

Metropolitan Parks and Open Space Commission Report

For the Community Development Committee meeting of July 19, 2021

For the Metropolitan Council meeting of July 28, 2021

Subject: Vadnais-Snail Lake Regional Park Master Plan Amendment, Ramsey County, Review File No. 16402-2

Proposed Action

That the Metropolitan Council:

1. Approve Ramsey County's Vadnais-Snail Lake Regional Park Master Plan Amendment.
2. Require Ramsey County, prior to initiating any development of the regional park, to send preliminary plans to the Environmental Services Assistant Manager at the Metropolitan Council's Environmental Services Division.

Summary of Committee Discussion/Questions

Colin Kelly, Planning Analyst, presented the staff report to the Metropolitan Parks and Open Space Commission at its meeting on July 1, 2021. Gus Blumer, Ramsey County Landscape Architect, was in attendance and responded to questions.

Commissioner Peichel asked whether there would be limitations on fishing from newly proposed boardwalks. Blumer responded the County will be gauging interest and will outfit spaces as needed.

Chair Yarusso asked multiple questions. Yarusso asked about the extent of the boardwalks currently needed, noting that some of the comments he had received favored limiting overall use of boardwalks. Blumer responded that the installation of new boardwalks is dependent on modeling by the Ramsey-Washington Metro Watershed District and that there may be some potential reductions in their use. Ramsey County's goal is to have infrastructure that works in both high and low water conditions.

Yarusso asked about the materials and design to be used for the boardwalks and whether it was possible to dampen the sound boardwalks produce when used, especially by bikes. Blumer responded that installing wood (vs. metal, plastic, or concrete) boardwalks would likely be the best choice and the County will look into ways to reducing noise.

Commissioner Peichel asked multiple questions. Peichel asked whether there were strategies to limit the use of new boardwalks by geese. Blumer responded that boardwalk railings should help keep the geese off of the structures, but that the County will be trying different strategies to reduce their impact.

Peichel noted the difference between the high and low water marks and asked whether the County intended to do any groundwater monitoring. Blumer responded that different agencies have responsibility for monitoring different portions of the regional park. The Department of Natural Resources monitors the lakes while the watershed district monitors other parts of the park. The County does not currently have a plan to monitor groundwater, but it does track surface water levels.

After the proposed actions were moved and seconded, Commissioner Peichel expressed appreciation for the combination of climate and water resilience and improved accessibility in the plan amendment.

Chair Yarusso again referenced the comments he had received about potentially limiting the overall extent of boardwalks, noting that this could be characterized as some measure of opposition to a component of the plan amendment.

The Metropolitan Parks and Open Space Commissioners voted unanimously to approve the proposed action.

Metropolitan Parks and Open Space Commission

Meeting date: July 1, 2021

For the Community Development Committee meeting of July 19, 2021

For the Metropolitan Council meeting of July 28, 2021

Subject: Vadnais-Snail Lake Regional Park Master Plan Amendment, Ramsey County, Review File No. 16402-2

MPOSC Districts, Members: District E, Jeremy Peichel; District F, Cecily Harris

Council Districts, Members: District 10, Peter Lindstrom; District 11, Susan Vento

Policy/Legal Reference: Minn. Stat. § 473.313; *2040 Regional Parks Policy Plan* Planning Policy – Strategy 1

Staff Prepared/Presented: Colin Kelly, AICP, Planning Analyst (651-602-1361)

Division/Department: Community Development/ Regional Planning

Proposed Action

That the Metropolitan Council:

1. Approve Ramsey County's Vadnais-Snail Lake Regional Park Master Plan Amendment.
2. Require Ramsey County, prior to initiating any development of the regional park, to send preliminary plans to the Environmental Services Assistant Manager at the Metropolitan Council's Environmental Services Division.

