arena uses R-22 as its refrigerant, a retrofit will likely be required. Any retrofit project should also include the "Green Ice Initiative", a capital effort to make traditionally energy-intensive arenas more energy efficient, through projects like LED lighting retrofits, waste heat recovery, building management systems, and others. The Arena Task Force report classifies Biff Adams as a Tier III (lowest priority) facility for R-22 replacement, making it a secondary priority for such work. Capital improvement projects should be deferred until the long-term future of the facility is determined.

### 2. Energy & Resilience

The roof configuration of the arena is reasonably suited to solar arrays. Carport arrays would provide additional solar capacity. In combination these arrays would potentially provide 170.5 MWh/year of energy to offset the site's energy use. The capital cost of such a system would have a payback period of around 15.9 years, which would make the facility a priority for solar energy planning. However, decisions related to renewable energy opportunities should be deferred until the long-term future of the facility is determined.

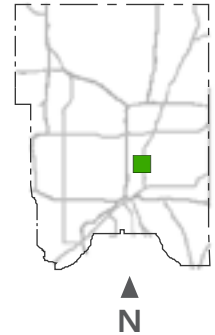
### 3. Partnership Opportunities

The county is anticipating a longer lease request from the Frogtown Curling Club when the existing five year lease agreement runs out.

### 4. Future Maintenance & Operations

Continue as required under the agreement.

## GUSTAFSON-PHALEN ARENA



### EXISTING SITE CONDITIONS



#### LOCATION AND SIZE

Gustafson-Phalen Arena, which opened in 1975, is located in Saint Paul's East Side, on the campus of Johnson High School. The 28,600 square foot facility is bounded on the east by the high school, on the north and west by athletic fields, and on the south by a parking lot. Arcade Street (Highway 61) is east of the school and Walsh Street provides access to the parking lot on the south.



#### SITE CHARACTERISTICS

Ramsey County has a ground lease covering 2 acres within a 16-acre parcel owned by Independent School District 625 (Saint Paul). This site is occupied by the arena, parking lots, and minimal landscaping. The parking lot to the south of the arena is shared with Johnson High School. The school district has maintenance responsibility for this lot. The surrounding neighborhood is single-family residential housing.



#### CURRENT USE & PARTNERSHIPS

Gustafson-Phalen Arena, with a seating capacity of 440, is operational October through February. The arena is primarily used for ice hockey practice for youth associations and high school programs.

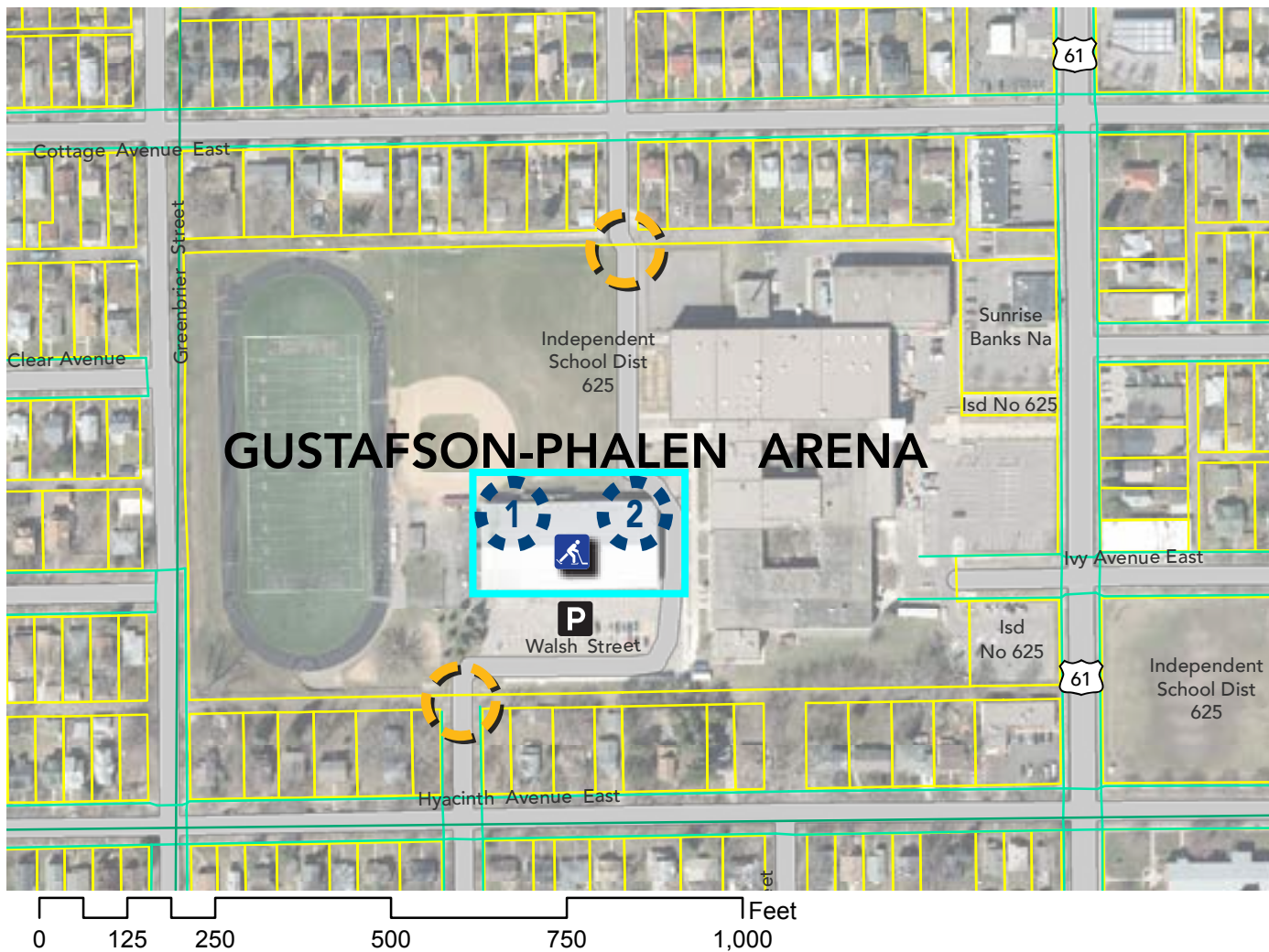
Johnson High School, with its storied hockey history, and the Johnson/Como/North Saint Paul youth hockey association are the largest current user groups at the facility.



#### MAINTENANCE

Current maintenance operations at the arena consist of maintaining a regulation 85' x 200' sheet of ice, locker rooms, concession stand, restrooms, an entry/lobby area and small office space from October through February. Off season maintenance includes painting, annual equipment checks and minor facility repairs. Ice skating area is inspected daily for thickness and temperature. Additional maintenance includes checking and adjusting refrigeration controls, air quality testing if required, flooding ice, operating ice resurfacing equipment, cleaning building including sweeping and mopping floors, picking up and removing trash, and washing walls, windows, tables, sinks, toilets and related items. Receiving payments and maintaining records of arena use. Maintenance operations also entail providing patron services such as emergency first aid, responding to complaints, crowd control and enforcement of arena rules. Seasonal grounds work for shoveling, lawn care and exterior building projects.

EXISTING CONDITIONS



Legend

Property Line



Proposed Development



Proposed Development Node



Metro Tranist Stop



Park Paved Trail



Park Turf Trail



Municipal Trail



Municipal Ped/Bike Facility



Site Entrance



Parking Lot



Hockey



## EXISTING CONDITIONS

### 1. Capitol Improvement Projects

Since the arena uses R-22 as its refrigerant, a retrofit will be required. Any retrofit project should also include the “Green Ice Initiative”, a capital effort to make traditionally energy-intensive arenas more energy efficient, through projects like LED lighting retrofits, waste heat recovery, building management systems, and others. The Arena Task Force report classifies Gustafson-Phalen as a Tier II facility for R-22 replacement, making it a secondary priority for such work. Future capital improvement opportunities may arise as the recommendations of the Arena Task Force are implemented.

### 2. Energy & Resilience

The roof configuration of the arena is reasonably suited to solar arrays, which would potentially provide 229.9 MWh/year of energy to offset the site’s energy use. The capital cost of such a system would have a payback period of around 13.3 years, which would make the facility a priority for solar energy planning. However, decisions related to renewable energy opportunities should be deferred until the long-term future of the facility is determined.

The site’s Energy Use Intensity (EUI), which measures energy use relative to physical building square footage, is 78.8, which is lower than both the national average of 96.8 for similar facilities and an average EUI of 95 for county-owned arenas.

### 3. Programming & Development Opportunities

Expanding open skating availability. Implementing Arena Task Force guidelines as appropriate.

### 4. Partnership Opportunities

Given the arena is located on school property connected to Johnson High School there may be opportunities with the school to develop alternative dry floor uses for the facility or enhanced athletic uses.

### 5. Future Maintenance & Operations

Eventual conversion from the existing R22 refrigerant ice plant to a new natural based ammonia system.

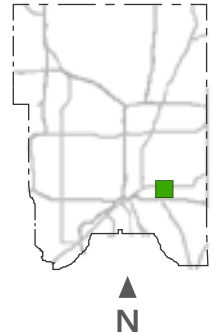
# HARDING ARENA

## EXISTING SITE CONDITIONS



### LOCATION AND SIZE

Harding Arena, which opened in 1975, is located in Saint Paul's East Side, on the campus of Harding High School. The 28,600 square foot facility is bounded on the north by 6th Street East, on the east by Harding High School and a service road, on the south by a parking lot, and on the west by an undeveloped natural area.



### SITE CHARACTERISTICS

Ramsey County has a ground lease covering 2 acres within a 36-acre parcel owned by Independent School District 625 (Saint Paul). This site is occupied by the arena, parking lots, and minimal landscaping. Directly east of the arena, the grade drops dramatically down to Highland Natural Golf Course. The arena is set at a higher elevation than 6th Street East, so the site slopes dramatically on the north and west sides. The parking lot to the south of the arena is shared with Harding High School. The school district has maintenance responsibility for this lot.



### CURRENT USE & PARTNERSHIPS

Harding Arena, with a seating capacity of 125, is operational October through February. The arena is primarily used for ice hockey practice for youth associations and high school programs.

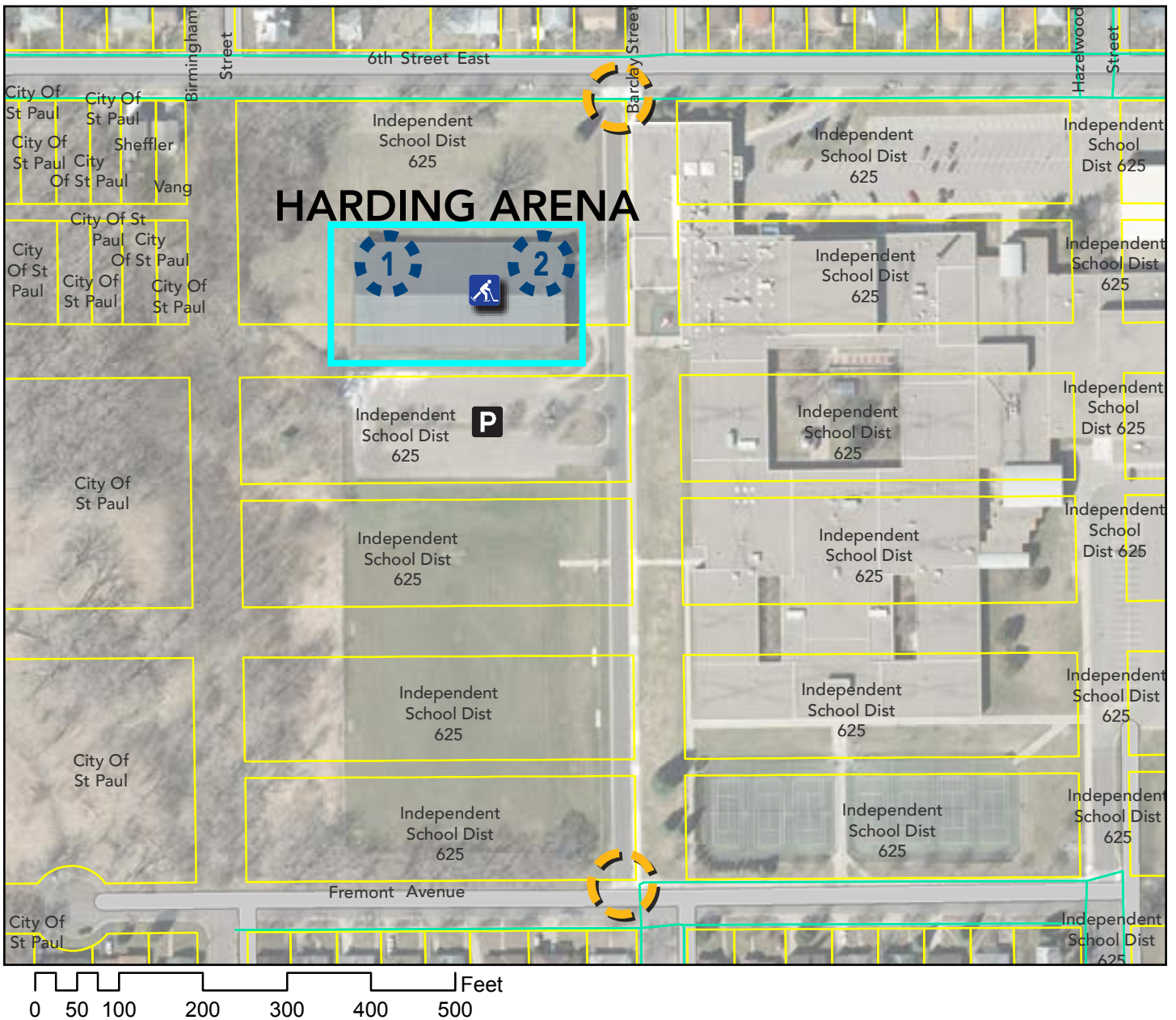
Harding High School no longer has a hockey program, and the local youth associated disbanded in 2001. As such, the facility has hosted out-of-county user groups in order to maximize ice revenues.



### MAINTENANCE

Current maintenance operations at the arena consist of maintaining a regulation 85' x 200' sheet of ice, locker rooms, concession stand, restrooms, an entry/lobby area and small office space from October through February. Off season maintenance includes painting, annual equipment checks and minor facility repairs. Ice skating area is inspected daily for thickness and temperature. Additional maintenance includes checking and adjusting refrigeration controls, air quality testing if required, flooding ice, operating ice resurfacing equipment, cleaning building including sweeping and mopping floors, picking up and removing trash, and washing walls, windows, tables, sinks, toilets and related items. Receiving payments and maintaining records of arena use. Maintenance operations also entail providing patron services such as emergency first aid, responding to complaints, crowd control and enforcement of arena rules. Seasonal grounds work for shoveling, lawn care and exterior building projects. Control and enforcement of arena rules. Seasonal grounds work for shoveling, lawn care and exterior building projects.

EXISTING CONDITIONS



Legend

- |                           |  |                             |  |               |  |
|---------------------------|--|-----------------------------|--|---------------|--|
| Property Line             |  | Park Paved Trail            |  | Site Entrance |  |
| Proposed Development      |  | Park Turf Trail             |  | Parking Lot   |  |
| Proposed Development Node |  | Municipal Trail             |  | Hockey        |  |
| Metro Tranist Stop        |  | Municipal Ped/Bike Facility |  |               |  |

## PROPOSED DEVELOPMENT

### 1. Capitol Improvement Projects

In 2014 Parks & Recreation received funding through the Ramsey County Capital Improvement Program (CIP) to replace the arena's roof, which was badly leaking. The existing metal roof was overlaid with a membrane with a 15-year warranty and a 20- to 25-year useful life.

Since the arena uses R-22 as its refrigerant, a retrofit will be required. Any retrofit project should also include the "Green Ice Initiative", a capital effort to make traditionally energy-intensive arenas more energy efficient, through projects like LED lighting retrofits, waste heat recovery, building management systems, and others. The Arena Task Force report classifies Harding as a Tier III facility for R-22 replacement, making it the lowest priority for such work. Future capital improvement opportunities may arise as the recommendations of the Arena Task Force are implemented and the future of the site is determined.

### 2. Energy & Resilience

The roof configuration of the arena is reasonably suited to solar arrays, which would potentially provide 209.4 MWh/year of energy to offset the site's energy use. The capital cost of such a system would have a payback period of around 13.6 years. However, the membrane roof may present challenges to solar installations. Decisions related to renewable energy opportunities should be deferred until the long-term future of the facility is determined.

The site's Energy Use Intensity (EUI), which measures energy use relative to physical building square footage, is 60.6, which is significantly lower than both the national average of 96.8 for similar facilities and an average EUI of 95 for county-owned arenas.

### 3. Programming & Development Opportunities

This facility has an agreement for guaranteed ice use as well as an annual contribution to the capital fund. Expanding open skating availability. Implementing Arena Task Force guidelines as appropriate.

### 4. Partnership Opportunities

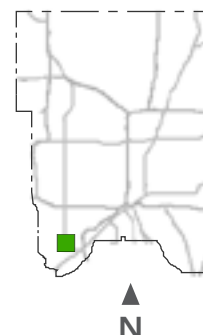
Renew use agreement with youth association that includes an annual capital contribution. As an ice skating facility, there are no other known opportunities for partnerships.

### 5. Future Maintenance & Operations

Eventual conversion from the existing R22 refrigerant ice plant to a new natural based ammonia system.

# HIGHLAND ARENA

## EXISTING SITE CONDITIONS



### LOCATION AND SIZE

Charles M Schulz Highland Arena is located in Saint Paul. The 57,200 square foot facility is bounded on the west by Snelling Avenue, on the west and north Saint Paul Regional Water Service's Highland Water Tower and Reservoirs, on the east by Highland National Golf Course, and on the south by Bohland Avenue and the Saint Paul Parks & Recreation Highland Maintenance Facility.



### SITE CHARACTERISTICS

Ramsey County has a ground lease covering 4 acres within a 37-acre parcel owned by Saint Paul Regional Water Service. This site is occupied by the arena, parking lots, and minimal landscaping. Directly east of the arena, the grade drops dramatically down to Highland Natural Golf Course. The arena is set at a lower elevation from Snelling Avenue, which causes stormwater overflow issues in heavy rain events.

The original arena opened in 1973. A second ice sheet was added in 1998. Locker rooms and a community room were added on to the north side of the facility in 2015.



### CURRENT USE & PARTNERSHIPS

Highland is home to youth, high school, and adult hockey, figure skating, public open skating and special ice events. The 500-seat capacity north rink is flooded year-round, while the 150-seat south rink operational September through February. The south rink's concrete floor allows for limited dry-floor events, such as floor hockey and dry land training, in non-ice months.

The parking lot provides 174 parking stalls across a larger upper lot, which is also used by Saint Paul Regional Water Service, and a small lower lot near the entrance.

Ramsey County currently has a long-term use contract with Cretin-Derham Hall High School. In 2015 the school funded a 2-story locker room and community room expansion on the north side of the facility. The use contract provides the school exclusive use of those lockers rooms in exchange for a minimum of 220 hours in annual ice purchases through 2035 and shared use of the community room.

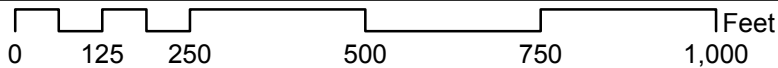


### MAINTENANCE

Current maintenance operations at the arena consist of maintaining two regulation 85' x 200' sheets of ice (one sheet year round and second sheet October through February), locker rooms, concession stand, restrooms, entry/lobby area and office space. Off season maintenance includes painting, annual equipment checks and minor facility repairs. Ice skating area is inspected daily for thickness and temperature. Additional maintenance includes checking and adjusting refrigeration controls, air quality testing if required, flooding ice, operating ice resurfacing equipment, cleaning building including sweeping and mopping floors, picking up and removing trash, and washing walls, windows, tables, sinks, toilets and related items. On site selling of game tickets, receiving payments and maintaining records of arena use. Maintenance operations also entail providing patron services such as skate sharpening, emergency first aid, responding to complaints, crowd control and enforcement of arena rules. Seasonal grounds work for shoveling, lawn care and exterior building projects.



EXISTING CONDITIONS



Legend

Property Line		Park Paved Trail		Site Entrance	
Proposed Development		Park Turf Trail		Parking Lot	
Proposed Development Node		Municipal Trail		Hockey	
Metro Tranist Stop		Municipal Ped/Bike Facility		Figure Skating Facility	

## PROPOSED DEVELOPMENT

### 1. Capitol Improvement Projects

In 2016 Parks & Recreation received funding through the Ramsey County Capital Improvement Program (CIP) to redevelop the parking lot at associated site work to improve traffic flow, increase parking capacity, address stormwater runoff issues, improve wayfinding and building ingress/egress. However, this project was put on hold when Parks & Recreation was informed that Saint Paul Regional Water Service, the site landowner, would be decommissioning the water reservoir immediately to the west of the arena, as this would potentially provide an opportunity for expanded parking lots or building expansions. As of early 2018 the reservoir had not been decommissioned. Parks & Recreation is working with the city of Saint Paul to develop concepts for the site once the reservoir is decommissioned.