Background

Vadnais-Snail Lake Regional Park is located near the center of the Regional Parks System in Ramsey County (Figure 1). The regional park consists of 1,696 acres, including the 444-acre Snail and Grass lakes section owned by Ramsey County and located in Shoreview, and the 1,252-acre Vadnais and Sucker lakes section owned by the Saint Paul Water Utility and located in Vadnais Heights (Figure 2).

This master plan amendment focuses on providing a plan for the Snail and Grass lakes section of the regional park to be more resilient to climate change particularly flooding concerns, with specific actions to replace existing park infrastructure including trails, picnic facilities, and parking facilities (Figure 3). The plan amendment will be made to the 1992 Snail Lake Regional Park Master Plan. This plan amendment does not include the Vadnais and Sucker lakes section of the regional park, east of Rice Street, nor does it include sections on stewardship plan, demand forecast, public services, operations, or equity analysis. The sections included in the master plan amendment and this business item were discussed and agreed upon in consultation between Council Parks with the regional park implementing agency, Ramsey County in fall 2019.

The Snail and Grass lakes section of the regional park have had rising surface and groundwaters affecting the region over the past decade. Neighborhoods, park infrastructure, and regional transportation infrastructure have become adversely affected from the result of the high water. Reliance on the natural basins and wetland complexes for flood water storage in the overall watershed have become critical strategies to prevent further negative impacts to the park, the regional transportation system, residential neighborhoods, and business

districts. Much of the available storage for excess water is located within the park land that is encompassed by the regional park system.

The cause of high water has been influenced by many factors including increased annual precipitation, past development in areas of low elevation, higher regional groundwater, segmenting of natural historic surface water courses, and elimination of natural water storage basins.

The outcome of this planning effort will be resilient infrastructure to future high water affecting the park from multiple water bodies and groundwater.

Rationale

The master plan amendment is consistent with the requirements of the *2040 Regional Parks Policy Plan*, including Planning Strategy 1, Master Planning, and other Council policies, as described in the attached Analysis.

Thrive Lens Analysis

The master plan amendment advances the Thrive outcome of Livability by increasing access to nature and outdoor recreation, which enhances quality of life in the region. The plan amendment also advances the Stewardship outcome through responsibly managing the region's finite resources including conserving quality natural resources.

Funding

The master plan amendment estimates \$3,850,000 in development and infrastructure costs.

Approval of the Plan does not commit the Council to any funding at this time. The acquisition and development costs based on this master plan may be awarded through the Regional Parks Bonding Program and the Parks and Trails Legacy Fund Program. Further Council action is required to authorize state and Council funds for regional parks implementing agencies.

Known Support / Opposition

On April 6, 2021, the Ramsey County Board of Commissioners unanimously adopted a resolution to approve the Vadnais-Snail Lake Regional Park Master Plan for submission to the Metropolitan Council (Resolution B2021-083, Attachment 1).

On November 16, 2020, the Shoreview City Council unanimously adopted a resolution supporting the Vadnais-Snail Lake Regional Park Master Plan (Resolution No. 20-91, Attachment 2).

There is no known opposition to the Master Plan.

Figure 1: Regional Parks Open to the Public (2020), Vadnais-Snail Lake Regional Park location