Since the arena uses R-22 as its refrigerant, a retrofit will be required. Any retrofit project should also include the "Green Ice Initiative", a capital effort to make traditionally energy-intensive arenas more energy efficient, through projects like LED lighting retrofits, waste heat recovery, building management systems, and others. The Arena Task Force report classifies Highland as a Tier I facility for R-22 replacement, making it the highest priority for such work. Future capital improvement opportunities may arise as the recommendations of the Arena Task Force are implemented and the future of the site is determined.

### 2. Energy & Resilience

The roof configuration of the arena is reasonably suited to solar arrays. Additionally, carports could provide an opportunity for further solar arrays. This combination would potentially provide 699.5 MWh/year of energy. This production would not be sufficient to offset the site's energy use, and relies heavily on carport arrays which may impact traffic flow in an already congested lot. However, the capital cost of such a system would have a payback period of around 15 years. As such, this site should be a priority for Ramsey County's renewable energy efforts. Alternative solar financing structures, such as community solar, lease-to-own, or power purchasing agreements (PPAs), should also be considered.

The site's Energy Use Intensity (EUI), which measures energy use relative to physical building square footage, is 123.2, which is significantly higher than both the national average of 96.8 for similar facilities and an average EUI of 95 for County-owned arenas. An energy study would identify opportunities for reducing energy consumption, thus reducing the size of the solar array necessary to offset the site's energy use.

Future facility and parking lot renovation projects provides an opportunity to incorporate stormwater management best practices, such as rain gardens and permeable pavements.

In 2015 an elevator was installed on the east end of the arena, providing easy access to the lower level of the arena. Future renovation projects provide a further opportunity to improve access to and within the arena for all users irrespective of race, age, gender, language, and physical ability.

### 3. Programming & Development Opportunities

Saint Paul Regional Water Authority (SPRWA) has decommissioned a reservoir adjacent to the arena. Plans for the addition of one to two sheets of ice on the site are dependent upon the decisions of the SPRWA Board for future development.

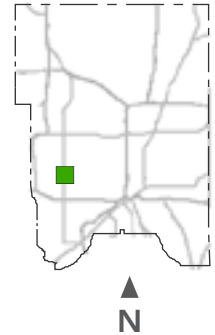
**PROPOSED DEVELOPMENT****4. Partnership Opportunities**

Dependent upon SPRWA final development decisions for the decommissioned reservoir site.

**5. Future Maintenance & Operations**

Future Maintenance operations consist of painting areas in need during summer months, repair and big maintenance projects identified throughout the year to be done during summer months. Parking lot improvements and improvement to storm water management on the site.

## OSCAR JOHNSON ARENA



### EXISTING SITE CONDITIONS



#### LOCATION AND SIZE

Oscar Johnson Arena, which opened in 1971, is located in Saint Paul's Energy Park area, approximately one half mile south of the State Fairgrounds. The 26,400 square foot facility is bounded on the south and east by a private business, on the west by Snelling Avenue, and on the north by the Burlington Northern Santa Fe (BNSF) Railroad. Access to the arena is from Decourcy Circle off Energy Park Drive.



#### SITE CHARACTERISTICS

Ramsey County owns the 2.47-acre parcel on which the arena and parking lots sit. The county also owns a 1-acre parcel just to the north which includes a portion of a parking lot and some landscaped area abutting the BNSF right-of-way. The surrounding area is a business/industrial park.



#### CURRENT USE & PARTNERSHIPS

The arena, with a seating capacity of 75, is operational October through February. The arena is primarily used for ice hockey practice for youth associations.

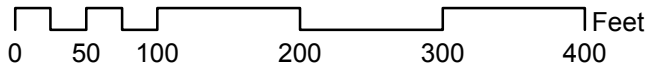
Parks & Recreation has an agreement with Merrill Companies, the landowner of the parcels east and south of the area, for shared use and maintenance of the parking lots.



#### MAINTENANCE

Current maintenance operations at the arena consist of maintaining a regulation 85' x 200' sheet of ice, locker rooms, concession stand, restrooms, an entry/lobby area and small office space from October through February. Off season maintenance includes painting, annual equipment checks and minor facility repairs. Ice skating area is inspected daily for thickness and temperature. Additional maintenance includes checking and adjusting refrigeration controls, air quality testing if required, flooding ice, operating ice resurfacing equipment, cleaning building including sweeping and mopping floors, picking up and removing trash, and washing walls, windows, tables, sinks, toilets and related items. Receiving payments and maintaining records of arena use. Maintenance operations also entail providing patron services such as emergency first aid, responding to complaints, crowd control and enforcement of arena rules. Seasonal grounds work for shoveling, lawn care and exterior building projects.

EXISTING CONDITIONS



Legend

- |                           |  |                             |  |               |  |
|---------------------------|--|-----------------------------|--|---------------|--|
| Property Line             |  | Park Paved Trail            |  | Site Entrance |  |
| Proposed Development      |  | Park Turf Trail             |  | Parking Lot   |  |
| Proposed Development Node |  | Municipal Trail             |  | Hockey        |  |
| Metro Tranist Stop        |  | Municipal Ped/Bike Facility |  |               |  |

## EXISTING CONDITIONS

### 1. Capitol Improvement Projects

Since the arena uses R-22 as its refrigerant, a retrofit will be required. Any retrofit project should also include the "Green Ice Initiative", a capital effort to make traditionally energy-intensive arenas more energy efficient, through projects like LED lighting retrofits, waste heat recovery, building management systems, and others. The Arena Task Force report classifies Oscar Johnson as a Tier II facility for R-22 replacement, making it a secondary priority for such work. Future capital improvement opportunities may arise as the recommendations of the Arena Task Force are implemented.

### 2. Energy & Resilience

The roof configuration of the arena is well suited to solar arrays, which would potentially provide 229.4 MWh/year of energy to offset the site's energy use. The capital cost of such a system would have a payback period of around 13.3 years, which would make the facility a priority for solar energy planning. However, decisions related to renewable energy opportunities should be deferred until the long-term future of the facility is determined.

The site's Energy Use Intensity (EUI), which measures energy use relative to physical building square footage, is 71.2, which is lower than both the national average of 96.8 for similar facilities and an average EUI of 95 for county-owned arenas.

Future facility and parking lot renovation projects provides an opportunity to incorporate stormwater management best practices, such as rain gardens and permeable pavements.

### 3. Programming & Development Opportunities

Expanding open skating availability. Implementing Arena Task Force guidelines as appropriate.

### 4. Partnership Opportunities

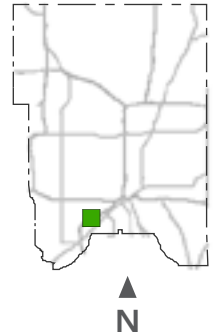
Roseville Youth Hockey Association (A local youth hockey association) has expressed interest in a multi-year agreement with the county at the arena to develop a shooting room, improve locker rooms and add youth association colors.

### 5. Future Maintenance & Operations

Eventual conversion from the existing R22 refrigerant ice plant to a new natural based ammonia system.

# PLEASANT ARENA

## EXISTING SITE CONDITIONS



### LOCATION AND SIZE

Pleasant Arena, which opened in 1973, is located in Saint Paul, along the I-35E corridor in the southwestern part of the city. The 25,920 square foot facility is bounded on the west by Pleasant Avenue, on the south by the Ramsey County Yard Waste Disposal site, on the east by I-35E, and the north by an undeveloped lot.



### SITE CHARACTERISTICS

Parks & Recreation owns 3 small parcels totaling 1.67 acres upon which the arena and parking lots site. The site overlooks Interstate I-35E to the south. There is a steep embankment on the southeast side of the site as the grade slopes down to the freeway. Public transit is accessible at Saint Clair Avenue, one block north of the facility.



### CURRENT USE & PARTNERSHIPS

The arena, with a seating capacity of 75, is operational year-round and is primarily used for figure skating and adult hockey.



### MAINTENANCE

Current maintenance operations at Pleasant Arena are centered on maintaining the facility as a year round figure skating studio. This involves a forced air heating/dehumidification system, expanded locker area, dance studio, training harnesses, enhanced sound system and rink side mirrors. In addition to the specialized features of the figure skating needs, the county maintains a regulation 85' x 200' sheet of ice, locker rooms, restrooms, an entry/lobby area and small office space. Ice skating area is inspected daily for thickness and temperature. Additional maintenance includes checking and adjusting refrigeration controls, air quality testing if required, operating ice resurfacing equipment, cleaning building including sweeping and mopping floors, picking up and removing trash, and washing walls, windows, tables, sinks, toilets and related items. Maintaining records of arena use. Maintenance operations also entail providing patron services such as emergency first aid, responding to complaints, crowd control and enforcement of arena rules. Seasonal grounds work for shoveling, lawn care and exterior building projects.

EXISTING CONDITIONS



Legend

Property Line		Park Paved Trail		Site Entrance	
Proposed Development		Park Turf Trail		Parking Lot	
Proposed Development Node		Municipal Trail		Figure Skating	
Metro Tranist Stop		Municipal Ped/Bike Facility			



## PROPOSED DEVELOPMENT

### 1. Capitol Improvement Projects

Since the arena uses R-22 as its refrigerant, a retrofit will be required. Any retrofit project should also include the “Green Ice Initiative”, a capital effort to make traditionally energy-intensive arenas more energy efficient, through projects like LED lighting retrofits, waste heat recovery, building management systems, and others. The Arena Task Force report classifies Pleasant as a Tier II facility for R-22 replacement, making it a secondary priority for such work. Future capital improvement opportunities may arise as the recommendations of the Arena Task Force are implemented.

### 2. Energy & Resilience

The roof configuration of the arena is reasonably suited to solar arrays. Carport arrays would provide additional solar capacity. In combination these arrays would potentially provide 194.5 MWh/year of energy to offset the site’s energy use. The capital cost of such a system would have a payback period of around 17.4 years, which would make the facility a priority for solar energy planning. However, decisions related to renewable energy opportunities should be deferred until the long-term future of the facility is determined.

The site’s Energy Use Intensity (EUI), which measures energy use relative to physical building square footage, is 193.8, which is higher than both the national average of 96.8 for similar facilities and an average EUI of 95 for county-owned arenas. An energy study would identify opportunities for reducing energy consumption, thus reducing the size of the solar array necessary to offset the site’s energy use.

### 3. Programming & Development Opportunities

Expanding open skating availability. Implementing Arena Task Force guidelines as appropriate

### 4. Partnership Opportunities

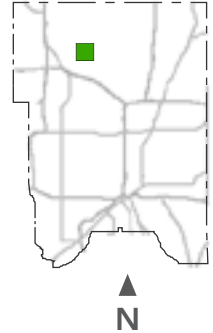
Opportunities to extend existing use contract with the Saint Paul Figure Skating Club will be reviewed.

### 5. Future Maintenance & Operations

Future Maintenance operations consist of repair and big maintenance projects identified throughout the year to be done during summer months. Monitoring of ice conditions during warmer months and coming up with ideas to combat the persisting problem.

# SHOREVIEW ARENA

## EXISTING SITE CONDITIONS



### LOCATION AND SIZE

Shoreview Arena, which opened in 1971, is located in the Shoreview Commons area of the city of Shoreview. The 26,400 square foot facility is bounded on the south by Highway 96, on the east by Victoria Street, on the west by the city of Shoreview Water Treatment Plant, and on the north by a city of Shoreview Maintenance Center.



### SITE CHARACTERISTICS

Ramsey County owns the 2.11-acre parcel on which the arena and 75-stall parking lot sit. Several municipal buildings are in the vicinity, including the Ramsey County Shoreview Library and Shoreview Community Center (across Victoria Street). The site is easily accessible from Highway 96, including nearby public transportation.



### CURRENT USE & PARTNERSHIPS

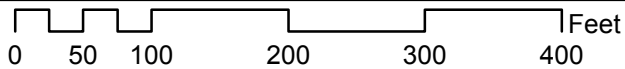
The arena, with a seating capacity of 500, is operational October through February primarily for ice hockey practice and games for youth associations. Dry floor events such as soccer, lacrosse, and rummage sales, are occasionally held at the facility in non-ice seasons.



### MAINTENANCE

Current maintenance operations at the arena consist of maintaining a regulation 85' x 200' sheet of ice, locker rooms, concession stand, restrooms, an entry/lobby area and small office space from October through February. Off season maintenance includes painting, annual equipment checks and minor facility repairs. Ice skating area is inspected daily for thickness and temperature. Additional maintenance includes checking and adjusting refrigeration controls, air quality testing if required, flooding ice, operating ice resurfacing equipment, cleaning building including sweeping and mopping floors, picking up and removing trash, and washing walls, windows, tables, sinks, toilets and related items. Receiving payments and maintaining records of arena use. Maintenance operations also entail providing patron services such as emergency first aid, responding to complaints, crowd control and enforcement of arena rules. Seasonal grounds work for shoveling, lawn care and exterior building projects.

EXISTING CONDITIONS



Legend

Property Line		Park Paved Trail		Site Entrance	
Proposed Development		Park Turf Trail		Parking Lot	
Proposed Development Node		Municipal Trail		Hockey	
Metro Tranist Stop		Municipal Ped/Bike Facility			

## PROPOSED DEVELOPMENT

### 1. Capitol Improvement Projects

The Arena Task Force report identified Shoreview Arena as a Tier I (highest priority) facility for replacement of R-22 refrigerant, manufacture of which is being phased out in 2020. Capital Improvement Program (CIP) funding has been approved for this project for 2019-20. In addition to the refrigerant retrofit, roof replacement, facade repairs, ADA and interior renovations are included in this funding. As part of this project, Parks & Recreation is also implementing its "Green Ice Initiative", a capital effort to make its traditionally energy-intensive arenas more energy efficient, through projects like LED lighting retrofits, waste heat recovery, building management systems, and others.

While this project is being planned with a 40- to 50-year life cycle in mind, future capital improvement opportunities may arise as the recommendations of the Arena Task Force are implemented.

### 2. Energy & Resilience

The roof configuration of the arena is well suited to solar arrays, which would potentially provide 174.8 MWh/year of energy to offset the site's energy use. The capital cost of such a system would have a payback period of around 14.5 years, which would make the facility a priority for solar energy planning. With a payback period under 15 years, this site should be a priority for Ramsey County's renewable energy efforts. Alternative solar financing structures, such as community solar, lease-to-own, or power purchasing agreements (PPAs), should also be considered, along with energy storage solutions.

The site's Energy Use Intensity (EUI), which measures energy use relative to physical building square footage, is 72.4, which is lower than both the national average of 96.8 for similar facilities and an average EUI of 95 for county-owned arenas.

Future projects also provides an opportunity to incorporate storm water management best practices, such as rain gardens and permeable pavements.

### 3. Programming & Development Opportunities

Expanding open skating availability. Implementing Arena Task Force guidelines as appropriate. The site is used in the fall for a local rummage sale that takes over the arena for 2 weeks. There has been random use of the facility for in line hockey and Box Lacrosse.

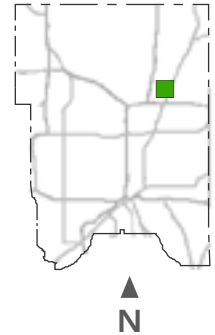
### 4. Partnership Opportunities

Exploring long term agreements with a local youth association.

### 5. Future Maintenance & Operations

Eventual conversion from the existing R22 refrigerant ice plant to a new natural based ammonia system.

## VADNAIS SPORTS CENTER



### EXISTING SITE CONDITIONS



#### LOCATION AND SIZE

Vадnais Sports Center is located in Vадnais Heights. The 10.58-acre site is bounded on the north by County Road E, on the east by Highway 61, on the west by International Drive, and on the south by a private property (currently a car dealership). The facility was constructed in 2010 and purchased by Ramsey County in 2014.



#### SITE CHARACTERISTICS

The site, encompassing two parcels owned by Ramsey County, is occupied by the arena, dome, parking lots, and minimal landscaping. The county's purchase of the facility included three out-lots, which subsequently have all been sold to private entities. A fourth out-lot, just north of the arena, contains a bar/restaurant, which is connected to the Sports Center.



#### CURRENT USE & PARTNERSHIPS

The 180,000-square foot Sports Center consists of two NHL-size rinks, a 100,000-square foot air-supported dome, meeting space, a weight room, concessions, locker rooms, and administrative space. Seating capacity is 1,100 for the "game" rink and 400 for the "practice" rink. Currently both rinks are operational year-round.

The dome is split into 3 fields, and space can be rented per field or the entire dome. The dome hosts a variety of sports, including lacrosse, softball, and soccer, as well as non-athletic events such as trade shows, rummage sales, and boxing matches. Dome use is dramatically higher in winter and shoulder seasons.

Parking is provided for 504 vehicles. Limited overflow parking is available on nearby streets. The lots are shared with the other businesses on the property.

Vадnais Sports Center is currently operated as an enterprise fund (i.e. independent from county-wide levy funding).

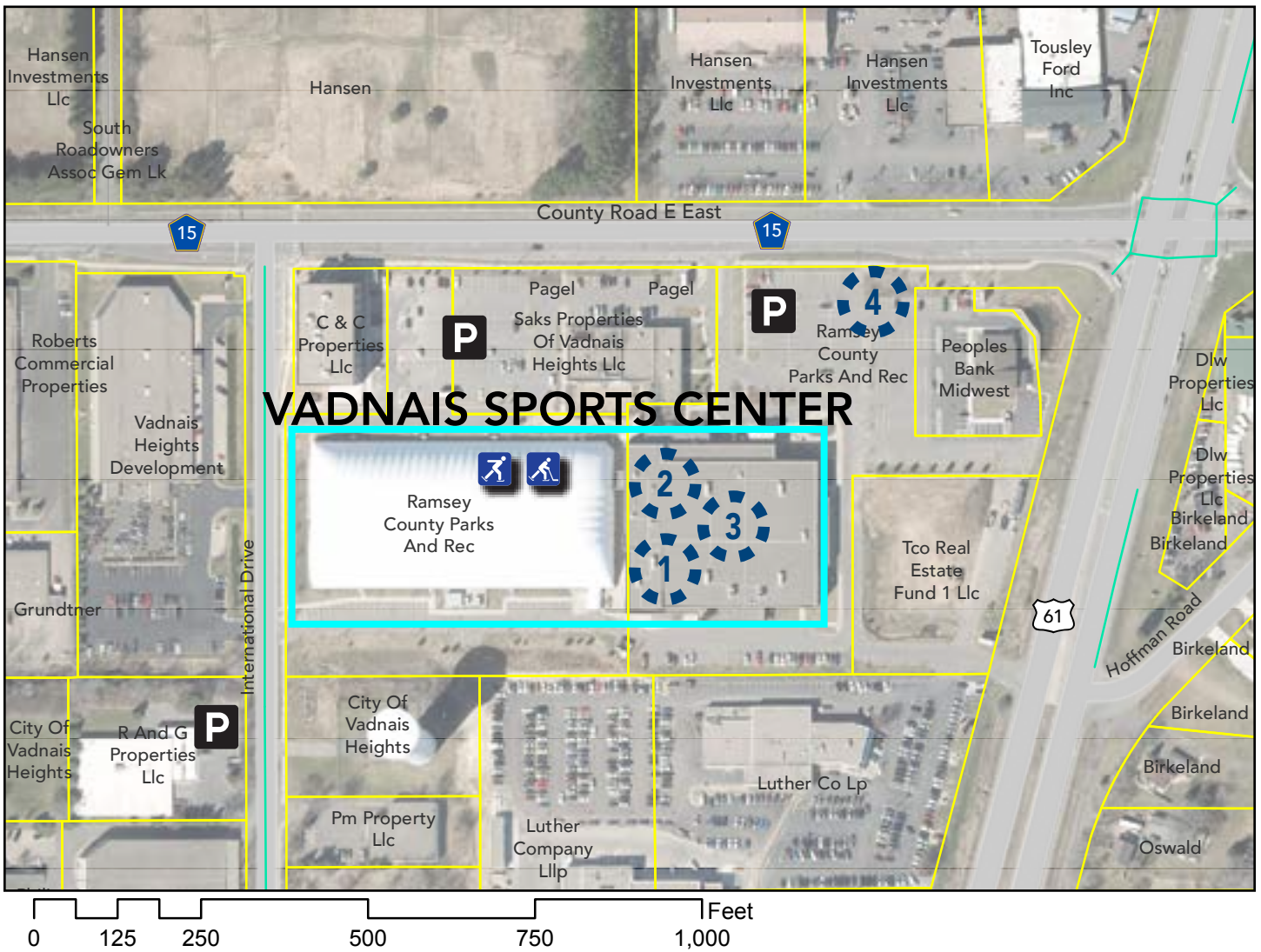


## MAINTENANCE

Current maintenance operations at the facility consist of maintaining 2 regulation size 85' x 200' sheets of ice with bleacher viewing areas year round, 14 locker rooms, 3 showers rooms, a 36' x 80' weight room, 2 meeting/party rooms, 3 offices, a front desk welcome center area, a large commons arena and lobby with 2 entry/exits, a concession stand, and a large inflated dome structure 215' x 450' which houses 5 artificial turf fields approximately 90' x 180' each, and 2 batting cages 14' x 60'. The facility is part of a larger retail complex with several out lots and buildings which include a private school, restaurant, sporting goods store, a bank, and a medical building. The Vadnais Sports Center is the managing partner for the complex and is responsible for the daily, seasonal, and annual maintenance and repairs for the shared parking lots and grounds area. Year-round activities at the facility include; hockey, figure skating, public open skating, soccer, lacrosse, football, softball, baseball, rugby, ultimate frisbee, walking and running, birthday parties, meetings, broomball, community events, trade expo's and shows, craft shows, exhibit shows, consignment shows, gymnastics meets, martial arts events, and company team building events.