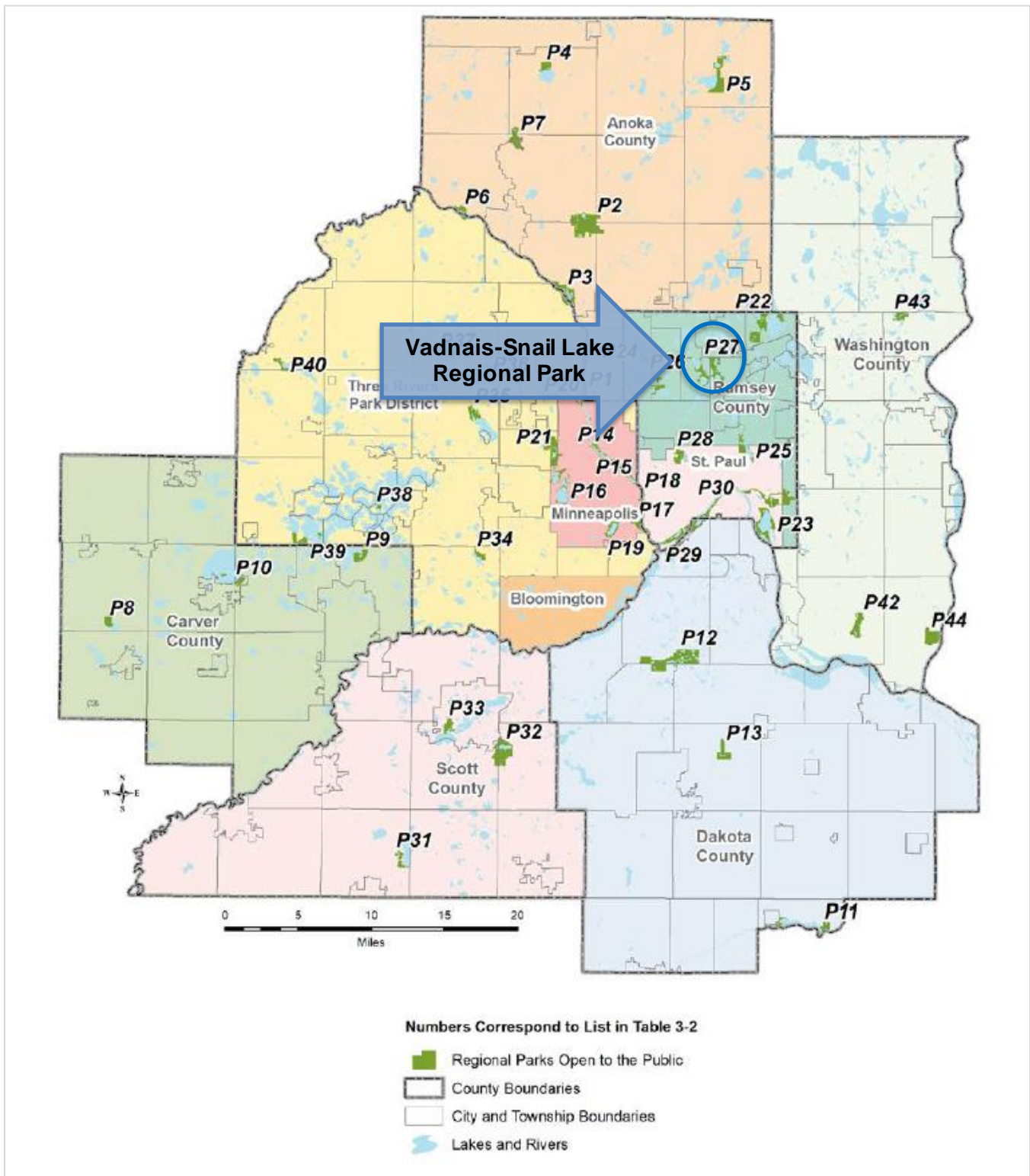


Figure 2: Regional