Daily building and equipment maintenance as well as safety checks are required and preformed daily and include checking and adjusting refrigeration controls, checking and adjusting condensing tower and chemical controls, checking and adjusting mechanical systems and lighting through an automated building management system, checking ice resurfacing and edging equipment, checking and adjusting dome air handling and pressure equipment, taking air quality tests if required, checking public walkways & sidewalks for safe access. The Ice surface, dasher board equipment, and related skating areas are inspected daily for ice thickness, ice temperature, and dasher board or glass damage. Additional maintenance includes checking flooding ice, operating ice resurfacing and edging equipment, setting up and clearing field for various turf activities, daily, weekly, and monthly grooming, cleaning, and sanitizing of field surfaces, cleaning building including sweeping and mopping floors, picking up and removing trash, and washing walls, windows, tables, sinks, toilets and related items, seasonal grounds work for shoveling, lawn care and exterior building projects. Off season maintenance includes annual equipment checks and repairs, minor facility repairs, seasonal deep cleaning, and painting.

EXISTING CONDITIONS



Legend

- |                           |  |                             |  |                |  |
|---------------------------|--|-----------------------------|--|----------------|--|
| Property Line             |  | Park Paved Trail            |  | Site Entrance  |  |
| Proposed Development      |  | Park Turf Trail             |  | Parking Lot    |  |
| Proposed Development Node |  | Municipal Trail             |  | Hockey         |  |
| Metro Tranist Stop        |  | Municipal Ped/Bike Facility |  | Figure Skating |  |

## PROPOSED DEVELOPMENT

### 1. Capitol Improvement Projects

The rink refrigeration system utilizes R-507. Unlike R-22, the refrigerant utilized in all other Ramsey County arenas, this refrigerant is not scheduled for phase-out in 2030. However, given long-term environmental concerns, it is likely that R-507 will be phased out at some point in the future. For the purposes of longer-term capital planning, a refrigeration retrofit should be assumed as a future requirement.

The facility has several items with life-cycle replacement costs over \$500,000, including the dome turf (anticipated end of life: 2025), bituminous pavements (2028), dome fabric (2030), and membrane roofs (2035). Since the facility, as an enterprise fund, must provide its own funding for capital maintenance and replacement, these costs must be incorporated into long-term plans.

Parks has requested funding through the county's Capital Improvement Program (CIP) for an expansion of the parking lot, to accommodate events where the current lots are insufficient.

Future capital improvement opportunities may arise as the recommendations of the Arena Task Force are implemented.

### 2. Energy & Resilience

The roof configuration of the arena is reasonably suited to solar arrays. Additionally, carports could provide an opportunity for further solar arrays. This combination would potentially provide 1,489 MWh/year of energy. This production would not be sufficient to offset the site's energy use, and relies heavily on carport arrays which may impact traffic flow in an already congested lot. However, the capital cost of such a system would have a payback period of around 14 years. With a payback period under 15 years, this site should be a priority for Ramsey County's renewable energy efforts. Alternative solar financing structures, such as community solar, lease-to-own, or power purchasing agreements (PPAs), should also be considered.

A number of rain gardens are installed on the site. Future project planning should consider additional stormwater management best practices, such as rain gardens permeable pavements. Future projects should also consider opportunities to improve access to and within the arena for all users irrespective of race, age, gender, language, and physical ability.

### 3. Programming & Development Opportunities

The recent addition of rental skates to Vadnais Sports Center combined with free public open skating programming has increased access and interest in ice skating significantly. Community drop in and groups reservation program has increased access to the dome field facility for individual citizens and small community groups who cannot afford the standard rental rates. Opportunities to expand community access through additional public open activities are strong and continue to grow.

### 4. Partnership Opportunities

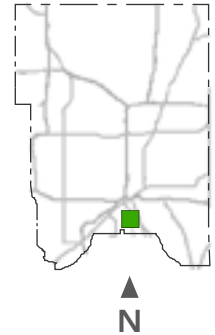
Metro transit is considering the site for adding a park and ride facility on the property which expand event parking. Potential opportunity exists to partner with youth hockey and field customers to move the dome facility to a larger multi-field complex and then add additional sheets of ice and increase parking spaces and improve traffic flow and safety.



**PROPOSED DEVELOPMENT****5. Future Maintenance & Operations**

Future maintenance projects and operations include the redesign, construction, and upkeep of the parking lot to increase parking stalls and traffic flow. Retrofitting of all existing lighting in the arenas, dome, and parking lots. Eventual conversion from the existing 507 refrigerant ice plant to a new natural based ammonia system.

## WESTSIDE ARENA



### EXISTING SITE CONDITIONS



#### LOCATION AND SIZE

West Side (Ken Yackel) Arena, which opened in 1975, is located in Saint Paul's West Side. The 25,920 square foot facility is bounded on the north by Isabel Street, on the east by commercial properties along Cesar Chavez Street, on the south by Congress Street, and on the west by Wabasha Street.



#### SITE CHARACTERISTICS

Ramsey County owns the 1.49 acre site, which includes the arena and a 42-stall parking lot. The facility is located in a primarily residential neighborhood, though several businesses are located nearby on Cesar Chavez Street.



#### CURRENT USE & PARTNERSHIPS

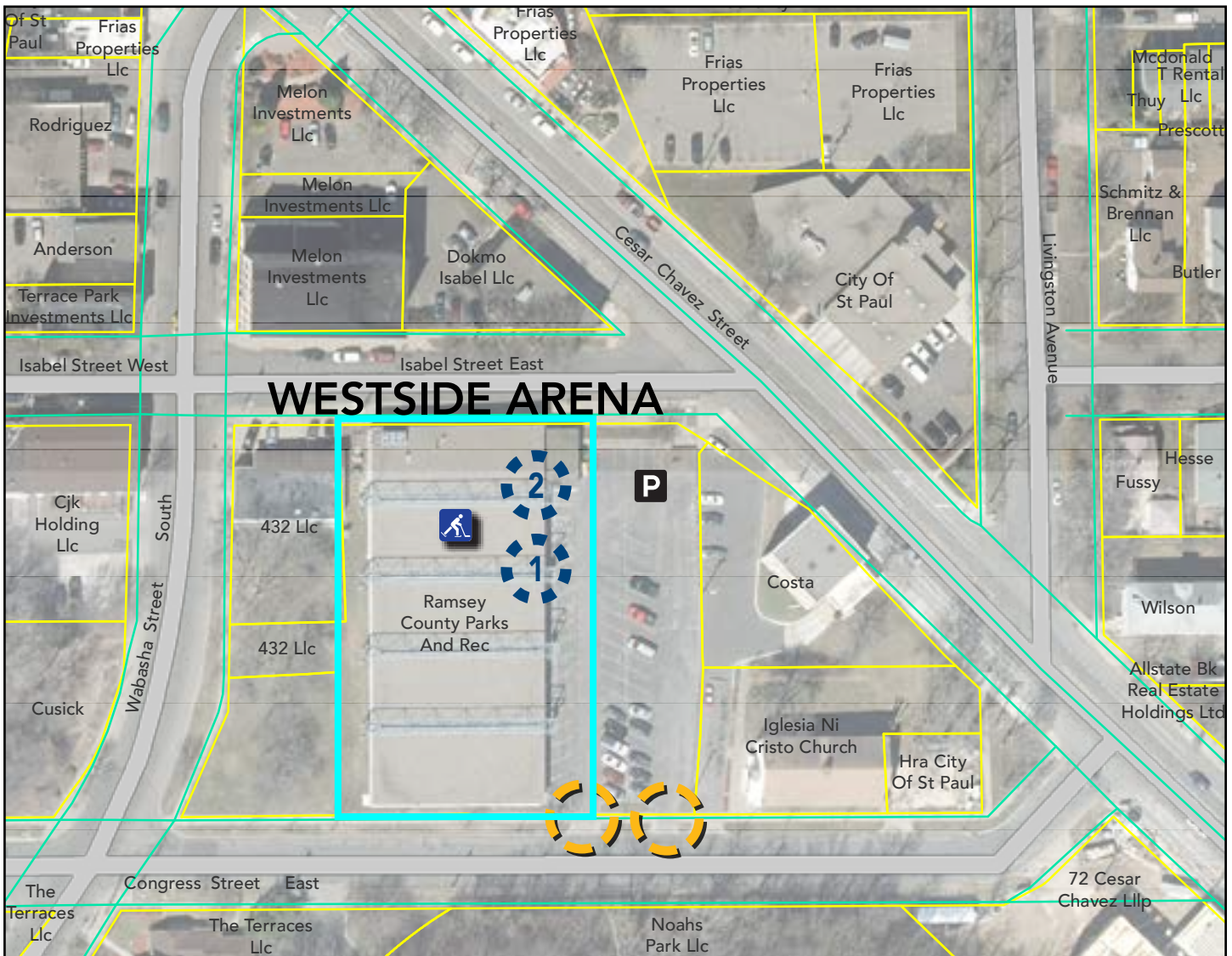
The rink, with a seating capacity of 75, is operational October through February. The arena is primarily used for ice hockey practice for youth associations and high school programs. Dry floor events, such as floor hockey, have been held in past off-ice seasons. Additionally, the parking lot has been used as a Ramsey County Household Hazardous Waste drop site.



#### MAINTENANCE

Current maintenance operations at the arena consist of maintaining a regulation 85' x 200' sheet of ice, locker rooms, concession stand, restrooms, an entry/lobby area and small office space from October through February. Off season maintenance includes painting, annual equipment checks and minor facility repairs. Ice skating area is inspected daily for thickness and temperature. Additional maintenance includes checking and adjusting refrigeration controls, air quality testing if required, flooding ice, operating ice resurfacing equipment, cleaning building including sweeping and mopping floors, picking up and removing trash, and washing walls, windows, tables, sinks, toilets and related items. Receiving payments and maintaining records of arena use. Maintenance operations also entail providing patron services such as emergency first aid, responding to complaints, crowd control and enforcement of arena rules. Seasonal grounds work for shoveling, lawn care and exterior building projects.

EXISTING CONDITIONS



Legend

- |                           |  |                             |  |               |  |
|---------------------------|--|-----------------------------|--|---------------|--|
| Property Line             |  | Park Paved Trail            |  | Site Entrance |  |
| Proposed Development      |  | Park Turf Trail             |  | Parking Lot   |  |
| Proposed Development Node |  | Municipal Trail             |  | Hockey        |  |
| Metro Tranist Stop        |  | Municipal Ped/Bike Facility |  |               |  |

## PROPOSED DEVELOPMENT

### 1. Capitol Improvement Projects

Since the arena uses R-22 as its refrigerant, a retrofit will be required. Any retrofit project should also include the “Green Ice Initiative”, a capital effort to make traditionally energy-intensive arenas more energy efficient, through projects like LED lighting retrofits, waste heat recovery, building management systems, and others. The Arena Task Force report classifies West Side as a Tier III facility for R-22 replacement, making it the lowest priority for such work. Future capital improvement opportunities may arise as the recommendations of the Arena Task Force are implemented and the future of the site is determined.

### 2. Energy & Resilience

The roof configuration of the arena is well suited to solar arrays, which would potentially provide 195 MWh/year of energy to offset the site’s energy use. The capital cost of such a system would have a payback period of around 16.7 years. Decisions related to renewable energy opportunities should be deferred until the long-term future of the facility is determined.

The site’s Energy Use Intensity (EUI), which measures energy use relative to physical building square footage, is 58.6, which is significantly lower than both the national average of 96.8 for similar facilities and an average EUI of 95 for county-owned arenas.

### 3. Programming & Development Opportunities

Expanding open skating availability. Implementing Arena Task Force guidelines as appropriate.

### 4. Partnership Opportunities

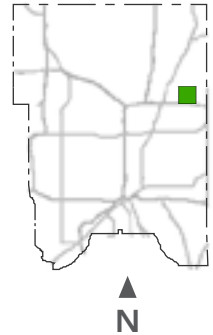
As an ice skating facility, there are no known opportunities for partnerships.

### 5. Future Maintenance & Operations

Eventual conversion from the existing R22 refrigerant ice plant to a new natural based ammonia system.

# WHITE BEAR ARENA

## EXISTING SITE CONDITIONS



### LOCATION AND SIZE

White Bear Lake Arena, which opened in 1973, is located in the city of White Bear Lake. The 25,920 square foot facility is bounded on the south and east by undeveloped parkland, on the west by a privately facility, and on the north by Orchard Lane.



### SITE CHARACTERISTICS

Ramsey County owns the 4.92-acre parcel on which the arena and parking lot sit. North of the arena is a residential neighborhood. White Bear Avenue is approximately one quarter mile to the west, providing nearby public transit access, and Interstate I-694 is approximately one-half mile to the south.



### CURRENT USE & PARTNERSHIPS

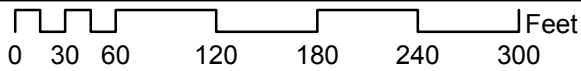
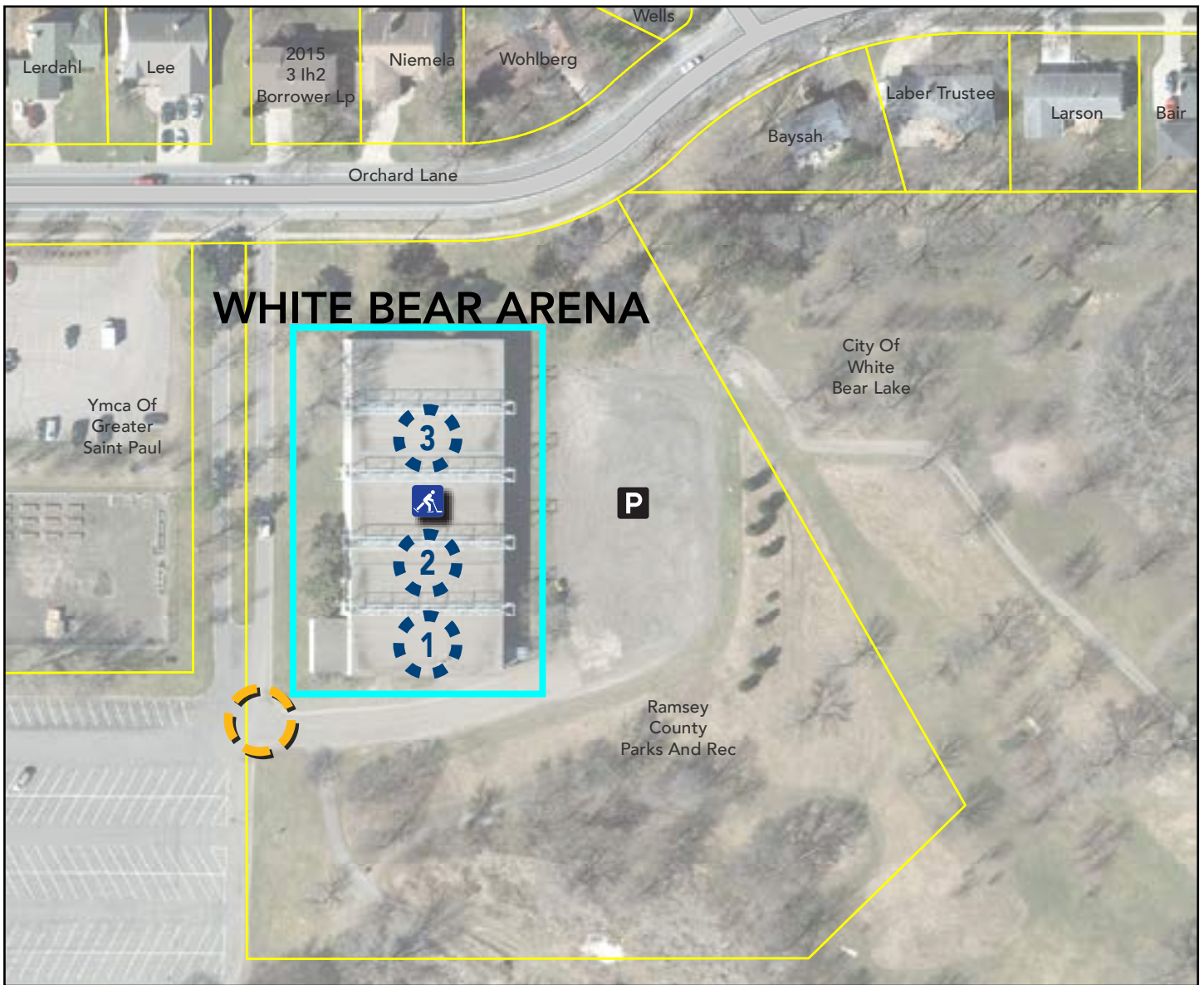
The arena, with a seating capacity of 75, is operational October through February primarily for ice hockey practice and games for youth associations.



### MAINTENANCE

Current maintenance operations at the arena consist of maintaining a regulation 85' x 200' sheet of ice, locker rooms, concession stand, restrooms, an entry/lobby area and small office space from October through February. Off season maintenance includes painting, annual equipment checks and minor facility repairs. Ice skating area is inspected daily for thickness and temperature. Additional maintenance includes checking and adjusting refrigeration controls, air quality testing if required, flooding ice, operating ice resurfacing equipment, cleaning building including sweeping and mopping floors, picking up and removing trash, and washing walls, windows, tables, sinks, toilets and related items. Receiving payments and maintaining records of arena use. Maintenance operations also entail providing patron services such as emergency first aid, responding to complaints, crowd control and enforcement of arena rules. Seasonal grounds work for shoveling, lawn care and exterior building projects

EXISTING CONDITIONS



Legend

- |                           |  |                             |  |               |  |
|---------------------------|--|-----------------------------|--|---------------|--|
| Property Line             |  | Park Paved Trail            |  | Site Entrance |  |
| Proposed Development      |  | Park Turf Trail             |  | Parking Lot   |  |
| Proposed Development Node |  | Municipal Trail             |  | Hockey        |  |
| Metro Tranist Stop        |  | Municipal Ped/Bike Facility |  |               |  |

## PROPOSED DEVELOPMENT

### 1. Capitol Improvement Projects

The Arena Task Force report identified Shoreview Arena as a Tier I (highest priority) facility for replacement of R-22 refrigerant, manufacture of which is being phased out in 2020. Capital Improvement Program (CIP) funding has been approved for this project for 2019-20. In addition to the refrigerant retrofit, parking lot replacement, and ADA and interior renovations are included in this funding. As part of this project, Parks & Recreation is also implementing its "Green Ice Initiative", a capital effort to make its traditionally energy-intensive arenas more energy efficient, through projects like LED lighting retrofits, waste heat recovery, building management systems, and others.

While this project is being planned with a 40- to 50-year life cycle in mind, future capital improvement opportunities may arise as the recommendations of the Arena Task Force are implemented.

### 2. Energy & Resilience

The roof configuration of the arena is moderately suited to solar arrays, but the steel "superstructure" above the roof does present challenges. Roof arrays in concert with carport arrays could potentially provide 175.3 MWh/year of energy to offset the site's energy use. The capital cost of such a system would have a payback period of around 15.1 years, which would make the facility a priority for solar energy planning. With a payback period under 15 years, this site should be a priority for Ramsey County's renewable energy efforts. Alternative solar financing structures, such as community solar, lease-to-own, or power purchasing agreements (PPAs), should also be considered, along with energy storage solutions.

The site's Energy Use Intensity (EUI), which measures energy use relative to physical building square footage, is 60.4, which is lower than both the national average of 96.8 for similar facilities and an average EUI of 95 for county-owned arenas.

The upcoming capital project also provides an opportunity to incorporate storm water management best practices, such as rain gardens and permeable pavements.

### 3. Programming & Development Opportunities

The White Bear YMCA has been renting the facility in the off season for summer camps and other activities. Expanding open skating availability. Implementing Arena Task Force guidelines as appropriate.

### 4. Partnership Opportunities

Two youth associations have expressed interest in the viability of capital investment on the site that would improve locker rooms, parking and add an additional sheet of ice.

### 5. Future Maintenance & Operations

Eventual conversion from the existing R22 refrigerant ice plant to a new natural based ammonia system.

## Golf

The county has five golf course operations and one golf dome practice facility. Three of the county's five courses have a professional services contract with a PGA-Certified Golf Professional to manage the pro shop and clubhouse operations. The capital and maintenance at those three courses are managed and operated by the county. Those courses are Keller (18 holes, "flagship course"), Goodrich (18 holes) and The Ponds at Battle Creek (regulation 9-hole). The fourth course, Manitou Ridge, is operated under a professional agreement, which includes the entire operation including clubhouse, pro shop and maintenance operation. The county maintains the capital needs of the course as part of the agreement. The fifth Course, Island Lake, is an executive nine-hole course with a driving range. The course was established as a lease-to-build agreement. The county also has a land lease agreement for the operation of the Goodrich Golf Dome, which is separate from the course agreement.