Parks System, Ramsey County

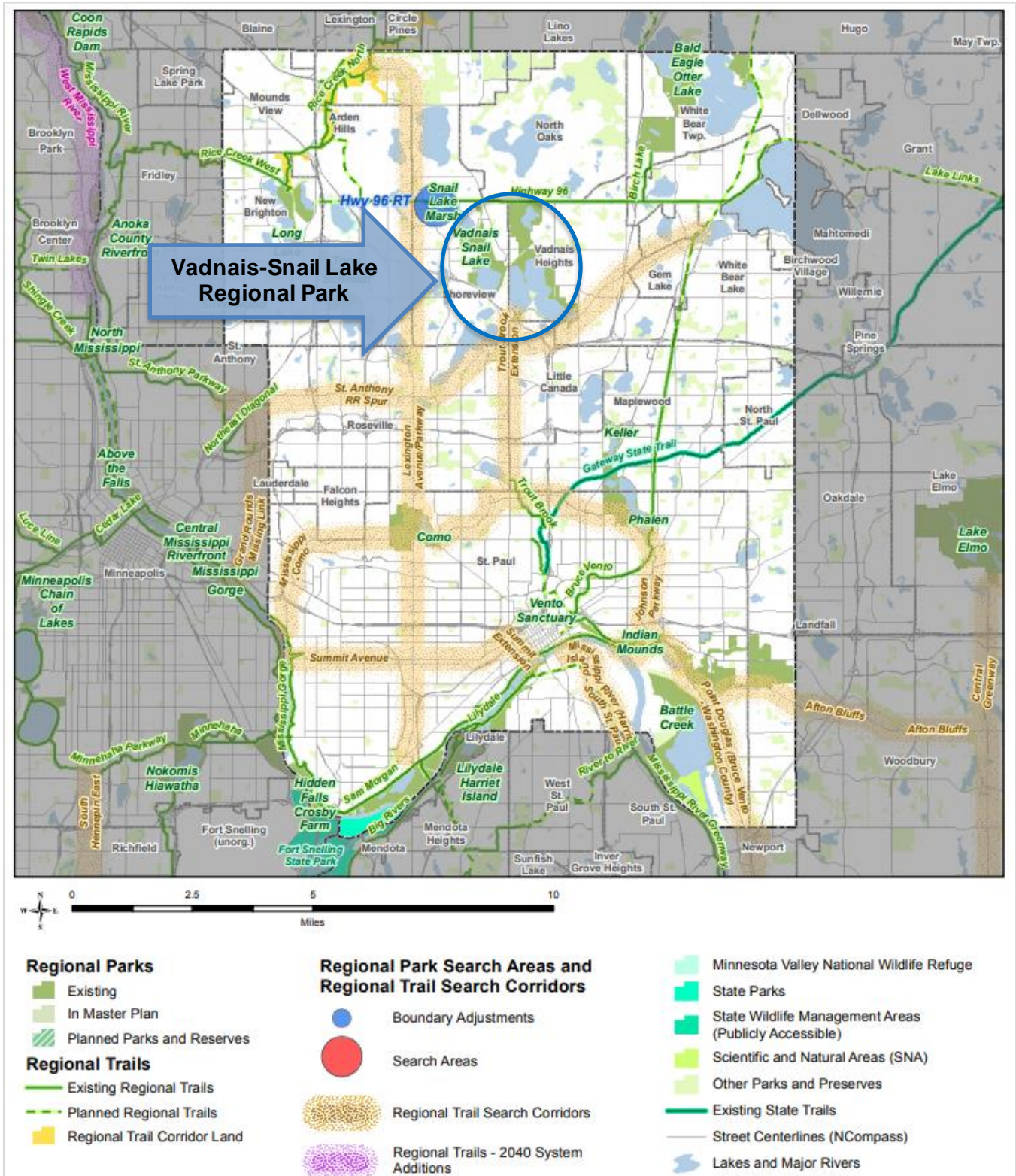