In 2018 the golf operation will undergo an analysis to evaluate the current finances and operational practices at its golf facilities as they compare to industry best management practices in public golf course operations. The department is seeking assessment of the operational efficiencies and suggestions for enhancements that will increase revenues and decrease costs. In addition, the county would like an evaluation of its golf courses' position in the community and local market. Included in the final report, the county will have a review of golf operations in totality as well as facility-by-facility, local market environment, a review of the physical condition of the facilities and recommendations and the results that can be expected from various strategies and options. The evaluation will provide a foundation for operational and financial decisions for the upcoming biennium budget and long-term capital planning.

### Golf Maintenance

#### Greens, Practice Putting Green and Nursery

- Mowing - At a height of 1/8" – 3/16", daily during the months of May through September and as needed during other months of operation.
- Daily change of cup locations on all greens and practice putting green, as needed, during the months of May through September and at least three times weekly during other months of operation. Cup location is moved a sufficient distance from the previous placement as deemed by existing turf conditions.
- Daily repair of ball marks, divots, or any other damaged turf on all greens and practice green.
- Core aerify or solid tine or linear aeration all greens, practice putting green and nursery at least once per year during the growing season or more if necessary.
- Top-dress all greens, practice putting green and nursery, after aerification and additionally, as needed (at least monthly during the growing season) to maintain a smooth putting surface.
- Light vertical mowing of all greens, practice putting green and nursery shall be performed as necessary to produce smooth and true putting surfaces. De-thatch as needed.
- All greens, practice green, and nursery receive proper fertilization applications to promote growth and recovery.
- All greens, practice green and nursery shall receive pesticide applications as needed on a curative basis to control pests, insects and disease.
- Areas where seeding/growing is untimely are re-sodded with a sod consistent with the type and quality of grass in the immediate surrounding area.
- The soil shall be analyzed periodically by a professional testing laboratory. Fertilization shall be based on the soil analysis and the recommendations provided in the analysis.



### Tees

- All tees shall be mowed at a height of 3/8" – 5/8" a minimum of three times per week.
- Aerification - All tees shall be cored or deep tined or linear or quad tined aerified at least once per season or more if necessary.
- All worn areas on tees shall be top-dressed at least weekly to fill divots and to level the tee surface. Topdressing material shall contain seed of bent grass, perennial ryegrasses, Kentucky bluegrass.
- All tees are vertically mowed as necessary to control mat, thatch build-up or uneven growth.
- All tees are fertilized as needed to maintain color, growth and health of the turf.
- Tees shall be kept weed and insect free to an extent of at least 90% of the area by the proper and timely application of pre-emergent and post-emergent herbicides and insecticides.
- Tee markers and all tee equipment are moved daily for proper teeing and control of turf wear. Ball washers are kept filled to the proper level with water and proper cleaning agent. Ball washers are flushed periodically to minimize odor.

### Fairways

- All fairways shall be mowed three times per week at a height of 7/16" – 3/4" from May through September and at least weekly during other months of operation.
- All fairways shall be aerified a minimum of once per year.
- All fairways will be vertically mowed as necessary to control mat or thatch build-up.
- All fairways are fertilized as needed to maintain color, growth, and health of the turf.
- Fairways shall be kept weed and insect free to an extent of at least 90% of the area by the proper and timely application of pre-emergent and post-emergent herbicides and insecticides.

### Rough

- All roughs shall be mowed weekly from May through September and as necessary during the other months of operation, at heights of 1.5" – 2.5". Rough mowing height shall not exceed 2" without the approval of the county.
- Aerification as necessary to establish and/or maintain quality turf.
- Roughs shall be fertilized as necessary to maintain quality turf.
- Pesticides and insecticides are applied as necessary to control weeds and insects as necessary to maintain a healthy turf and to allow proper play.
- Worn Areas are sodded or over seeded and top-dressed as necessary to maintain a healthy turf and to allow proper play.

### Natural Growth Areas

- All areas in which native or introduced vegetation is allowed to survive without routine mowing, cultivating, irrigation, or other routine turf maintenance procedures.

### Trees

- Hazardous trees shall be removed in a timely manner.
- Trees are staked as necessary until they are of sufficient size to stand unassisted, up to one year maximum.
- Pruning - All trees are properly pruned by removing dead wood, crossing branches and hazards to maximize the health of the tree, appearance and safety.
- All trees are irrigated to provide adequate moisture for normal growth.
- Large area mowers are not to be used within two feet of the trunk of any tree.
- Plant native species when possible.

### Ornamental

- Ornamental areas are maintained to be free of trash and debris.
- All ornamental areas are maintained to be free of weeds and undesirable grass by using mechanical removal methods or applying pesticides and insecticides.
- The ornamentals are trimmed for proper growth and appearance.

### Irrigation

- Maintain entire irrigation system, including mainlines, valves, lateral lines, and sprinkler heads and controllers in good repair, functioning properly and conforming to all related codes and regulations. Irrigate as required to maintain adequate moisture for growth rate and appearance. Adequate soil moisture shall be determined by visual observation, plant resiliency, turgidity, examining cores removed by soil probe, and moisture sensing devices.
- While irrigating, consideration is given to soil texture, structure, porosity, water holding capacity, drainage, compaction, precipitation rate, run off, infiltration rate, percolation rate, evapotranspiration, seasonal temperatures, prevailing wind condition, time of day or night, type of grass plant and root structure. Proper irrigation may include syringing and hand watering to prevent wilt and desiccation.
- In areas where wind creates problems of spraying onto private property or road rights of way, the controllers are set to operate during the period of lowest wind velocity, which would normally occur at night.
- Monitor frequently all systems within the golf course premises and correct for: coverage, adjustment, clogging of lines, and removal of obstacles, including plant materials, which obstruct the spray.
- Sprinkler heads are checked daily and adjusted and/or repaired as needed.
- All controllers are kept in proper working order, repaired as necessary, and run times adjusted as necessary to maintain proper moisture levels.
- A soil probe or tensiometer is used to determine the soil moisture content in various areas periodically.
- All leaking or defective valves, heads, lines and controllers are repaired as soon as possible.
- All reporting requirements of the Minnesota Department of Natural Resources are met annually.

### Sand Bunkers

- All sand bunkers shall be edged as necessary to maintain a proper lip as designed and raked four times per week. Replacement sand shall produce acceptable playing conditions. The sand shall meet USGA specifications for sand bunker use.

### Aquatic Areas

- All lakes, ponds and streams are properly sealed and maintained in an environmentally sound manner.

### Color Areas

- The various plantings areas throughout the course are cultivated, weeded, and pruned on a regular basis with annual flowers replanted each year.

### Playing Equipment

- Flags, flagsticks, benches, ball washers, tee markers, signage, yardage markers, trash receptacles and hazard stakes are maintained in proper condition.

**Litter Control and Recycling**

- Remove all litter daily from golf course grounds including the golf course proper, clubhouse, maintenance yard, landscaped areas and driving range. Remove all trash and debris resulting from golf course maintenance as it occurs. Recyclable materials are collected and deposited in the proper refuse containers.

**Buildings and Structures**

- All maintenance buildings and structures are maintained in good repair at all times. Surrounding areas shall be free of weeds, brush, disorganized junk or broken-down equipment, trash piles, etc. Interior areas shall be clean and neatly organized, safe and sanitary, for customers and employees. Painting, rodent and insect control, and landscaping shall be performed as necessary. Housekeeping duties shall be performed daily.

**Cart Paths**

- All cart paths shall be maintained in a smooth and clean condition, and repaired promptly as needed.

**Parking Lots**

- Golf course staff is responsible for maintaining planting areas in the parking lot islands and areas adjacent to the parking lots.

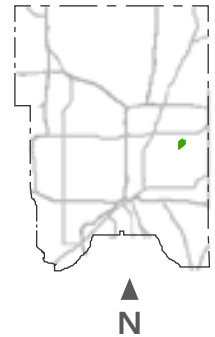
**Edging**

- All sidewalks, patios and concrete cart paths shall be kept edged. Edging around valve boxes, meter boxes, backflow preventers, etc. are maintained as needed to ensure that there is no obstruction during play.

**Fences and Walls**

- Immediately repair or replace as necessary all broken or damaged fences, gates, and locking devices needed for the protection of the golf course, equipment or buildings.

## GOODRICH GOLF COURSE



### EXISTING SITE CONDITIONS



#### LOCATION AND SIZE

Goodrich Golf Course is located in Maplewood. The 120-acre site is bounded on the south by North Saint Paul Road, on the east by 7th Avenue North, on the north by the Willard Munger State Trail, and on the west by Van Dyke Street.



#### COURSE CHARACTERISTICS

Established in 1956, Goodrich Golf Course is a 18-hole, par-70 course. The course length is 6235, with a slope of 121 and a rating of 69.0. It features gently rolling hills, water on five holes, a large practice putting green featuring a tiered sand bunker, and moderate tree cover.

Across the street from the course is the Goodrich Golf Dome. Originally built in 1996, the dome was remodeled in 2016, including improvements to turf, dome materials, and other amenities. The facility has 33 hitting stalls, a chipping and putting green. An 18-hole mini golf course is located outside for summer months' use.



#### CURRENT USE & OPERATING MODEL

In addition to the course, the site includes a clubhouse with a full bar, 65-seat banquet room, and patio, as well as a 95-car parking lot. Overflow parking is available on the adjacent Aldrich Arena lot. Maintenance facilities are located in the adjacent Ramsey County Parks & Recreation Department's Administrative/ Maintenance Center. Under the course's operational model, Ramsey County is responsible for course maintenance, while pro shop services are the responsibility of a contracted PGA golf professional. This service agreement runs through February 4, 2019 with an option for a one-year extension. Ramsey County retains a portion of the revenue generated under this agreement.

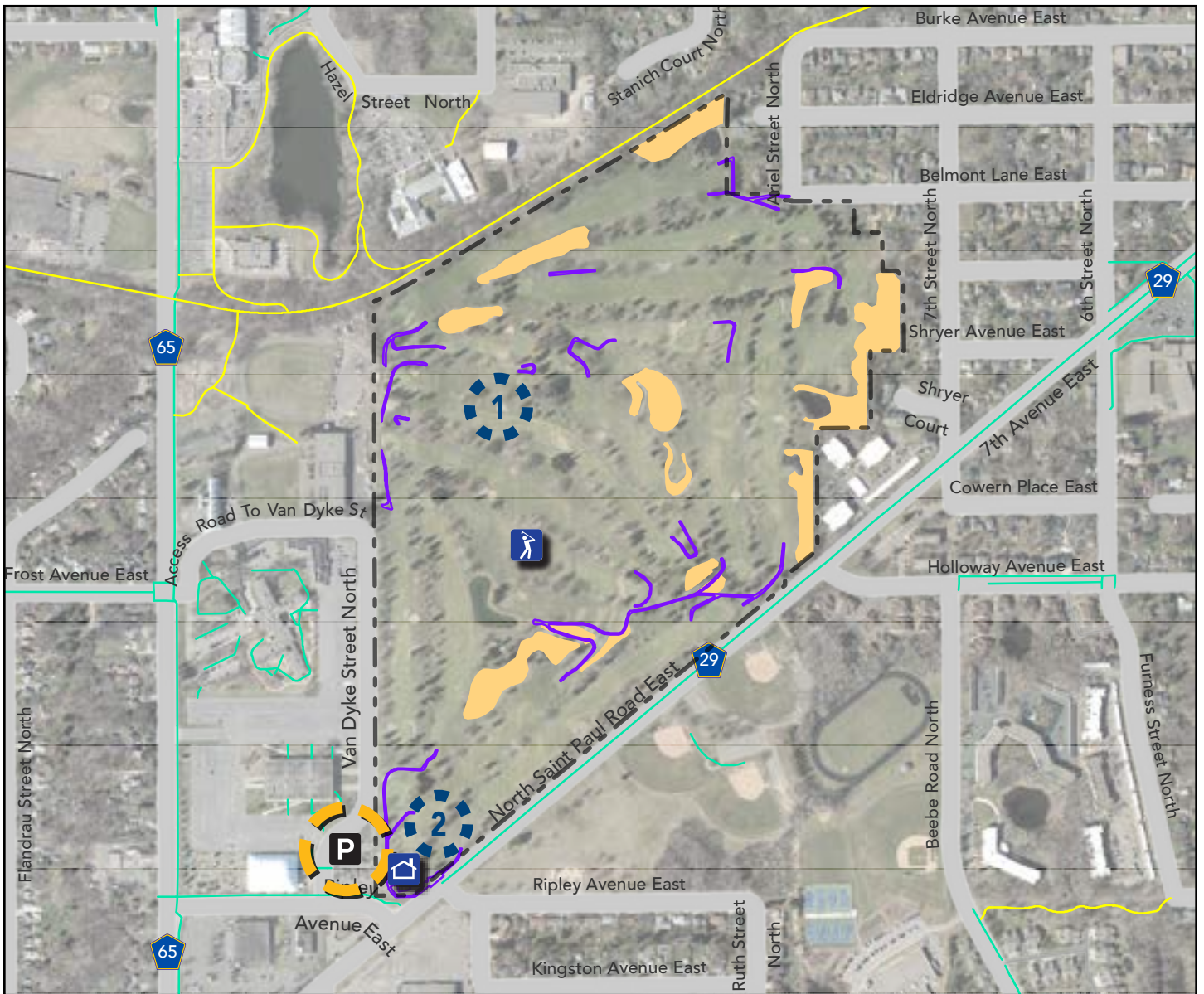
The maintenance and operation of the Golf Dome and adjacent mini-golf course is contracted to a private management company. The current license agreement runs through December 31, 2036.



## MAINTENANCE

The course is 18 holes covering 102 acres. It features approximately 2 acres of Bentgrass/Poa Annua greens, of various quality from pushed up native soil to USGA based specifications. Fairways comprise 20 acres and are a mix of Kentucky Bluegrass and Poa Annua. Ground area considered the "Rough" is approximately 20 acres of Kentucky Bluegrass and Poa Annua. Golf course grounds are maintained at or above the levels set forth in the Ramsey County Golf Course Maintenance Standards Manual. 34 Sand traps are scattered throughout the course. They have all aged beyond their life cycle and as such require manual draining and sifting after major rains. There are seven water features on the course. The largest is a  $\frac{3}{4}$  acre holding pond that is used to store irrigation water filled by a 500 ft. deep well. Four of the water features are small shallow ponds and will not hold water consistently. Two those four are filled for playability and visual enhancement. Natural areas are located throughout the course and continue to be expanded. Approximately 12 acres of new natural habitat have been established since 2007. These areas promote local wildlife and the use of native perennial plantings which require little or no maintenance.

EXISTING CONDITIONS



Legend

- |                           |  |                             |  |                     |  |
|---------------------------|--|-----------------------------|--|---------------------|--|
| Site Boundary             |  | Park Paved Trail            |  | Site Entrance       |  |
| Proposed Development      |  | Park Turf Trail             |  | Cart Paths          |  |
| Proposed Development Node |  | Municipal Trail             |  | Native Buffer Areas |  |
| Metro Tranist Stop        |  | Municipal Ped/Bike Facility |  | Parking Lot         |  |
|                           |  |                             |  | Golf                |  |
|                           |  |                             |  | Clubhouse           |  |

## PROPOSED DEVELOPMENT

### 1. Capitol Improvement Projects

The course bunkers and irrigation system are past their useful life and are in need of replacement. Parks & Recreation has requested funding for these repairs through the Ramsey County Capital Improvement Program, to date the requests have not been funded.

Future capital improvement plans will incorporate the recommendations of the forthcoming golf study.

### 2. Energy & Resilience

The roof configuration of the clubhouse is reasonably suited for solar arrays. Parking lot carports provide additional solar potential. This combination of rooftop and carport solar would potentially provide 117.1 MWh/year of energy to offset the site's energy use. However, due to the capital cost of such a system, and current regulations which do not allow for on-site solar arrays to generate more energy than the site uses, the energy cost savings over the estimated life of a solar system would not offset the capital cost. From an economic standpoint, county-financed solar "retrofitting" of the current site should not be a high priority. Alternative solar financing structures, such as community solar, lease-to-own, or power purchasing agreements (PPAs), should also be considered. Environmental and societal benefits of renewable energy must also be weighed alongside financial considerations.

The site's Energy Use Intensity (EUI), which measures energy use relative to physical building square footage, is 123.3, which is higher than the national average of 85 for similar facilities. An energy study would identify opportunities for reducing energy consumption, thus reducing the size of the solar array necessary to offset the site's energy use.

A wash-water recycling system was installed in 2016 to allow for reuse of water used to wash carts, mowing equipment, and other maintenance equipment. Future opportunities for reduction in course water consumption should be considered as such technologies evolve.

Master planning efforts should be coordinated with the adjacent Golf Dome, Aldrich Arena, Parks & Recreation Administration Building, and related Ramsey County facilities. A campus approach to these facilities may provide new opportunities for energy and resilience related issues.

### 3. Programming & Development Opportunities

Future plans will incorporate the recommendations of the forthcoming golf study.

### 4. Partnership Opportunities

Future plans will incorporate the recommendations of the forthcoming golf study. The city of Maplewood's Master Plan includes a desire for a central park. Goodrich has been identified as a possible location should the site no longer encompass a golf operation.

**PROPOSED DEVELOPMENT****5. Future Maintenance & Operations**

This should include replacing the irrigation system which was installed in 1995. Sand traps should also be redone to increase playability and prevent further contamination of the turfgrass. Continued effort to reduce maintained turfgrass and increase natural habitats on the course for use as buffer zones around water features, and pollinator vegetation will be a priority. Expanding no-mow restoration areas as well as continuing to maintain our current natural areas. With funding, adding a tree management program. Ash tree removal is a necessary preemptive move prior to inevitable Emerald Ash Bore infestation.



# ISLAND LAKE GOLF COURSE

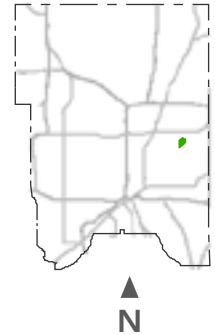
## EXISTING SITE CONDITIONS



### LOCATION AND SIZE

Island Lake Golf and Training Center is located in the city of Shoreview. The 41-acre site is bounded by Interstate I-694 to the north, Island Lake to the east, commercial properties to the west, and a residential neighborhood to the south. Entrance to the facility is off Red Fox Road.

Island Lake County Park, also owned by Ramsey County, is approximately 1.5 miles east of the Golf and Training Center by road.



### COURSE CHARACTERISTICS

Opened in 1995, Island Lake Golf and Training Center is a 9-hole, par-28 “executive” course. The course length is 1,423 yards, with a rating of 28. It features sweeping greens, abundant wildlife, and several ponds.

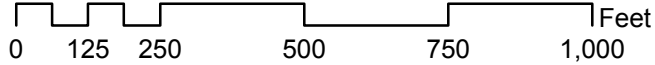
A 35-station driving range, putting green, clubhouse, maintenance facility, and 75-space parking lot are also located on site.



### CURRENT USE & OPERATING MODEL

Under the course’s operational model, course maintenance, pro shop, and clubhouse services are the responsibility of a private management company. This model was developed as a “lease-to-build” arrangement to encourage development of county-owned land. This agreement runs through 2023.

EXISTING CONDITIONS



Legend

Site Boundary

--- Park Paved Trail

— Site Entrance



Proposed Development

3 Park Turf Trail

— Cart Paths

Proposed Development Node

1 Municipal Trail

— Native Buffer Areas

Metro Tranist Stop

T Municipal Ped/Bike Facility

— Parking Lot



Golf



Clubhouse



## PROPOSED DEVELOPMENT

### 1. Capitol Improvement Projects

- Future capital improvement plans will incorporate the recommendations of the forthcoming golf study.

### 2. Energy & Resilience

The roof configuration of the clubhouse is reasonably suited for solar arrays and would potentially provide 14.1 MWh/year of energy to offset the site's energy use. The capital cost of such a system would have a payback period of around 25 years. Alternative solar financing structures, such as community solar, lease-to-own, or power purchasing agreements (PPAs), should also be considered. Environmental and societal benefits of renewable energy must also be weighed alongside financial considerations.

Natural resource management should be a consideration in future planning efforts. Future opportunities for reduction in course water consumption, such as efficient irrigation and wash-water recycling systems, should also be considered as such technologies evolve.

Master planning efforts should be coordinated with the adjacent Island Lake County Park.

### 3. Programming & Development Opportunities

Future plans will incorporate the recommendations of the forthcoming golf study.

### 4. Partnership Opportunities

Future plans will incorporate the recommendations of the forthcoming golf study.

### 5. Future Maintenance & Operations

The Golf and Training Center was developed under a long-term lease/management agreement with a private operator. The facility includes a 1,423-yard, 9-hole par 28 golf course with a driving range, putting course, clubhouse, and maintenance shop and a 75-car parking lot. The agreement includes a revenue sharing formula and expires in 2023.

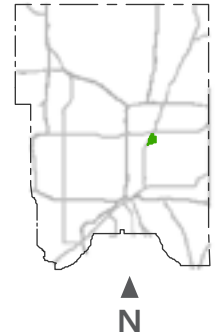
# KELLER GOLF COURSE

## EXISTING SITE CONDITIONS



### LOCATION AND SIZE

Originally developed in 1929, Keller Golf Course (a part of Keller Regional Park) is located in the east central part of Ramsey County in the city of Maplewood. The 140-acre site is bounded on the north by County Road B, on the east by Duluth Street, on the south by the Gateway segment of the Willard Munger State Trail and on the west by Highway 61.



### COURSE CHARACTERISTICS

Keller Golf Course is a 6,500-yard, 18-hole par 72 championship-style golf course with a full-length driving range, practice bunkers and chipping green, and pro shop, clubhouse. The course has a slope of 133 and a rating of 72.2. It has hosted several PGA and LPGA events throughout its history and remains one of the most prestigious municipal golf courses in the region.

In 2014, Ramsey County built a new clubhouse and a separate golf shop and renovated the golf course.



### CURRENT USE & OPERATING MODEL

In addition to the course, the site includes a clubhouse which houses Keller Grille, a full-service bar and restaurant, is located in Keller Clubhouse. Year-round banquet and meeting space for private gatherings of up to 300 people with spectacular views of the golf course and Keller Lake. Other amenities include an inviting stone hearth, stunning views, wood beamed ceilings, outdoor patios and private balconies. Parking for 264 cars is available amongst 3 parking lots.

Under the course's operational model, Ramsey County is responsible for capital improvements and course maintenance, which is managed from an on-site maintenance center. Pro shop services are the responsibility of a contracted PGA golf professional. This service agreement runs through December 31, 2022 with an option for a five-year extension. Ramsey County retains a portion of the revenue generated under this agreement.

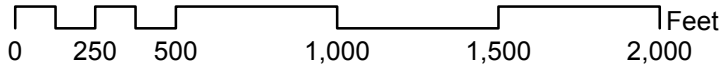
Clubhouse services, including the operation of Keller Grille and the banquet facility, are contracted to a private catering company. This service agreement runs through December 31, 2023. Ramsey County retains a portion of the revenue generated under this agreement.



## MAINTENANCE

Keller Golf Course is an 18-hole facility located on 150 acres of land in Ramsey County. The Grounds Maintenance operations staff are responsible for all property located outside of the Clubhouse and Golf Shop buildings. Areas maintained include the golf course proper, an 8-acre, 40 station practice facility, cart paths, roadways, parking lots, the Halfway House/restrooms, the Turfgrass Management Center and 26 acres of restored natural areas. Golf Shop and Clubhouse buildings are maintained by Parks & Recreation building maintenance staff. Golf course grounds are maintained at or above the levels set forth in the Ramsey County Golf Course Maintenance Standards Manual. Keller Golf Course is one of 22 Certified Audubon Cooperative Sanctuaries in the state of Minnesota. The ongoing mission is to be a leader in golf course environmental programming and implementation at the local and regional level. The course has established a very strong and positive relationship with the local watershed district, The Ramsey-Washington Metro Watershed District. This partnership has allowed for joint engagement in multiple projects and programs devoted to storm water management, water quality improvement, habitat improvement and public outreach and education. In a cost-share venture with RWMWD we have employed a seasonal restoration intern to further develop and maintain our high-quality restoration areas. The Turfgrass Management Center includes the main service and storage building, constructed in 2003, and out buildings including an 8'x12' self-contained chemical storage unit, a 1000 gallon, above-ground fueling station, a 30'x60' storage pole barn, a well house and a pump house by the irrigation pond on the 12th hole. We have one portable toilet located on the 13th hole in addition to the restroom facilities at the Halfway House located in the center of the golf course.

EXISTING CONDITIONS



Legend

Site Boundary		Park Paved Trail		Site Entrance		Clubhouse	
Proposed Development		Park Turf Trail		Cart Paths		Restrooms	
Proposed Development Node		Municipal Trail		Native Buffer Areas			
Metro Transit Stop		Municipal Ped/Bike Facility		Parking Lot			
		Golf					

## PROPOSED DEVELOPMENT

### 1. Capitol Improvement Projects

- In 2018 Ramsey County will begin a project to realign the driving range to reduce the possibility of errant balls entering neighboring yards.
- Future capital improvement plans will incorporate the recommendations of the forthcoming golf study.

### 2. Energy & Resilience

The roof configurations of the clubhouse and maintenance center are reasonably suited to solar arrays, which would potentially provide 100.1 MWh/year of energy to offset the site's energy use. The capital cost of such a system would have a payback period of around 25 years. Alternative solar financing structures, such as community solar, lease-to-own, or power purchasing agreements (PPAs), should also be considered. Environmental and societal benefits of renewable energy must also be weighed alongside financial considerations.

The site's Energy Use Intensity (EUI), which measures energy use relative to physical building square footage, is 199.5, which is significantly higher than the national average of 85 for similar facilities. An energy study would identify opportunities for reducing energy consumption, thus reducing the size of the solar array necessary to offset the site's energy use.

Keller Golf Course is managed under the Audubon Sanctuary golf course standards. Several areas within the golf course are managed to provide landscape diversity and wildlife habitat. The state-of-the-art irrigation control system allows for adjustment of run times to match micro climates, soil types, and elevation changes, and a lined, 1.5-acre irrigation pond holds 4.4 million gallons of water for irrigation. All fine-turf playing surfaces are "super" bent grasses that have been bred for much improved disease resistance, cold, heat and drought tolerance, all while providing superior playing conditions. Sand bunkers were constructed to minimize sand movement and washouts due to heavy rains and drain efficiently to eliminate standing water. More than 20 acres of the course have been converted and restored to native plantings. Future opportunities for reductions in water consumption should be considered as such technologies evolve.

### 3. Programming & Development Opportunities

Future plans will incorporate the recommendations of the forthcoming golf study.

### 4. Partnership Opportunities

Future plans will incorporate the recommendations of the forthcoming golf study

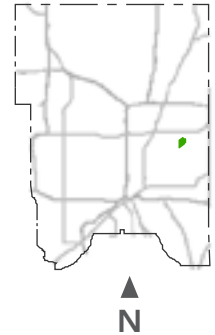
## PROPOSED DEVELOPMENT

### 5. Future Maintenance & Operations

Looking forward, we will continue to work with the RWMWD as we expand our no-mow restoration areas as part of several upcoming projects as well as continuing to maintain our current natural areas. Garlic Mustard removal and eradication will continue into the foreseeable future. In 2018 we are scheduled to redevelop our practice facility which includes moving a parking lot, possibly installing new facility entrance signage and expanding prairie acreage on the MNDOT easement parcel along Highway 61. Our cart path system needs several extensions added onto existing paths as well as adding connecting segments in several areas to improve functionality. Examples would include the stretch between the Halfway House and 16 green and completing the 14th hole tee to green. Tweaking and improving the new drainage system will be ongoing as time allows. This includes a fix for the swamp behind six green and installing a lift station in six pond to alleviate wet drainage basins on the third and fifth holes. The split rail cedar fence around 15 pond is in need of replacement. Removal of many Austrian pine trees will continue indefinitely due to a Diplodia needle blight epidemic on the property. With funding, adding a tree management program. Ash tree removal is a necessary preemptive move prior to inevitable Emerald Ash Bore infestation. An additional portable toilet will be placed at the practice facility for the 2018 season.



## MANITOU RIDGE GOLF COURSE



### EXISTING SITE CONDITIONS



#### LOCATION AND SIZE

Opened in 1928, Manitou Ridge Golf Course is located in the city of White Bear Lake. The 140-acre site is bounded on the south by Interstate I-694, on the east and north by residential housing, and on the west by McKnight Road.



#### COURSE CHARACTERISTICS

Manitou Ridge Golf Course is a 6,400-yard, 18-hole par 71 golf course with a driving range, two chipping greens, and a pro shop/clubhouse. The course has a slope of 126 and a rating of 70.7. The course is located at one of the highest points in Ramsey County. Maintenance facilities are located on site.



#### CURRENT USE & OPERATING MODEL

In addition to the course, the site includes a clubhouse which houses a pro shop, including club repair services, and a clubhouse, including a snack bar and lounge with a full liquor license. Parking for 69 cars is available on site.

Under the course's operational model, Ramsey County is responsible for capital improvements. Course maintenance, pro shop, and clubhouse services are the responsibility of a private management company. This service agreement runs through December 31, 2021 with an option for a five-year extension. Ramsey County retains a portion of the revenue generated under this agreement.



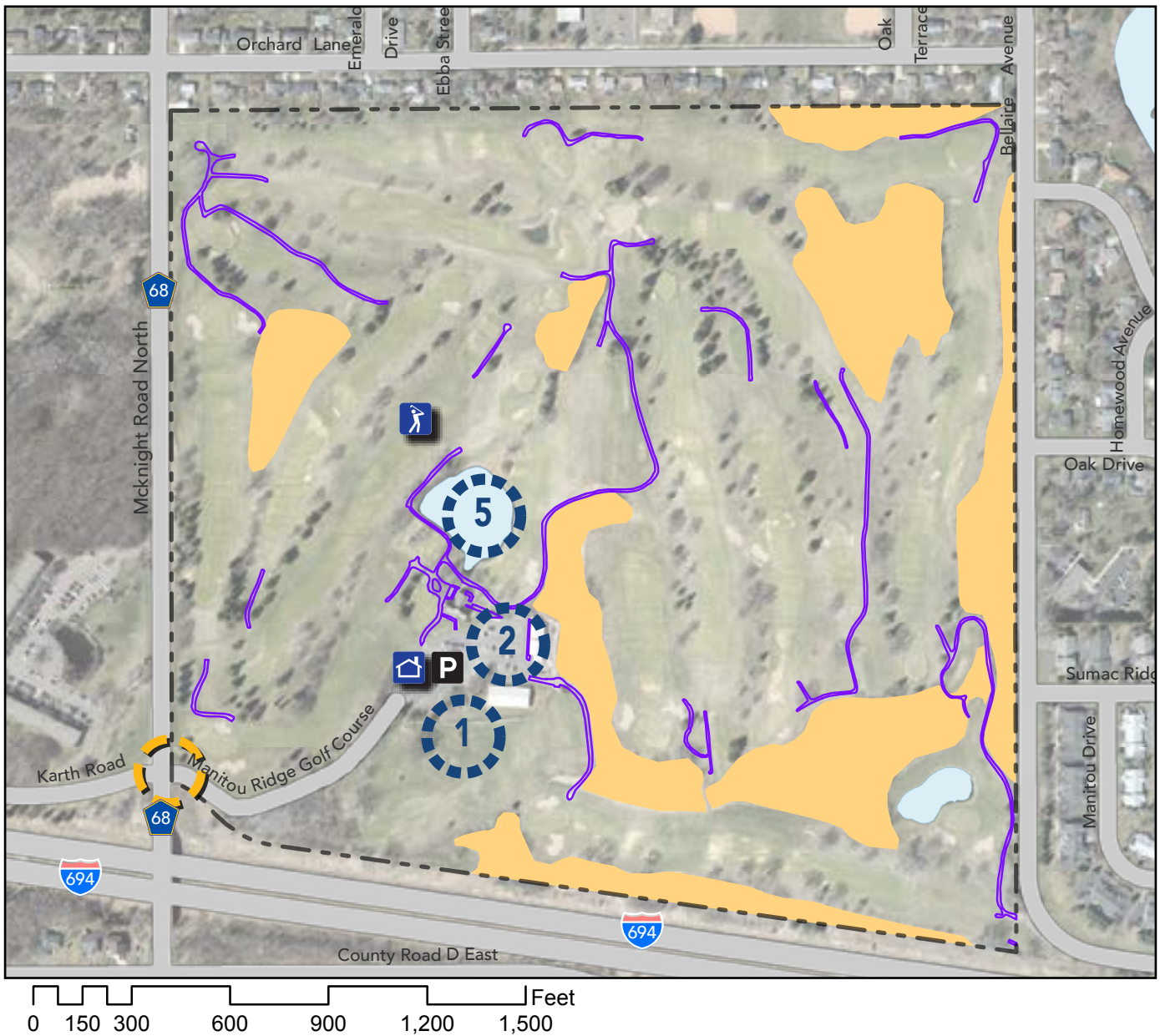
#### MAINTENANCE

Current Maintenance operations are provided on the course by a contracted vendor. A ten year agreement is in place for the pro shop, clubhouse and turf management components of the golf operations. The county owns the land and all structures. Turf maintenance is performed following the County Golf Operations Standard. Pesticides are limited in use, fertilizer is low-phosphorous and slow-release in nature, and advanced cultural practices are in place. A weather station is connected to the on-site irrigation computer and is part of the water use management system. The 138 acre golf course was built on glacial till and features panoramic views of the metro area. Soils consist primarily of sandy loam, loamy sand, and small pockets of clay. Greens are mostly constructed to USGA specifications, populated with Penncross/Poa Anna grasses mowed at .13 inch and are approximately 4 acres in area. Two acres of pushup bluegrass tees were capped with a generous 4 inches of special tee mix and are mowed at .50 inches. Fairways are a bluegrass/Poa Anna mix, mowed at .675 inches and 24 acres in

## MANITOU RIDGE GOLF COURSE

size. The remainder of the course is a native blue/fescue mix and includes many natural areas of oak savanna, hard and soft woods, and wildlife corridors. Water come into play on three holes and is about 8 acres in size. The facility features a small clubhouse with golf shop, snack bar, and liquor bar. A 5 acre driving range with a grassed tee is also part of the operation. A recently constructed maintenance building and cold storage building are also included in the clubhouse area. Hard surfaces include general parking for 130 cars. An over flow parking area of 25 cars, a clubhouse patio, and limited cart paths throughout the course.

EXISTING CONDITIONS



Legend

- |                           |                             |                             |                               |                     |                       |               |             |
|---------------------------|-----------------------------|-----------------------------|-------------------------------|---------------------|-----------------------|---------------|-------------|
| Site Boundary             | --- Site Boundary           | Park Paved Trail            | — Park Paved Trail            | Site Entrance       | — Site Entrance       | Clubhouse     | 🏠 Clubhouse |
| Proposed Development      | 3 Proposed Development      | Park Turf Trail             | — Park Turf Trail             | Cart Paths          | — Cart Paths          |               |             |
| Proposed Development Node | 1 Proposed Development Node | Municipal Trail             | — Municipal Trail             | Native Buffer Areas | — Native Buffer Areas |               |             |
| Metro Tranist Stop        | T Metro Tranist Stop        | Municipal Ped/Bike Facility | — Municipal Ped/Bike Facility | Parking Lot         | — Parking Lot         | P Parking Lot |             |
|                           |                             |                             |                               | Golf                | — Golf                | 🏌️ Golf       |             |

## PROPOSED DEVELOPMENT

### 1. Capitol Improvement Projects

- In 2016, Ramsey County constructed a new maintenance facility and cold storage building on site.
- The course's bunkers and irrigation system are past their useful life and in need of replacement. Parks & Recreation has previously requested funding for these repairs through Ramsey County's Capital Improvement Program; to date the requests have not been funded.
- Future capital improvement plans will incorporate the recommendations of the forthcoming golf study.

### 2. Energy & Resilience

The roof configurations of the clubhouse and maintenance center are reasonably suited to solar arrays, which would potentially provide 57.4 MWh per year of energy to offset the site's energy use. The capital cost of such a system would have a payback period of around 22.2 years. Alternative solar financing structures, such as community solar, lease-to-own, or power purchasing agreements (PPAs), should also be considered. Environmental and societal benefits of renewable energy must also be weighed alongside financial considerations.

The course is managed under the Audubon Sanctuary golf course standards. Several areas within the golf course are managed to provide landscape diversity and wildlife habitat.

A wash-water recycling system was installed in 2017 to allow for reuse of water used to wash carts, mowing equipment, and other maintenance equipment. Future opportunities for reduction in course water consumption should be considered as such technologies evolve.

### 3. Programming & Development Opportunities

Future plans will incorporate the recommendations of the forthcoming golf study.

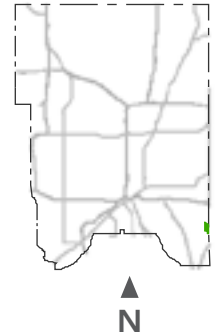
### 4. Partnership Opportunities

Future plans will incorporate the recommendations of the forthcoming golf study

### 5. Future Maintenance & Operations

Future maintenance practices will recognize changes to DNR Well Pumping restrictions and feature use of moisture sensors, development of surface water catch basins for irrigation use, wetting agent injection, and an upgraded, new irrigation system. A renovation of course features including bunkers and tees. Continuation of dead cottonwood and elm tree removal as required. More rough areas will become no mow areas and preserved as natural habitat. With funding, adding a tree management program. Ash tree removal is a necessary preemptive move prior to inevitable Emerald Ash Bore infestation.

## PONDS AT BATTLE CREEK GOLF COURSE



### EXISTING SITE CONDITIONS



#### LOCATION AND SIZE

Ponds at Battle Creek Golf Course is located in south Maplewood. The 91-acre site is located adjacent to the Ramsey County Correctional Facility, bounded by Lower Afton Road to the north, Century Avenue to the east, Linwood Avenue to the south, and residential housing to the west. Interstate I-94 is approximately 1.5 miles to the north on Century Avenue, while Interstate I-494 is approximately 1 mile to the south.



#### COURSE CHARACTERISTICS

Established in 2003, Ponds at Battle Creek Golf Course is a 9-hole, par-35 course. The course length is 3,020 yards, with a slope of 131 and a rating of 34.8. It features a parkland prairie-style layout with nine ponds dotting the course.

A lighted driving range is also located on site. The facility has 55 hitting stalls, chipping area, and large putting green.



#### CURRENT USE & OPERATING MODEL

In addition to the course, the site includes a clubhouse with club repair and pro shop service areas, a bar, snack bar, and patio, as well as a 105-stall parking lot. Maintenance facilities are located north of Lower Afton Road, on Ramsey County Correctional Facility property. Under the course's operational model, Ramsey County is responsible for course maintenance, while pro shop services are the responsibility of a contracted PGA golf professional. This service agreement runs through December 31, 2022 with an option for a five-year extension. Ramsey County retains a portion of the revenue generated under this agreement.

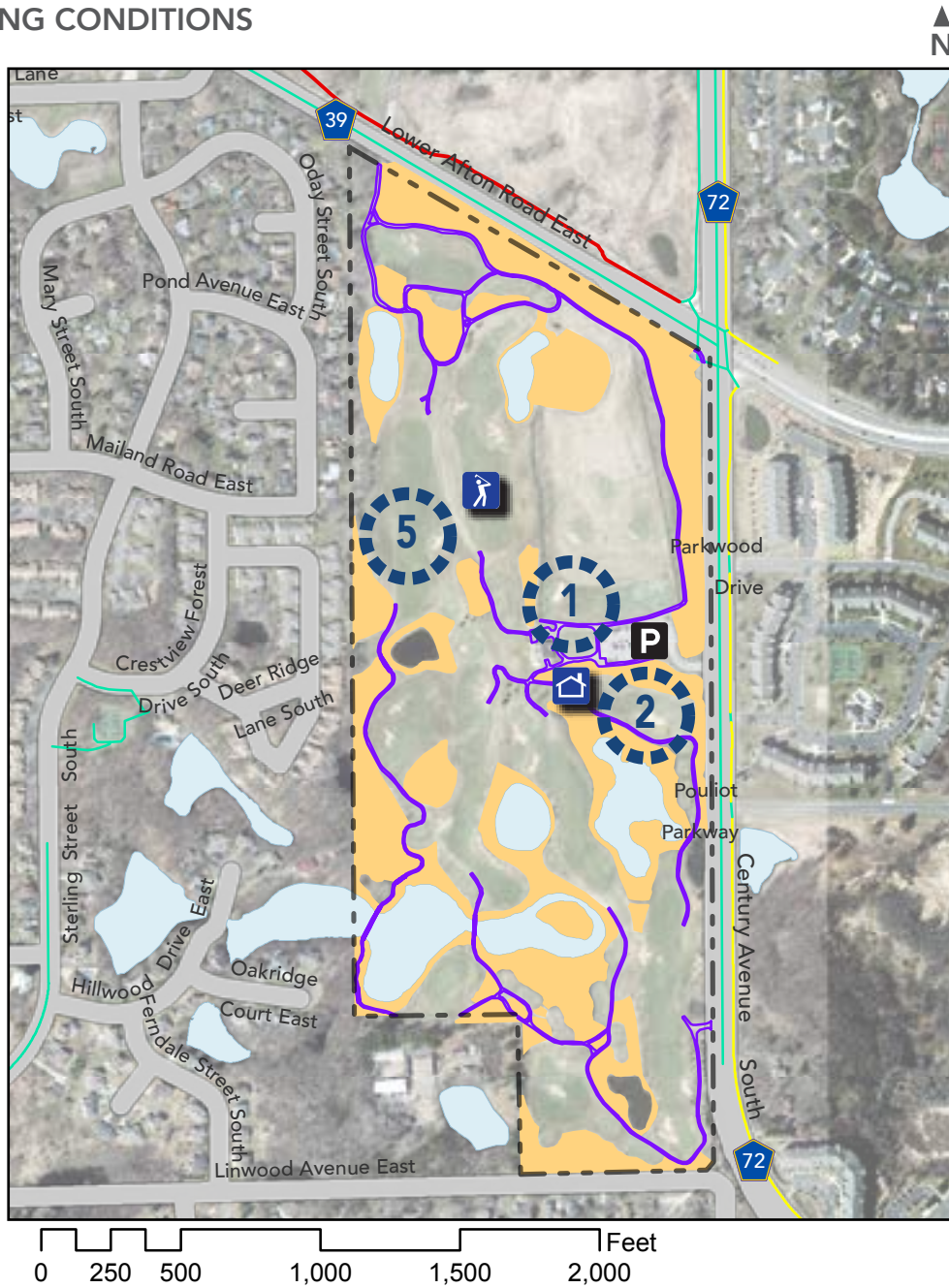
From 2003-2017, course maintenance was performed by inmates from the Correctional Facility, under the supervision of Parks & Recreation and course staff. As of 2018, the Correctional Facility will no longer provide inmate labor for course maintenance.