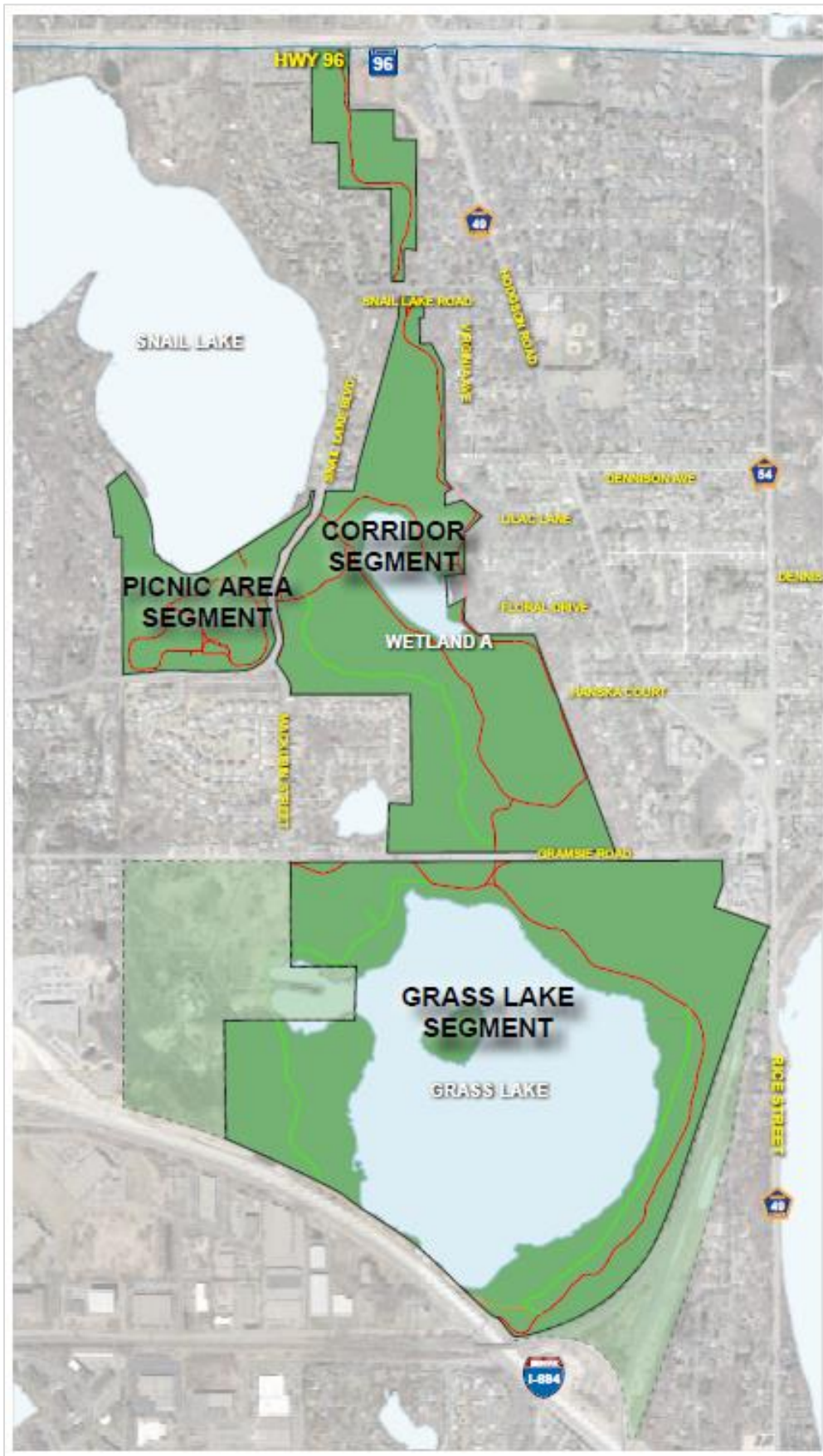


Figure 3: Master plan amendment park areas (MPA Fig. 7)



Analysis

Planning Strategy 1 of the *2040 Regional Parks Policy Plan* requires that master plans for regional parks address the eleven items detailed below.

Public Engagement and Participation

Ramsey County Parks & Recreation staff attended several meetings hosted by other agencies where the discussion of high-water levels was the primary focus. Members of the public were allowed to speak and voice their concerns. Many of the comments from these meetings focused on the flooded trails in the regional park. In addition, due to high water persisting since 2016, County staff fielded a number of calls and emails from the public inquiring about the future of the affected trails prior to the formal planning process beginning.

Staff used the International Association for Public Participation's spectrum to determine the level of engagement that was best suited to this master plan process. Due to the limited scope and focused attention to flooding, the category of "Involve" was selected as an appropriate engagement level to inform this planning process. At this level, the public participation goal is "to work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered."

The engagement process included identifying potential stakeholders, agency partners and resources. In addition, staff assessed demographic information, housing types, and user groups in the communities surrounding the regional park.

At the end of 2019 and in early 2020, Ramsey County staff organized a series of public engagement meetings and online feedback opportunities to gather feedback on the proposed master plan for the Vadnais-Snail Lake Regional Park Master Plan Amendment. To reach the widest possible audience, various forms of communication were used to alert the public to these events:

- Approximately 7,000 mailings were sent out to residents in the immediate area surrounding the regional park.
- Twitter, Facebook, and other social media was used to announce meetings and online engagement opportunities
- Ramsey County Communications alerted public partners including municipalities and targeted engagement partners

The first public engagement meeting for the master plan amendment was held in January 2020 at the Ramsey County Public Library in the City of Shoreview. This first meeting was held to introduce the project to interested stakeholders and community members. Ramsey County staff gave a brief presentation to explain the purpose, process and history of the project and share goals for the master plan amendment. Following the presentation, staff asked attendees to list concerns and comments on maps and Post-it notes, and staff answered questions. The public could also comment online.

The second public engagement meeting was held at the Shoreview Community Center in February 2020. Comments and ideas from the first public meeting were synthesized into three different concepts and presented to the public for discussion and additional comments. The meeting included a presentation of the concepts followed by questions and answers and a comment session. The public worked with staff to record their comments on large format maps, as well as leave written comments on note cards. Concepts were also posted online for feedback.

A series of pop-up meetings was also held after the second public engagement meeting, to engage people “where they are” at popular locations in their community. These pop-up meetings were held at the Shoreview Public Library and the Shoreview Community Center.

Originally scheduled for March 2020, the third public engagement meeting was cancelled due to the COVID-19 pandemic. Ramsey County staff intended to present the draft preferred concepts at this time. Instead, all project materials were re-organized into an online format for continued community engagement throughout the remainder of the project.

Comments on the draft concepts were received between March and July 2020 and as a result, revisions were made to the preferred concepts.

A 30-day public review of the draft master plan amendment was held between December 2020 and January 2021, and the plan amendment was presented to the Ramsey County Parks and Recreation Commission in January 2021.

Partner Engagement

Ramsey County staff had been in discussions about the high waters in the park since 2016 and had worked with staff from the Ramsey-Washington Metro Watershed District, City of Shoreview, and Minnesota Department of Natural Resources to help address flooding concerns affecting areas both in and beyond the Vadnais-Snail Lake Regional Park boundaries. Partnerships formed prior to the master planning process allowed for a more collaborative process to help address public comments and ideas. Detailed studies and engineering work completed by these agencies was used to address the public feedback, develop viable concept ideas, and develop realistic changes to existing and proposed infrastructure to ensure it was feasible, resilient, and realistic to construct. This information was then applied to the concepts and final master plan development.

Numerous staff-level meetings were held since 2016 and included the Minnesota Department of Natural Resources, Ramsey-Washington Metro Watershed District, Vadnais Lakes Water Management Organization, Ramsey County Public Works and Parks & Recreation departments, and the cities of Shoreview, Vadnais Heights, and Little Canada.

These meetings were led by Ramsey-Washington Metro Watershed District and were used to update the public agencies of the ongoing studies, modeling, and coordination of flood impact to public infrastructure, and discuss ways to mitigate it. These meetings did not specifically address flooded trails, but rather water elevations, flood water storage options, and drainage improvements in and around the regional park. The information provided for studies and modeling was used to provide context and base requirements around the master plan concepts so public engagement could take place.