## MAINTENANCE

Current Maintenance operations at the Ponds at Battle Creek in Ramsey County consist of maintaining a 90 acre 9-hole golf course, a large 40 station driving range, a clubhouse and parking lot. All turfgrass maintenance is guided by the Golf Course Superintendents Association of America (GCSAA) best management practices (BMP). Best management practices recommend sound agronomic practices which include efficient water use, topdressing, frequent rolling of greens, aeration of soil to promote healthy turf, use of plant protectants, wetting agents, to ensure environmental sustainability. The L-93 greens are maintained at a height of 1/8 of an inch while Low Mow Kentucky Bluegrass (LMKBG) tees are cut at 1/2 of an inch. LMKBG Fairways are cut slightly higher at 5/8 of an inch with rough usually mowed at 2 1/2 inches. Other areas that require maintenance include bunkers, aquatics, trees, paved paths, parking lot, landscaped areas and natural/native areas. While most of the areas require daily maintenance, the natural/native areas require weekly/monthly monitoring to ensure proper environmental stewardship. Those areas provide habitat, reduce costs and add to scenic views of the urban golf course. There are two portable toilet stations located on the course located at the 3rd tee area and 7th fairway, which are maintained and serviced through a third party vendor. Outside of the 90 acres is the Maintenance area on the north side of Lower Afton Rd with an office area, 2 cold storage buildings, a nursery tee and a wash pad area.

EXISTING CONDITIONS



Legend

- |                           |                             |                             |                               |                     |                       |           |             |
|---------------------------|-----------------------------|-----------------------------|-------------------------------|---------------------|-----------------------|-----------|-------------|
| Site Boundary             | --- Site Boundary           | Park Paved Trail            | — Park Paved Trail            | Site Entrance       | — Site Entrance       | Clubhouse | ⊙ Clubhouse |
| Proposed Development      | 3 Proposed Development      | Park Turf Trail             | — Park Turf Trail             | Cart Paths          | — Cart Paths          |           |             |
| Proposed Development Node | 1 Proposed Development Node | Municipal Trail             | — Municipal Trail             | Native Buffer Areas | — Native Buffer Areas |           |             |
| Metro Tranist Stop        | T Metro Tranist Stop        | Municipal Ped/Bike Facility | — Municipal Ped/Bike Facility | Parking Lot         | — Parking Lot         | P         | P           |
|                           |                             |                             |                               | Golf                |                       |           | ⚪ Golf      |

## PROPOSED DEVELOPMENT

### 1. Capitol Improvement Projects

- In 2017 the clubhouse was re-painted and re-roofed.
- Future capital improvement plans will incorporate the recommendations of the forthcoming golf study.

### 2. Energy & Resilience

The roof configuration of the clubhouse is reasonably suited for solar arrays. Parking lot carports provide additional solar potential. This combination of rooftop and carport solar would potentially provide 178.8 MWh per year of energy to offset the site's energy use. The capital cost of such a system would have a payback period of around 22.2 years.

The site's Energy Use Intensity (EUI), which measures energy use relative to physical building square footage, is 102.7, which is higher than the national average of 85 for similar facilities. An energy study would identify opportunities for reducing energy consumption, thus reducing the size of the solar array necessary to offset the site's energy use.

The course contains 26 acres of wetlands, wetland buffers, and native areas. Natural resource management should be a consideration in future planning efforts. Future opportunities for reduction in course water consumption, such as efficient irrigation and wash-water recycling systems, should also be considered as such technologies evolve.

Master planning efforts should be coordinated with the adjacent Correctional Facility. A "campus" approach to these facilities may provide new opportunities for energy and resilience related issues.

### 3. Programming & Development Opportunities

Future plans will incorporate the recommendations of the forthcoming golf study.

### 4. Partnership Opportunities

Future plans will incorporate the recommendations of the forthcoming golf study

### 5. Future Maintenance & Operations

Future Maintenance operations will include increasing natural/native areas and reduction in water use. Full participation as an Audubon Cooperative Sanctuary Program for Golf is a primary goal for this course. Adding a Wash Water Treatment and Chemical Containment Facility will be a major component to maintaining Audubon Certification. Continued work on removal of Buckthorn throughout the property. With funding, adding a tree management program. Ash tree removal is a necessary preemptive move prior to inevitable Emerald Ash Bore infestation.



# MARSDEN ARCHERY RANGE

## EXISTING SITE CONDITIONS



### LOCATION AND SIZE

Marsden Archery Range is located in the northwestern part of Ramsey County in the city of Arden Hills. The 8-acre site is bounded by Lexington Avenue on the east and the Twin Cities Army Ammunition Plant (TCAAP) on the south, west, and north.



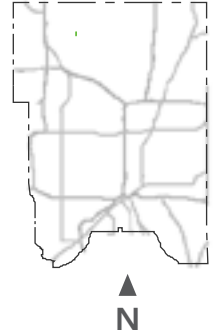
### SITE CHARACTERISTICS

The site has a natural appearance with 20-year old pines, grass areas and scattered deciduous trees

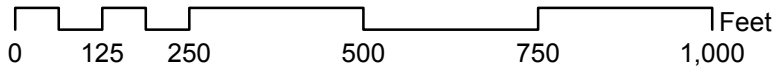


### RECREATION DEVELOPMENT

The site is entirely fenced and contains 20 archery lanes with butts. Lanes vary in length from 10 to 40 yards. The site also includes a 20-car parking lot.



EXISTING CONDITIONS



Legend

Park Border 

Park Entrance 

Opportunity Area 

Constraint Area 

Metro Transit Stops 

County Paved Trail 

Municipal Trail 

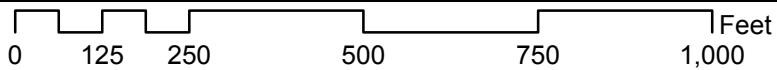
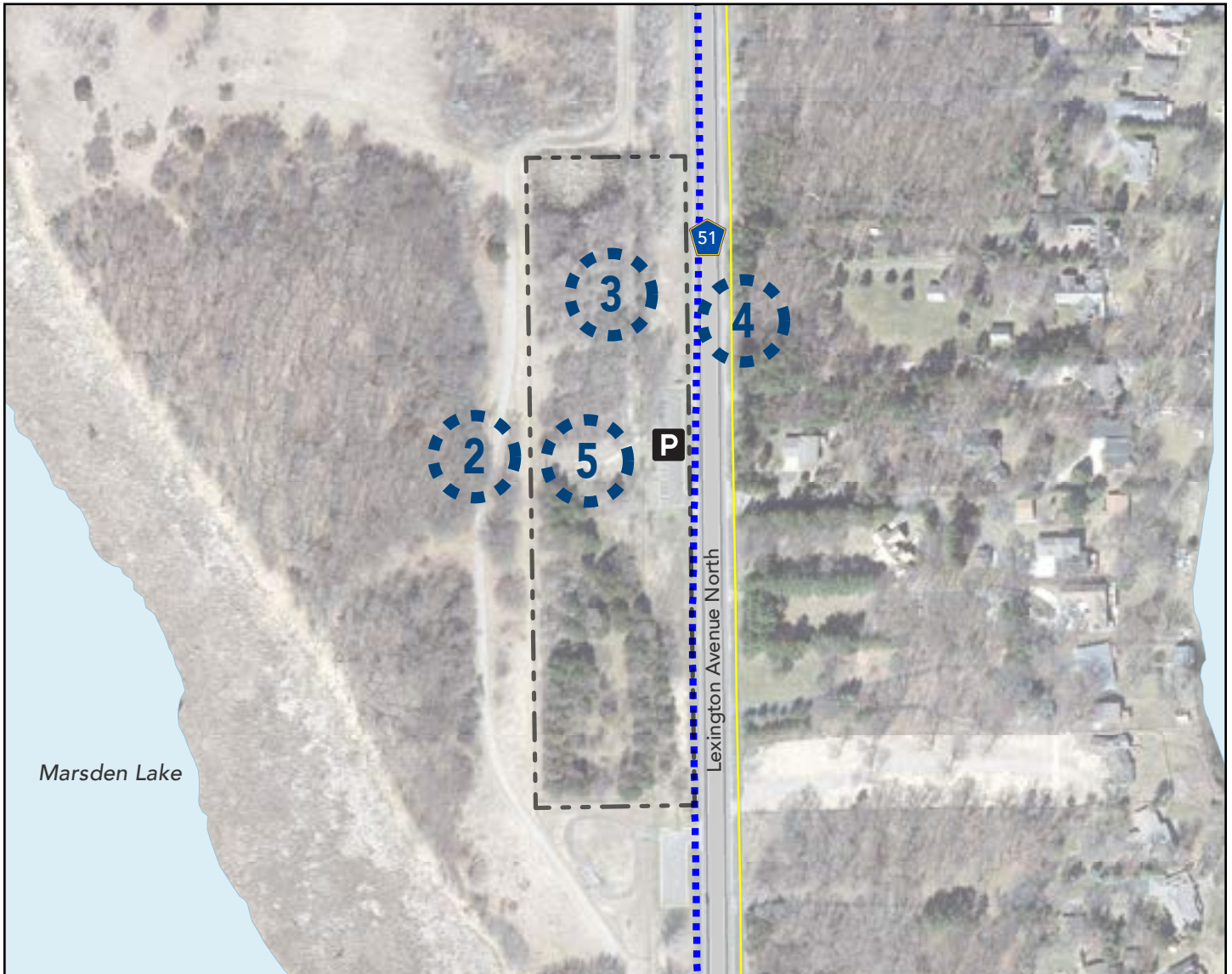
Municipal Sidewalk 

Regional Trail 

Parking Lot 

Archery Range 

PROPOSED DEVELOPMENT



Legend

- |                           |                    |                             |            |                           |              |
|---------------------------|--------------------|-----------------------------|------------|---------------------------|--------------|
| Park Border               | — · — · —          | Park Paved Trail            | — (red)    | Regional Trail            | — (blue)     |
| Proposed Development      | 3 (in yellow box)  | Park Turf Trail             | — (green)  | Proposed Regional Trail   | - - - (blue) |
| Proposed Development Node | 1 (in blue circle) | Municipal Trail             | — (yellow) | Proposed Paved Park Trail | - - - (red)  |
| Metro Tranist Stop        | T (in red square)  | Municipal Ped/Bike Facility | — (cyan)   |                           |              |

## PLANNING CONSIDERATIONS

The site is available from TCAAP on a use-permit basis. The area adjacent to the site is part of the Arden Hills Army Training Site (AHATS) managed by the Minnesota National Guard. A wildlife observation area that was constructed by the U. S. Army is located on AHATS property immediately south of the archery range.

## PROPOSED DEVELOPMENT

### 1. Master Planning

Redevelopment of the existing archery range will require a future master planning process to address proposed park and recreational opportunities, changing trends, demographics, and amenities. Any future master planning process shall be coordinated with the National Guard and local archery clubs for improved connections and recreational opportunities with AHATS.

- Develop partnerships with the city of Shoreview, National Guard, Rice Creek Watershed District (RCWD), other local agencies, and private parties for funding strategies, increased recreational opportunities, and proposed improvements.

### 2. Arden Hills Army Training Site (AHATS)

Dependent on use of the AHATS property by the National Guard there may be opportunities for expansion of archery range facilities on the AHATS property. Long-term improvements may consist of additional shooting lanes, restrooms, an interpretive and educational programming facility, a storage building, increased parking, improved connections to the existing wildlife observation area, interpretive and educational programming areas, and trail development for improved connectivity. Long-term improvements will require additional master planning.

### 3. Habitat Restoration & Management

- Convert Amur dominated woodland edges and old fields to native prairie and remove invasive woody species from the greater mixed woods areas in the southwest section of the park.
- Remove buckthorn and other woody invasive species from the small section of oak woods.
- Prescribed burns of select areas and seeding of native herbaceous understory to follow the initial removal of invasive woody species.

### 4. Lexington Regional Trail

The Lexington Regional Trail is planned to be located in the Lexington Avenue corridor adjacent to the archery range. Trail connections will be proposed as part of the regional trail master plan.

### 5. Internal Archery Range Trails

There is a demand to provide improved connectivity to park and recreation facilities. Proposed improvements consist of a new trail connection from the Lexington Regional Trail and new internal trails.

## PROPOSED DEVELOPMENT

### 6. Vehicular Access

- Improve pedestrian signage for improved wayfinding to trail accesses and other site amenities. Provide interpretive signage in natural areas for increased wayfinding to nature education opportunities.
- All signage should conform to the Ramsey County Parks & Recreation Wayfinding Master Plan.

### 7. Recreation Opportunities

Dependent on use of the AHATS property by the National Guard, there may be future opportunities for expansion of Archery Range facilities on the AHATS property. Potential improvements may consist of an interpretive and educational programming facility, restrooms, and site storage. Future building development should comply with the Americans with Disabilities Act (ADA) and Universal Design standards.

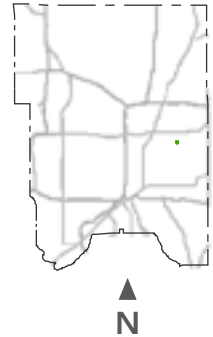
Redevelop the existing archery range and access points to provide access for individuals of all abilities. Improvements to the archery range would include trail improvements with connections to archery amenities, redevelopment of shooting lanes, targets, signage, and other range site components.

### 8. Acquisitions

There may be future opportunities for expansion of archery range facilities on the AHATS property. Acquisition of land, easements, or a joint powers agreement may be required for expansion.

# PARKS & RECREATION ADMINISTRATION CAMPUS

## EXISTING SITE CONDITIONS



### LOCATION AND SIZE

The Parks & Recreation Administration campus is 18.38 acres in size located at 2015 Van Dyke Street, Maplewood MN, nearest to the intersection of White Bear and Frost Avenues.



### SITE CHARACTERISTICS

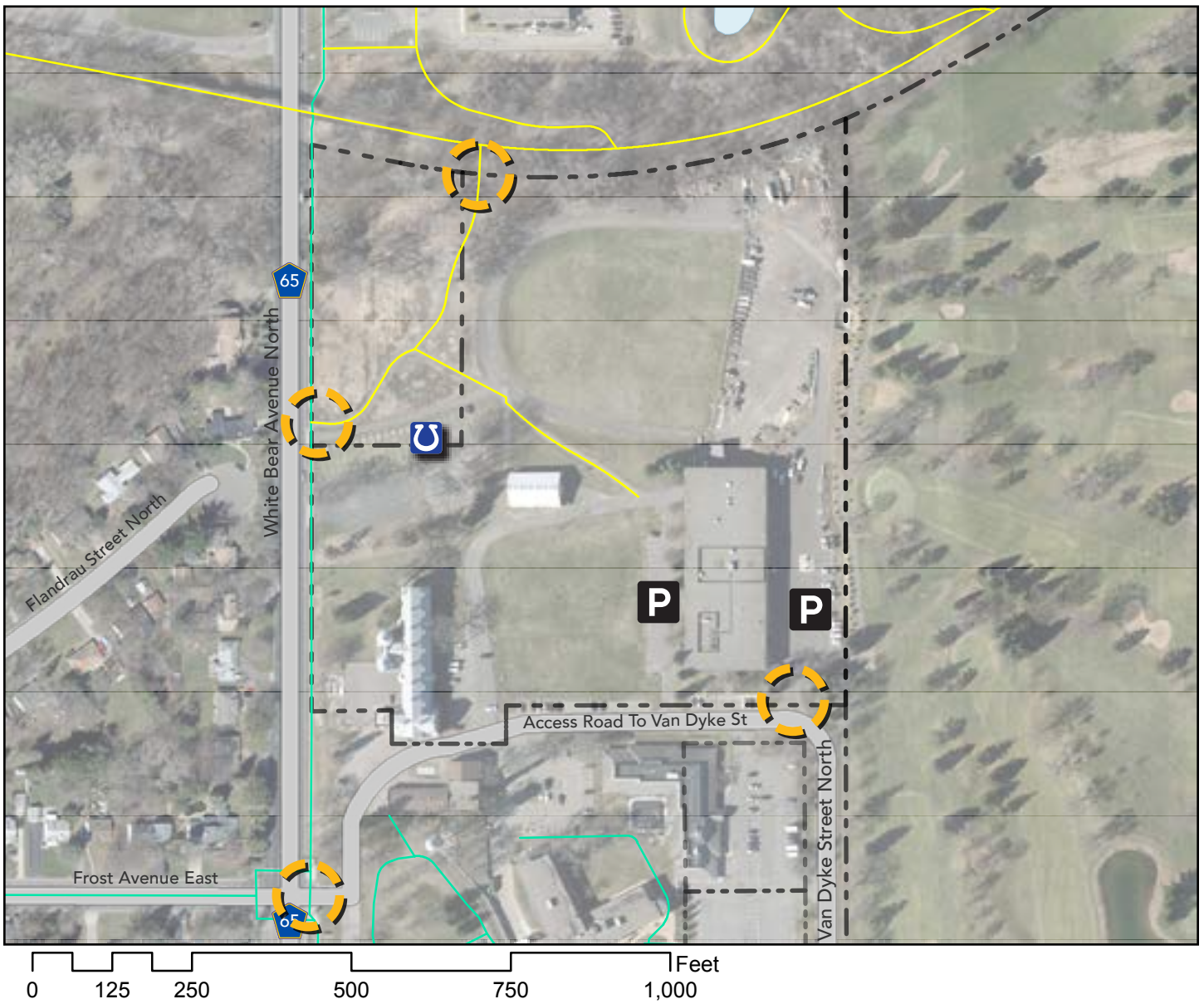
The site contains the administrative office of the department, maintenance and operations crews also stage equipment here, the Ramsey County Extension Barn, Poor Farm Cemetery, county horseshoe pits, along with open lawn spaces.



### RECREATION DEVELOPMENT

Horseshoe Pits.

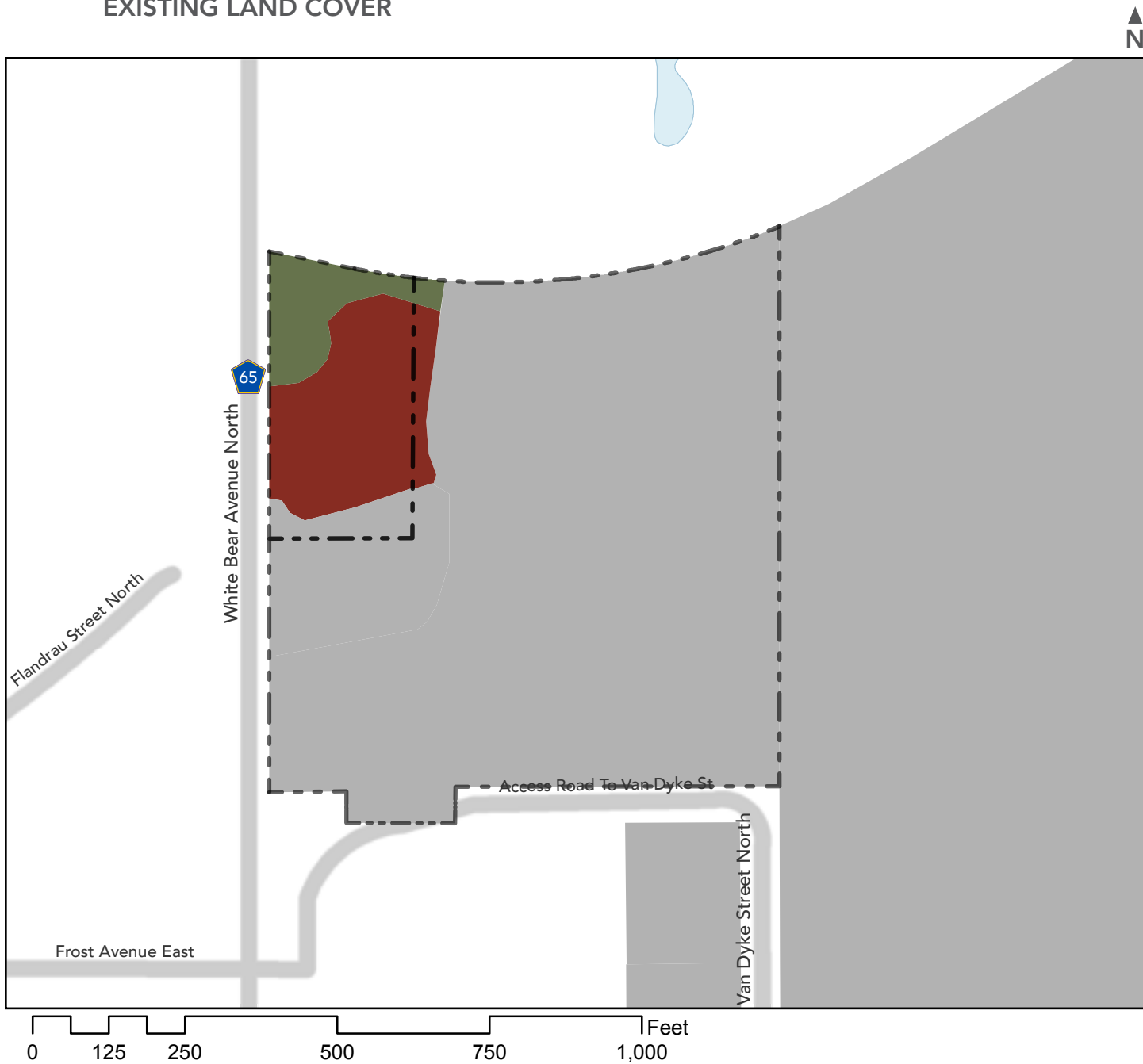
EXISTING CONDITIONS



Legend

- |                     |  |                    |  |                |  |
|---------------------|--|--------------------|--|----------------|--|
| Park Border         |  | County Paved Trail |  | Parking Lot    |  |
| Park Entrance       |  | Municipal Trail    |  | Horseshoe Pits |  |
| Opportunity Area    |  | Municipal Sidewalk |  |                |  |
| Constraint Area     |  | Regional Trail     |  |                |  |
| Metro Transit Stops |  |                    |  |                |  |

EXISTING LAND COVER

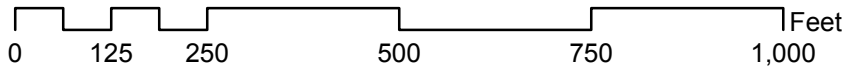


Existing Land Cover

- |                     |                   |            |                 |
|---------------------|-------------------|------------|-----------------|
| Active Use          | Floodplain Forest | Oak Woods  | Remnant Prairie |
| Impervious          | Mesic Forest      | Old Field  | Savanna         |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp     |
| Tamarack Swamp      | Wetland           | Open Water |                 |



PROPOSED DEVELOPMENT



Legend

- |                           |  |                             |  |                           |  |
|---------------------------|--|-----------------------------|--|---------------------------|--|
| Park Border               |  | Park Paved Trail            |  | Regional Trail            |  |
| Proposed Development      |  | Park Turf Trail             |  | Proposed Regional Trail   |  |
| Proposed Development Node |  | Municipal Trail             |  | Proposed Paved Park Trail |  |
| Metro Tranist Stop        |  | Municipal Ped/Bike Facility |  |                           |  |

## PROPOSED DEVELOPMENT

### 1. Master Planning

No master plan has been prepared for the Parks & Recreation Administration Building Campus. Due to changing trends of park and recreation facilities, demographics, and the need to provide improved recreational facilities, a detailed master planning will be addressed as needs arise for improvements to park and recreation amenities, fairground, open space areas, the maintenance yard, parking, trails, sidewalks, and connectivity with adjacent buildings.