The City of Shoreview played a key role by proposing to construct a bypass trail of the flooded Gramsie Road tunnel which they own but is utilized to connect one side of the regional park to the other. In addition, many residents provided comments to the City which were shared with the County. Comments focused on the timeline to reopen trails and the quality of life the trails provide. The comments from the City were used to influence and prioritize the development concepts of the plan amendment.

The Minnesota Department of Natural Resources (DNR) Metro Area Hydrologist attended several meetings and provided useful insight as to historic high and low water conditions that have existed in area lakes and waters. The direction was that there would not be changes to ordinary high-water elevations for the water bodies in and around the park. This information was used in the plan to help

understand floodplain and wetland impacts associated with replacement locations for flooded park infrastructure.

Metropolitan Council Environmental Services (MCES) was also involved in discussions prior to the start of the master plan process. Those discussions explored how to weave public recreation infrastructure like a trail into a combined maintenance access for the trunk sewer line that exists in the park, particularly south of Gramsie Road, east of Grass Lake. The result of these discussions was a proposed new sewer alignment and a proposed relocated and reinforced trail system to support maintenance equipment used, while providing a paved and natural surface trail corridor located out of potential flooded areas.

Boundaries and Acquisition

Currently, there are no properties available for acquisition and/or inclusion into the Regional Parks System in the area around Vadnais-Snail Lake Regional Park. The plan amendment identified potential future boundary and easement adjustments, which may include:

- The Sioux Line Railroad right-of-way – This property is proposed to be included in future park acquisition if and when it would become available. The property is currently an active rail corridor located along the east side of the Grass Lake segment of the regional park. There is no timetable or cost analysis for this potential future acquisition.
- Fox/UTV Holdings Inc. & Delaware Corporation communications tower – Located just west of the Grass Lake segment, this property comprises 57 acres. The property has been used as the site for a major communications tower for the region since the 1960s. The development footprint of the existing infrastructure is small relative to the size of the property, however much of the property is protected by the Federal Communications Commission regulations.

Ramsey County does not intend to add these properties as “inholdings” or future additions to the Vadnais-Snail Lake Regional Park boundary as part of this master plan amendment. If the County chooses to add these properties as inholdings in the future, they will need to do a master plan amendment and follow the boundary adjustment processes as defined in the Regional Parks Policy Plan, Chapter 5, Strategy 1.

Conflicts

In 2021, MCES will begin the process for the relocation of the regional sanitary sewer line through the Grass Lake segment of the regional park. This project will seek to adjust the alignment of the sanitary sewer line to an elevation that is not prone to high water. As part of the project, the existing paved trail will be reconstructed as well as a turf trail that also serves as a ski trail. The preliminary alignment of the new trail and sewer will require removal of many oak trees and associated woodlands east of Grass Lake. The County will work with MCES to replace and restore the oak woodlands within the Grass Lake segment of the regional park.

Several comments received as part of the community engagement process questioned the safety of at-grade crossings proposed to allow users to continue to use the trail system in times of high water that may inundate the existing trail underpasses. Working with the City of Shoreview, who owns and operates the streets where the proposed crossings are located, it was determined that the proposed crossings met the criteria to deem them safe for trail crossings. The Gramsie Road crossing has excellent sight lines, and the assigned speed is compatible with at-grade crossings that are not at a controlled intersection. The crossing proposed for Snail Lake Boulevard will be located at an existing controlled intersection with a crosswalk.

Development Concept

Vadnais-Snail Lake Regional Park provides important recreation amenities and areas of high-quality natural resources in the form of restored prairies, floodplain forests, restored mesic and oak woods, as well as the ongoing management of its water resources. Changes to the climate have caused the need to reassess how and where recreation amenities are placed in the park and how the topography of the park serves as an important component to the overall management of the regional watershed.