- Develop partnerships with the city of Maplewood, Ramsey County Care Center, Ramsey County Family Service Center, Ramsey County Property Management, University of Minnesota Extension Services, and Ramsey-Washington Metro Watershed District (RWMWD) for funding strategies, increased recreational opportunities, storm water management best practices and proposed improvements to the campus.

### 2. Parks Administration Building

The parks administration building is the main location for park and recreation administrative staff, park maintenance staff, Goodrich Golf Course staff, maintenance operations, yard storage, and mechanic operations. Master planning activities have started to develop spatial diagrams for improvements within the administration building for offices, meeting spaces, safety and security, and an improved building entrance and lobby areas. Additional master planning activities will be required for more detailed plans of the building for maintenance and mechanic operations, energy efficiency improvements as identified in the Ramsey County Parks Energy Plan, as well as entrance and landscape improvements. Improvements should comply with the Americans with Disabilities Act (ADA) and Universal Design standards.

### 3. Maintenance Yard

The maintenance yard was developed with the administration building in 1985 and has had various improvements. In 2015 the upper maintenance yard and parking area was retrofitted to accommodate stormwater management best practices, parking, vehicular circulation, an updated fuel system, screening from Goodrich Golf Course, and security. The entrance road to the lower maintenance yard area was completed with this project along with the addition of an outdoor wash bay. Due to changing service levels of park and recreation facilities, additional redevelopment is proposed for the lower maintenance yard to improve stormwater management practices, equipment parking, material storage, vehicular circulation, and access to the lower storage area. Master planning activities will be required for more detail on improvements to the lower maintenance yard.

### 4. Goodrich Golf Course

Goodrich Golf Course staff and maintenance activities are accommodated in the parks administration building. Due to changing service levels for the golf course, redevelopment within the building and adjacent area on the east side of the building may need to occur. Master planning activities for a county-wide golf course study began in 2018 to determine long term use and improvements for golf courses within the park system.

## PROPOSED DEVELOPMENT

### 5. Ramsey County Fairgrounds

The Ramsey County Fair utilizes the large turf area west of the park administration building and lower maintenance yard for fairground operations. Other space is utilized for fair events and exhibits in the pole barn, maintenance storage bays within the parks administration building, and Poor Farm building located adjacent to White Bear Avenue. Master planning will be required to identify any improvements. Improvements may consist of vehicular and pedestrian access, event areas, a bandshell or performance area, entrances, landscaping, and recreational amenities. Dependent on fairground use there may be an opportunity to repurpose the old circle track for stormwater management and improved recreation opportunities.

### 6. Community Events

There is a need to accommodate outdoor concerts and community events such as a bandshell or performance area.

### 7. Poor Farm Cemetery

The area north of the horseshoe courts adjacent to White Bear Avenue is a historic cemetery where nearly 3,000 people are buried in unmarked graves. Current maintenance operations consist of weed management and natural turf maintenance. No additional improvements are proposed for this area. Protection of the cemetery is required.

### 8. Horseshoe Courts

Due to changing trends, demographics, and the need to provide improved recreational facilities, detailed master planning will be occur in the future to address court play and maintenance, pedestrian connections, and parking as needs arise.

### 9. Trail Development and Pedestrian Access Points

Redevelop existing trail connections and provide improved pedestrian access to the facility from White Bear Avenue, Ripley, Van Dyke Street, and the Gateway State Trail. Master planning will be required to determine new pedestrian and vehicular access points.

Redevelop the existing access point from the Gateway trail into the complex. New access points are proposed at White Bear Avenue, Ripley, and along Van Dyke Street to provide improved pedestrian access.

Examine and redevelop the trail network throughout the complex for improved access to recreational amenities, and adjacent building. New trail development is proposed and will require additional master planning activities.

## PROPOSED DEVELOPMENT

### 10. Vehicular Access

Redevelop and increase parking for improved access. Dependent on long-term use of the area there may be a need to redevelop access points from adjacent streets for improved vehicle accesses and circulation through the site. Master planning activities and coordination among the site's users will be required for expanding or reconfiguring parking.

**-Administration Building West Lot:** A mill and overlay was completed in 2012 and will require future pavement maintenance. Additional parking is proposed due to an increase in demand.

**-Administration Building East Lot:** A mill and overlay was completed in 2012 and will require future pavement maintenance.

**-Van Dyke Street Parking:** Located directly in front of the administration building along Van Dyke, a mill and overlay was completed in 2012 and will require future pavement maintenance. This is a shared parking area for the Park Administration Building, Aldrich Arena, Golf Dome, Ramsey County Care Center, Fairgrounds, Poor Farm Barn, and the Ramsey County Family Service Center. A mill and overlay will be required for this parking area. Parking expansion is proposed due to an increase in demand. Coordination will be required among all users for improvements and funding strategies.

**-Van Dyke Entrance Road:** This is a shared entrance road for the Park Administration Building, Aldrich Arena, Golf Dome, Ramsey County Care Center, Fairgrounds, Poor Farm Barn, and the Ramsey County Family Service Center. A mill and overlay will be required. Parking expansion is proposed due to an increased demand. Coordination will be required among all users for improvements and funding strategies.

-During any parking lot redevelopment additional parking should be considered along with improved pedestrian connections, signage, stormwater management best practices, and site amenities.

### 11. Wayfinding

Improve pedestrian signage for improved wayfinding to trail accesses and other amenities. Development of pedestrian entrance signage will need to be coordinated with adjacent building user groups.

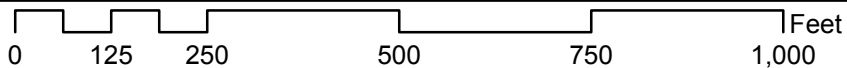
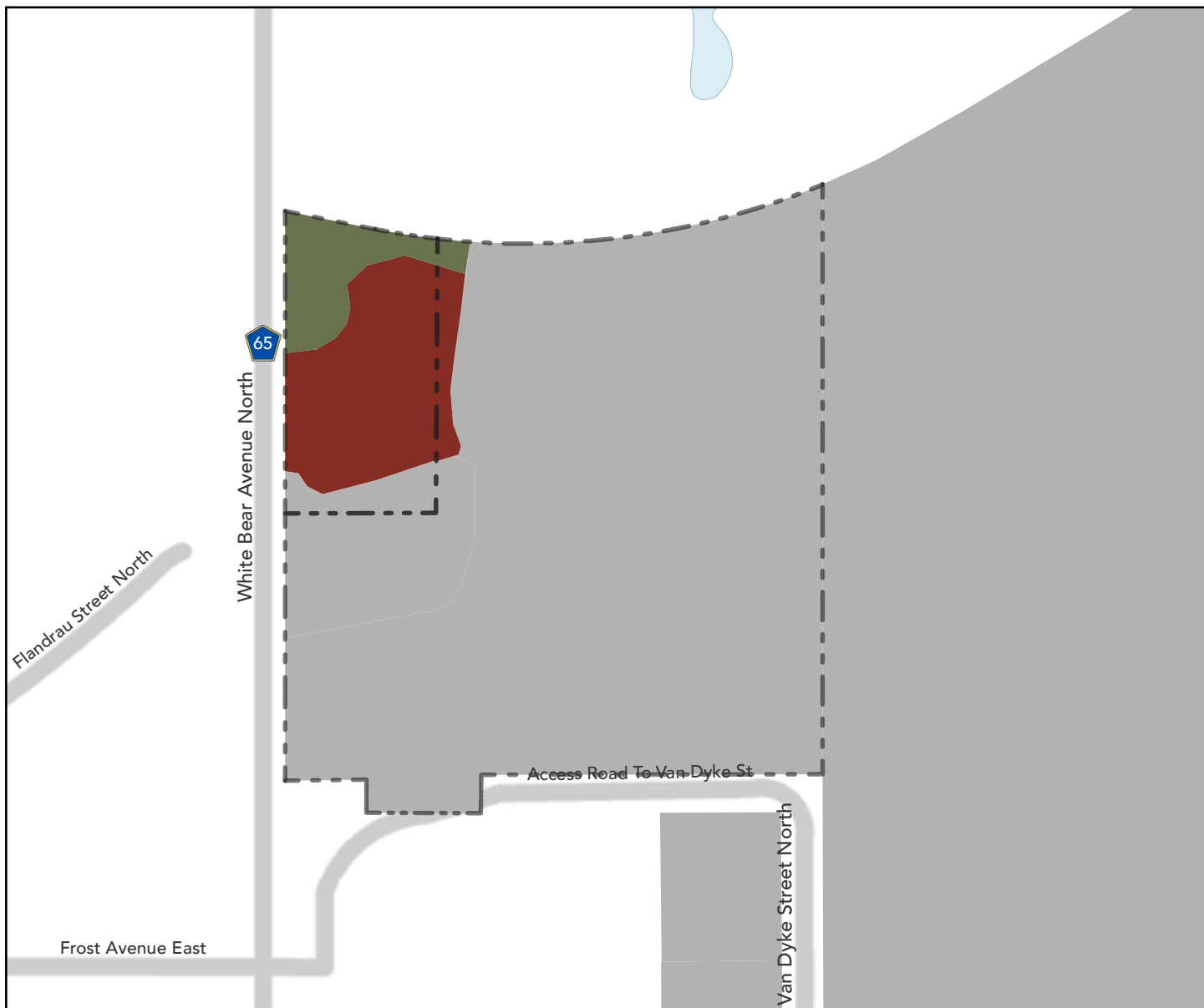
Improve vehicular entrance signage for better wayfinding to access the complex. Development of vehicle entrance signage will need to be coordinated with other adjacent building user groups.

All signage should conform to the Ramsey County Parks & Recreation Wayfinding Master Plan.

### 12. Recreation Opportunities

- **Community Event Building:** Develop a community event building, such as a bandshell or performance area along with restrooms, to provide enhanced recreational amenities for the fair, outdoor concerts, and other community events. Development of building structures should comply with the Americans with Disabilities Act (ADA) and universal design standards.
- **Playground:** Development may be proposed with new development areas. Master planning will be required for determining appropriate playground opportunities.

PROPOSED LAND COVER



Proposed Land Cover

- |                     |                   |            |                   |
|---------------------|-------------------|------------|-------------------|
| Active Use          | Floodplain Forest | Oak Woods  | Prairie (remnant) |
| Impervious          | Mesic Forest      | Old Field  | Savanna           |
| Cultivated Conifers | Mixed Woods       | Prairie    | Shrub Swamp       |
| Tamarack Swamp      | Wetland           | Open Water |                   |

## COMMUNICATION PLAN

Effective communication and resident engagement is essential for strong management of the parks system. A communication plan will be developed to ensure that public engagement goals are met.

The scope of the communication plan will include:

- Social media
- Web content
- GovDelivery email notifications
- Local media outreach
- Print collateral

# COMMUNITY ENGAGEMENT

Successful public engagement requires building trust, understanding, and a foundation for informed consent between department officials, residents, and other stakeholders. An effective public engagement program combines technical competence, honesty, integrity, good listening and responsiveness through:

- Early and continuous participation of stakeholders.
- Reasonable availability of project information.
- Collaborative input on the preliminary planning.
- Open access to the decision-making process.
- Ongoing engagement through a variety of channels to reach community members throughout the development process.
- Proactive efforts to inform the public and engage them in the process, including those groups that are often underrepresented in design processes, namely people of color, immigrants, young people, renters, people with any disability, low-income residents, and people with limited English proficiency.

# HOW DO WE GET THERE

## FUTURE PLANNING VISION 2040

The County Board has established the Vision, Mission and Goals for Ramsey County. They are:

- Strengthen individual, family and community health, safety and well-being through effective safety-net services; innovative programming; prevention and early intervention; and environmental stewardship.
- Cultivate economic prosperity and invest in neighborhoods with concentrated financial poverty through proactive leadership and inclusive initiatives that engage all communities in decisions about our future.
- Enhance access to opportunity and mobility for all residents and businesses through connections to education, employment, and economic development through our region.
- Model fiscal accountability, transparency and strategic investments through professional operational and financial management.

Parks & Recreation has established objectives, strategies, and performance measures to work towards achieving the goals set forth. These are established during the budgeting process and updated as needed.

This section identifies methods and initiatives that can keep efforts moving in a positive direction. There is also an explanation of how ideas are processed. Many ideas come to the department from a variety of sources. How those ideas are handled is key to building a system that meets the needs and interests of the county while meeting the goals established by the county board. Holding ideas up to the vision, mission, and goals is one step to discern whether to keep that idea moving forward, or not.

The same goes for existing facilities, programs and services. Do they still meet the needs and interests of the county and do they contribute to the vision, mission, and goals? If not, there must be a willingness to discard or change what does not align. Here are some of the ways to reach the desired future:

### Partnerships

Most major projects require collaboration and working partnerships. Building quality relationships will be vital to achieving project and program success. One example of partnership includes the Ramsey County Parks & Recreation Commission meeting with park commissions from cities within the county. These entities meet to coordinate plans and synchronize development projects. Annual communication also takes place with Parks & Recreation staff and staff from each of the cities in Ramsey County. A list of current partners is included in the Park System Plan.

### Relationship Building

Building relationships in the community is vital to developing effective partnerships. There needs to be a connection on an individual and agency-wide level. Transactional relationships are adequate for getting things done at a basic level but do not necessarily build towards deeper connection and greater outcomes. A sense of trust is important for relationships to endure. Sincerity, consistency, and competency are the three foundations of trusting relationships.



### Establish a Foundation

Creating a non-profit parks and recreation foundation, led by a diverse board, is one tool that can build support and provide funding for major initiatives. The foundation will be an independent group that can support the park system. This offers a blend of the public, private and non-profit communities to come together for the greater good. The foundation might be more nimble to respond to urgent needs as well as lead campaigns for large capital plans.

### Responsive Staff

Customer service is the basis for public service. Parks & Recreation has been established to offer places and programs to serve the leisure time interests of the community. Staff working in the department must be service oriented. Staff that look for partnerships, work at building relationships, and are tuned into the community will be more responsive. A department goal is to build a more racially diverse staff team. A staff that better represents the racial make-up of the community will be perceived as a more responsive staff and more aware of the needs and interests of those they serve.

### Working with the Regional System and the Implementing Agencies

The Metropolitan Council, the state legislature, the Governor, the Department of Natural Resources, and the Greater Minnesota Regional Parks System are all vital to funding capital projects, operation and maintenance work and the future of the Legacy program. Advanced cooperation and collaboration can improve how these groups work together to increase the quality of life for parks and recreation users. This relates to building relationships that result in better communication when contentious issues arise.

### Continuous Improvement

To improve services Parks & Recreation staff must work more efficiently and effectively to meet the needs of the public. Developing a culture of continuous improvement will require critical thinking, more intentional fostering of suggestions/ideas from staff, and encourage recipients of services to provide feedback.

Other methods for advancing the Parks & Recreation vision include:

### Adopt a Work Plan for Advancing Racial Equity that Includes

- Racial and ethnic diversification of the workforce.
- Utilize a racial equity lens when analyzing projects, programs, services, policies, procedures, and ordinances.
- Evaluate Parks & Recreation's effect on racial disparity and racial equity.
- Increase the use of minority-owned businesses for contract work.
- Provide racial equity training for Parks & Recreation staff

Short and long-term planning such as comprehensive plans, master plans, capital improvements plans and other similar plans are formal ways that lead to implementation of ideas. Other ideas are derived outside of formal plans. For example, how does staff respond when a resident has an idea or staff is approached by a special interest group wanting their interest implemented? Some are easily implemented without risk, or major impact to operations. However, others may require additional time and consideration to evaluate the impact on provided level of services. Steps to address this process are identified below.

### How Does An Idea Come to Fruition?

1. Community Engagement – develop and nurture relationships in the community. Establish meaningful ways to meet residents, such as, meeting them where they are at instead of having them come to staff. Provide constant, consistent relationship which in-turn, keeps the relationship flowing. Once these relationships are established, ideas will begin to develop.
2. Master Plan Review – Be sure the idea fits into the overall planning effort for that particular facility. The idea must be examined for relevance to the vision, mission, and goals.
3. Internal Reviews – Complete reviews by department staff, county-wide staff, and senior leadership staff for relevance to the vision, mission, and goals of the county
4. Partner Review – Coordinate planning efforts and project review with partners to ensure ideas coincide and compliment, but do not conflict with other plans.
5. Commission Review – Present idea(s) to the Parks & Recreation Commission for feedback. There may be further research that comes from this step.
6. Stakeholder Review – Meet with stakeholders directly impacted by the idea.
7. Draft Plan – Further refine the idea through a draft plan that addresses opportunities and constraints and steps for implementation.
8. Public Comment – Provide a public review comment period for the draft plan. A variety of presentation methods may be required for meaningful engagement.
9. Plan – Present the formal plan for approval.
10. Implementation – Make the idea a reality. This step will require significant coordination and public notice to ensure minimal impact to adjacent residents and park users.
11. Evaluation – Formal review of the implementation to determine how public and stakeholder feedback can improve the idea.
12. As part of the formal process, mechanisms should be put in place to allow for change or the introduction of ideas outside of the plan if the idea dramatically alters service or impact goals. In addition, it is important to recognize idea outcomes may be challenging to meet and may require change in order to fully reach desired outcomes.

# 10 YEAR PLAN IMPLEMENTATION PRIORITIES

So often, plans are developed and then proceed to sit on shelves and gather dust. Much time and energy goes into the development of plans that are meant to provide short and long-term guidance. There are several plans that have been recently developed as living documents that impact daily operations. These plans are revised periodically and will be prominent in the focus for the next ten years.

The Capital Improvement Program is a six-year plan that prioritizes projects, both regular and major. The plan is revised and updated every two years in conjunction with the county budget cycle. Work has begun on the next six year plan for the 2020-2021 county budget cycle. Future capital projects are placed in the following four years as placeholders but are not officially funded. This allows for some flexibility should the priorities shift or new ones emerge. Please see the table below for the six year estimated budget:

RAMSEY COUNTY PARKS & RECREATION CAPITOL IMPROVEMENT PROGRAM 6 YEAR PLAN 2020-2025 (ESTIMATED SUMMARY)								
PRI-OR-ITY	PROJECT OR ITEM	TOTAL PROJECT COST	ESTIMATED COST					
			2020	2021	2022	2023	2024	2025
REGULAR COUNTY CIP PROJECTS (UNDER \$1 MILLION)								
1	NORTH OWASSO BOULEVARD COST SHARE	\$490,000	\$490,000	-	-	-	-	-
2	CAMPUS MASTER PLAN	\$200,000	\$200,000	-	-	-	-	-
3	NATURAL RESOURCE HABITAT RESTORATION - COUNTY PARKS	\$600,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
4	BATTLE CREEK WINTER RECREATION AREA	\$200,000	-	\$200,000	-	-	-	-
5	BITUMINOUS PROJECTS	\$2,270,817	\$263,797	\$107,238	\$263,603	\$373,283	\$856,508	\$406,388
6	CAPITOL ASSET MANAGEMENT-ARENAS	\$2,996,000	\$185,000	\$225,000	\$995,000	\$990,000	\$233,000	\$368,000
7	PLAYGROUND REPLACEMENTS	\$2,100,000	-	\$300,000	\$600,000	\$600,000	\$300,000	\$300,000
8	ASH TREE REMOVAL AND REPLACEMENT	\$450,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000

## 10 YEAR PLAN IMPLEMENTATION PRIORITIES

RAMSEY COUNTY PARKS & RECREATION CAPITOL IMPROVEMENT PROGRAM 6 YEAR PLAN 2020-2025 (ESTIMATED SUMMARY)								
PRI-OR-ITY	PROJECT OR ITEM	TOTAL PROJECT COST	ESTIMATED COST					
			2020	2021	2022	2023	2024	2025
<b>REGULAR COUNTY CIP PROJECTS (UNDER \$1 MILLION)</b>								
9	ADA IMPLEMENTATION - COUNTY FACILITIES	\$1,200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000
10	WOODVIEW OFF LEASH DOG AREA MASTER PLAN	\$75,000	-	\$75,000	-	-	-	-
11	SATELLITE MAINTENANCE FACILITY	\$1,966,000	-	-	\$983,000	\$983,000	-	-
12	POPLAR LAKE COUNTY PARK MASTER PLAN	\$300,000	-	-	\$300,000	-	-	-
13	CAPITOL ASSET MANAGMENT - PARKS (OVER \$50K)	\$100,000	-	-	-	-	\$100,000	-
14	GREEN ICE	\$871,062	-	-	-	-	-	\$871,062
<b>LARGE COUNTY CIP PROJECTS (OVER \$1 MILLION)</b>								
1	GOLF STUDY PROJECTS	\$11,562,246	\$3,677,311	\$2,432,935	\$2,500,000	-	\$2,952,000	-
2	HIGHLAND PARKING LOT	\$4,110,872	\$4,110,872	-	-	-	-	-
3	BITUMINOUS PROJECTS	\$2,395,938	-	\$1,395,485	\$260,974	\$105,688	\$259,512	\$373,279
4	ADMINISTRATION BUILDING RENOVATION	\$3,943,364	-	-	\$220,500	\$3,722,864	-	-
5	VADNAIS LAKES TRAIL	\$4,667,120	-	-	-	-	\$4,667,120	-
6	ARENA REGULATORY COMPIANCE	\$4,138,818	-	-	-	-	-	\$4,138,818

## 10 YEAR PLAN IMPLEMENTATION PRIORITIES

RAMSEY COUNTY PARKS & RECREATION CAPITOL IMPROVEMENT PROGRAM 6 YEAR PLAN 2020-2025 (ESTIMATED SUMMARY)								
PRI-OR-ITY	PROJECT OR ITEM	TOTAL PROJECT COST	ESTIMATED COST					
			2020	2021	2022	2023	2024	2025
REGULAR COUNTY CIP PROJECTS (UNDER \$1 MILLION)								
REGIONAL PARK & TRAIL CIP/LEGACY								
-	REGIONAL PARK & TRAIL CIP/LEGACY	\$13,882,477	\$2,916,220	\$1,510,557	\$3,072,925	\$1,654,925	\$3,072,925	\$1,654,925
-	REGIONAL HABILITATION OPERATION & MAINTENANCE (LOTTERY IN-LUE STATE FUNDS)	\$2,850,000	\$475,000	\$475,000	\$475,000	\$475,000	\$475,000	\$475,000
NATURAL RESOURCE - REGIONAL PARKS & TRAILS								
-	CONSERVATION PARTNERS LEGACY PROGRAM (CPL)	\$1,200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000
-	LESSARD SAMS OUTDOOR HERITAGE COUNCIL - PIGS EYE LAKE ISLANDS	\$4,337,000	\$4,337,000	-	-	-	-	-
COUNTY CAPITOL ASSET MANAGEMENT PLAN (UNDER \$50K)								
-	CAPITOL ASSET MANAGEMENT - PARKS (UNDER \$50K)	\$4,440,000	\$740,000	\$740,000	\$740,000	\$740,000	\$740,000	\$740,000
TOTALS		TOTAL	2020	2021	2022	2023	2024	2025
		\$71,346,714	\$17,970,200	\$8,037,215	\$10,986,002	\$10,219,760	\$14,231,065	\$9,902,472
NOTE: THE OVERALL PARKS CIP IS UPDATED EVERY TWO YEARS AS PART OF THE COUNTY BUDGET PROCESS								

Master plan updates (with improved community engagement) will be methodically revised until the system is completed. To project what each park will look like and what facilities and amenities are included would be presumptuous and ignore the community engagement process. Every aspect will include some form of engagement and will specifically examine opportunities to eliminate racial disparities.

The Natural Resources Plan maps out the methods and priorities for protecting, preserving, and maintaining the natural resources of the park system. Funding opportunities are key to implementation of the plan. Regular funding through the capital improvement plan began in the 2018-2019 budget.

## 10 YEAR PLAN IMPLEMENTATION PRIORITIES

The Arena System Plan, as presented by a task force in 2016, will help guide work over the next ten years. Arenas are prioritized in order of importance based on current demand and condition. Lower priority arenas may provide an opportunity for repurposing should demand decrease in the future. Three arenas, Aldrich, White Bear County and Shoreview, are the first to be redeveloped. Charles M. Schulz -Highland Arena will see redevelopment in the 2020-2021 budget cycle. Replacing the refrigeration system is a top priority along with building improvements.

The Bicycle and Pedestrian Plan, completed in 2016, will guide the work in this area for the next ten years and beyond. Short term goals are to fill gaps in the network system, continue with ongoing maintenance and rehabilitation of the existing system, and plan for opportunities to develop the system further. Connecting the system within the county and to surrounding trails will be important work over the next ten years.

A Golf System Plan will be developed from a comprehensive analysis of the golf courses in Ramsey County in 2018. This will determine work within the courses for the immediate future. It is anticipated that the analysis will highlight improvements to customer service, market corrections, physical rehabilitation and preparations necessary to meet future community demands.

Redevelopment of county parks continues systematically. After Lake Owasso County Park is redeveloped in 2017-2020, the process of redevelopment begins at Beaver Lake County Park. All other county parks will follow. This methodical redevelopment provides an opportunity to meet the changing needs and interests of the ever-changing population of Ramsey County. Community engagement will be vital to redesigning these parks which tend to be more locally based. Creating a non-profit parks and recreation foundation for Ramsey County parks will begin within the next ten years. Formation of this non-profit group, with a board to lead the effort, will take time and energy. Board member selection will need to be done carefully to ensure an effective group of leaders that can establish an impactful organization that supports the mission of parks in the county.

Another financial focus is to create a method for funding the purchase of in-holdings. This may happen in conjunction with the foundation or in combination with a variety of funding methods. Having the ability to purchase properties as they become available is important to grow and complete the system.

Park maintenance standards will be a priority to help Parks & Recreation operate effectively and efficiently. The asset management system will eventually allow for improved data collection that can help analyze the operation and improve maintenance planning efforts. Resource allocation can be justified through the data.

The Energy Plan for the county and the Green Spaces, Green Places energy initiative created by the department will help Parks & Recreation work towards goals of reduced electricity and natural gas use. This effort will provide an economic benefit and better align the department with natural resource and environmental stewardship improvement goals.

The park ordinance is the legal policy in place used for instruction, guidance, enforcement and protection of the parks, natural resources, and people who use them. Keeping the rules and laws current and relevant to the community is important.

## DELIVERING THE VISION

How does Parks & Recreation deliver the vision set forth by the county board, “a vibrant community where all are valued and thrive”? For decades the park system has delivered places and programs where many are valued and thrive. The challenge is to go further and make Ramsey County parks vibrant for all community members. Data shows that Park visitors are in lower percentages of people of color than exist in the general population.

Following the mission, “a county of excellence working with you to enhance our quality of life,” will be the guiding principle to deliver the vision. Working on established goals will further demonstrate how that vision is achieved. Each employee of the county will then use objectives and strategies that dive deeper into specific methods to make the vision a reality.

### Diversify the Workforce

This demonstrates to the community that parks staff are reflective of everyone in the community and can relate to their interests and needs. The county is looking to implement changes that will influence the attraction, retention and promotion of talent and much effort will need to be exerted to change the internal culture that persists.

### Develop Relationships in the Communities Underrepresented

This involves reaching out to all community members and will take intentional effort and focused resources. These communities are more difficult to reach and therefore take more resources to connect with as compared to the general population. The staff that reflects the community will help make this connection. New and different methods of outreach will be employed to build those relationships so critical to hearing voices not heard before. Use of a racial equity toolkit will help maintain the lens and eliminate disparities. The toolkit will inform all policies, procedures, facilities and planning for every aspect of the department.

### Listen

The majority of time needs to be spent listening. What are residents saying? What messages are important to hear? Remove the barriers and focus on ways to enrich the conversation. The government exists to serve, not dictate to the residents.

### Racial Equity Toolkit

Use as a racial equity lens for analysis of programs, policies, procedures, budgeting, capital planning—everything Parks & Recreation does. This is a formal method to listen and learn and respond appropriately. The toolkit involves a series of steps to analyze a project, program, or service from a racial equity perspective. The toolkit will help formalize the process that will eventually become the way of doing business. This is needed to break from traditional thinking that yields the same results. All that is delivered will benefit all people.

### Lead

Much of this effort takes leadership. The ability to inspire people to move forward, grow and change. To persevere even when resistance is blowing in the face of the leader. Knowing and believing in justice and what will benefit all, the community as a whole, not just the majority and not just a minority

## DELIVERING THE VISION

The communication section describes the methods for keeping the public informed. General lack of awareness seems to be a major barrier to getting people out to the parks and trails. Increasing awareness will improve the use of the system. The open data portal will be one tool that can provide the public with information that they are looking for while telling important stories about the impact of Parks & Recreation on the community.

The operations and maintenance division within Parks & Recreation will standardize their operation. This will provide for effective and efficient use of resources. The standards will also provide justification for future budget needs. As the system changes, the use of data through asset management will improve operations. The ability to model impacts of change to the system will improve resiliency, sustainability, and channel resources to essential areas.

Keeping natural resources front and center is primary to the mission of the Parks & Recreation department and should direct decisions moving forward. Consolidating Ramsey County staff that address natural resource work may be a direction for consideration.

Resiliency, sustainability and green energy are all related to the work of Parks & Recreation. Focus on these areas will set the department up for long-range viability and keep the synchronicity of how environmental stewardship is linked to parks.

Maintaining partnerships, including private and nonprofit organizations, municipalities, and intergovernmental entities, provides an approach for accountability, collaboration, and opportunity to expand or enhance Parks & Recreation opportunities. It is anticipated that over time, additional relationships may be established and formalized to enhance public services.



## FUNDING THE VISION

Funding is a major factor in the implementation of the plan. Funding can be variable and limiting, so prioritizing elements within the plan is essential. This plan relies upon multiple funding sources that include, but are not limited to:

**Tax Levy:** Currently the operating budget for Parks & Recreation is supplied approximately one-third (33%) from the tax levy.

**Revenue:** The balance of the operating budget is generated through fees and charges and some of the other funding sources listed below.

**O & M Regional Parks & Trails Funding:** The State legislature provides the Met Council with operation and maintenance funding that is distributed among the ten implementing agencies of the regional park system. Ramsey County's share varies with the funding amount. Recently the share has covered approximately \$250,000 of the \$6 million cost to maintain and operate the six regional parks and six regional trails in the system

**Parks & Trails Legacy Fund:** The State provides this funding through a portion of the sales tax to the regional park system. This can be used to fund projects, programs, positions and other initiatives that meet the four pillars of the program – Create, Connect, Coordinate, Care for.]

**Capitol Improvement Program - Regional Parks:** The State provides bonding for capital projects every two years. Every \$3 in bond funds are matched with \$2 in Met Council bond funds. Ramsey County receives a portion based on a formula.

**Capitol Improvement Program - County:** Ramsey County has a Capital Improvement Program funded through the sale of bonds.

- Major Projects – are projects over \$1 million
- Regular Projects – are projects under \$1 million.

For more information on the parks 2020-2025 CIP budget, refer to pages 528-530.

**Federal Transportation Grants:** In recent years the status of these grants has been uncertain due to the volatile federal budget. The program funds trail projects.

**All Abilities Transportation Program:** A Ramsey County Policy which will vet all transportation related projects through a lens of the least mobile residents on up to large commercial carriers.

**1/2 Percent Transit and Transportation Sales Tax:** Utilizing the All Abilities Transportation Program policy, this funding source may be the source of some funds after the regional transportation projects are completed.

**\$20 Per Vehicle Excise Fee:** Primarily used for road projects, related trails and trail connections are also a part of many projects.

## FUTURE IDEAS

### Create A Parks & Recreation Foundation 501(c)3

Setting up an independent non-profit foundation would allow for fundraising, donations, and initiatives related to supporting the parks system.

### Sell Park Property and Create a Fund to be Used to Purchase In-Holdings

The fund can receive other sources through donations, grants, and budgetary infusions. Currently, when in-holdings become available, there is no funding source readily available to respond. Ramsey County has a "no net loss" of parkland policy. If land is sold there must be replacement of equal or greater value.

### Establish a Revenue Policy

Fees and charges for programs and services are categorized by a policy. For example, programs, facilities and services of community-wide benefit are usually offered at low or no charge. Other offerings are geared toward a specific audience will be offered at market rates covering some of the cost. Still others that offer exclusive or special interest participation are expected to charge the amount needed to offer the program, facility or service. This philosophy/policy will govern how the activities of the Parks & Recreation department are delivered. The policy also guides the budget development.

The shift towards racial equity and eliminating disparities will usually mean an increase subsidy to offer programs, facilities and services that interest and attract those not currently utilizing existing offerings. The current Parks & Recreation system was built based upon a majority dominant culture, more passive recreation, and relatively few programs. The demand is shifting towards programming, ease of accessibility both physically and financially, and facilities other than those offered in the past.

### Partnerships With Other Government Agencies

Cost-share projects, through government partnerships, provide benefit to all involved. New Brighton, for example, is sharing the cost of a parking lot and rest room within Long Lake Regional Park. The lot and rest room will serve both the regional park visitors as well as the city's Lions Park users.

### School Districts

Partnerships with public schools. Current partnerships helped to build arenas at Harding and Johnson high schools. Other high school hockey teams rent arena use at county facilities. Tamarack Nature Center provides regular programming for partnering schools.

### Partnerships With Other Entities

Cretin-Derham Hall, Hill-Murray, Woodbury and Mahtomedi youth hockey associations fill gaps in arena rental use. The arena flooring at Aldrich is being provided by a vendor through a revenue agreement. This arrangement incentivises the vendor to book and promote events – tasks that Parks & Recreation staff may not have the appropriate expertise and experience to perform – while ensuring that the facility is used in the off-ice season.

### Contract Services

Services such as canoe and kayak rental, food trucks, concessions, Go Ape, yoga-in-the-parks, and bike rentals are examples of contract services that could generate some revenue.

## Revenue Generation Ideas

### Camping

There are currently no camping opportunities within the park system. Camping cabins are a popular amenity for some surrounding county park systems. Metropolitan campgrounds are popular for those visiting the area.

### Sponsorships of Buildings and Facilities

Sponsorship is a portion of the revenue at the Vadnais Sports Center. Naming rights and system-wide sponsorship are other possible expansions of this concept. A county policy could provide revenue for major capital improvements to facilities.

### Advertising

The sale of display ads on hockey boards and Zambonis . electronic ads, sign ads at facilities, and ads on vehicles could be a future source of revenue.

### Lease Agreements

Examples of this type of revenue include the golf dome, Island Lake Golf, and the Biff Adams curling club. Future repurposing of other arenas (curling clubs, lacrosse, hydroponics, other business use) are possibilities.

### Operating Agreements

Manitou Ridge, Keller, The Ponds at Battle Creek and Goodrich golf courses all have agreements with the individual golf pros.

### Increase Daytime Users of Indoor Ice

The daytime user is always a sought-after commodity. School use, figure skating clubs, lunch time skates are some opportunities to rent the ice during the weekday time slot.

### Increase Dry Floor Use of Arenas Spring Through Fall

Many attempts have been made to increase use of the indoor arenas outside of the winter skating season. Graduation ceremonies, craft show, markets, roller derby, concerts, rodeos, large family gatherings, and special events are some past uses.

### Revenue Generating Facilities

Use of Aldrich Arena for events such as concerts has filled a niche for smaller sized events. Other facilities could be built to host large events such as festivals and fairs.

# PERFORMANCE MEASURES

Parks & Recreation strategies, methods and goal performance will be measured. These performance measures address goals listed in both the Ramsey County Vision, Mission, and Goals and the Thrive 2040 Regional Park and Trail Policy Plan set by the Metropolitan Council.

## RAMSEY COUNTY PERFORMANCE MEASURES

The Ramsey County Board has established four goals that help deliver their vision and mission. Parks & Recreation sets strategies, objectives and performance measures to contribute to the accomplishment of the goals. The following is a list of some of the ways the department contributes to the county goals:

### Strengthen individual, family and community health, safety and well-being

Through effective safety-net services; innovative programming; prevention and early intervention; and environmental stewardship.

- Provide access to safe and well-maintained county and regional parks, offering a variety of services and facilities that promote healthy and active living for all residents of Ramsey County.
- Provide early learning opportunities with a nature-based curriculum
- Promote environmental stewardship through preservation and restoration of natural resources.

### Cultivate economic prosperity and invest in neighborhoods with concentrated financial poverty

Through proactive leadership and inclusive initiatives that engage all communities in decisions about our future.

- Engage in proactive and constructive partnerships and dialogues with residents from all neighborhoods, races, classes, and cultures.
- Offer programming and facilities that reach across economic levels and allows opportunities for all residents.
- Create and expand opportunities for local, diverse small women and minority-owned businesses and workers through Ramsey County's procurement efforts.

### Enhance access to opportunity and mobility for all residents and businesses

Through connections to education, employment, and economic development through our region.

- Offer educational programming and opportunities, including the classes offered through the Tamarack Nature Center, and provides a field trip destination for schools throughout the region.
- Build, promote and improve pedestrian bike and trail systems that are accessible to all residents of Ramsey County and connect the county to other regional trail networks.

### Model fiscal accountability, transparency and strategic investments

Through professional operational and financial management.

- Reduce energy consumption through strategic energy plan implementation.
- Maintain accreditation through the Commission for Accreditation of Park and Recreation Agencies (CAPRA).

## THRIVE GOALS

In addition to following the Ramsey County Vision, Mission and Goals, this plan also supports the 2040 Regional Parks Policy Plan which, outlines the Metropolitan Council's goals and strategies for the development of world-class regional parks. It reflects the regional vision set forth in Thrive MSP 2040 and describes how the regional parks system will be developed and operated to support Thrive MSP goals. The Council adopted the 2040 Regional Parks Policy Plan February 11, 2015.

The plan strives to build upon the existing good work of our partners to advance equity by committing to several strategies designed to strengthen equitable use of the Regional Park System. The planned regional parks and trails will enable residents to enjoy a variety of new park experiences throughout the region. Policies and strategies for regional parks include:

### Expanding the Regional Parks System

To conserve, maintain, and connect natural resources identified as being of high quality or having regional importance.

### Providing a comprehensive regional park and trail system

That preserves high-quality natural resources, increases climate resiliency, fosters healthy outcomes, connects communities, and enhances quality of life in the region.

### Promoting expanded, multimodal access

To regional parks, regional trails, and the transit network, where appropriate.

### Strengthening equitable use of regional parks and trails

by all our region's residents, across age, race, ethnicity, income, national origin, and ability.

As a requirement for regional parks and trail funding, the department defines performance measures for Capital Improvement Program projects funded through State bonds and Parks and Trail Legacy funds received through the Legacy Fund.

The Parks and Trails Legacy Plan recommends how the Parks and Trails Legacy Fund should be used. The Parks and Trails Fund, one of the four funds created by the Clean Water, Land and Legacy Amendment passed in 2008, receives 14.25 percent of the money raised by the sales tax increase of three-eighths of one percent. The purpose of the amendment is to provide supplemental financial resources to traditional funding sources for support of state and regionally significant park and trail systems.

Legacy outcome measures as indicated in the Parks and Trails Legacy Plan need to be tied to forward four strategic directions, also referred to as pillars or themes. The four are:

- Connect people and the outdoors
- Acquire land and create opportunities
- Take care of what we have
- Coordinate among partners

## PERFORMANCE MEASURES

For both the Parks and Trails Legacy Fund and the Capital Improvement Program there are performance measures tied to a racial equity tool. Agency project proposals answer questions about community engagement, how the project enhances racial equity, and how the project will be measured to determine the impact.

### [Legacy Amendment Parks and Trails Strategic Fund Direction](#)