The park is connected by trails to the existing regional and local trail network. The proposed in-park trail realignments and additions will reconnect existing flooded trails to the overall off-street trail systems throughout the city including Highway 96 Regional Trail, the City of Shoreview trail system, and proposed extension of the Trout Brook Regional Trail.

The master plan process includes the three distinct areas of the park separated by local streets and identified in the 1992 master plan as:

- Snail Lake Picnic Area segment,
- Corridor segment / Wetland A area, and
- the Grass Lake segment.

Each of these segments has existing park infrastructure and natural resources that have been affected by high water.

Snail Lake Picnic Area Segment

The infrastructure affected by high water from Snail Lake consists of the small shelter, sand volleyball court next to the small shelter, the swimming beach, the boat launch, and the trail pedestrian tunnel under Snail Lake Boulevard. All of these amenities have been flooded with water for multiple years (Figure 4).

Figure 4: Snail Lake Picnic Area segment - Preferred plan (MPA Fig. 8)



Small Shelter and Sand Volleyball Court

To achieve resiliency to continued and future higher lake elevations, the small shelter and sand volleyball located near the southern shore of the lake will need to be moved to a higher elevation above the Snail Lake overflow elevation. This plan amendment proposes the redevelopment of the lower public parking lot that serves the beach and small shelter currently. This parking lot will be reconfigured with a smaller, more efficient footprint. Currently the parking lot has 97 stalls. Plan improvements include increased parking, one-way circulation, updated stormwater treatment, lighting and Americans with Disabilities Act (ADA) improvements. The smaller impervious footprint will reduce stormwater runoff and allow space for the relocation of the small shelter and open space for sand volleyball or other amenity that is complementary to picnic and beach facilities. Possible amenities could include sepak takraw, lawn bowling, open level turf, or individual picnic tables. The existing in-park trails leading to the beach will require some adjustments to complete the pedestrian circulation to the various amenities included with the parking lot redevelopment. The small shelter will retain a similar 50-person capacity with tables, serving area, grills, water, and electrical service. Restrooms available at the nearby beach building will serve both picnicking and swimming.

One issue identified through public engagement with nearby residential areas was noise created by the existing picnic pavilion and shelter at the Snail Lake picnic area. Residents to the west of Snail Lake were concerned that relocating the small shelter to the west side of the park would have a negative impact on them and their property values due to amplified sound associated with groups using the park facilities. To address this concern, the location selected for the relocation of the flooded small picnic shelter is more central to this park segment, near the beach. In addition, Ramsey County Parks ordinances are being reviewed for possible amendments to address sound and noise across all of the park system.

Snail Lake Swimming Beach

The swimming beach has been affected by high water since 2014. The high-water outlet pipe, which is located between the beach and the boat launch, allows water to flow to the south under Snail Lake Boulevard to the Corridor segment of the regional park. The area available for this water collection point, however, is very limited. The overflow from this sub-basin used to flow south toward the Crestview Addition neighborhood. The Ramsey-Washington Metro Watershed District changed the overflow direction in 2018 to flow to the west and into the Wetland A basin where there is more flood water capacity. This new elevation of 888.34 feet was used to determine where to establish the new top of swim beach elevation.

The beach improvements were completed during the winter and spring seasons of 2020. Improvements include turning the previous turf area above the beach into sand, removal of muck, installation of a sand blanket in the water, ADA access, and installation of a concrete ribbon curb delineating the top of the beach and creating a maintainable edge between sand and turf.

Additional future improvements include relocating flooded picnic tables to flood resilient elevations, shower tower relocation, and ADA improvements to the beach building.

Snail Lake Boat Launch

Fluctuation of the lake levels is a challenge for most boat launch operations. The Snail Lake boat launch water elevations can fluctuate six feet from an elevation of 882.4 feet (at which point the augmentation system is used) to 886.5 feet (the outflow pipe elevation) to 888.34 feet (the emergency overland overflow elevation). The record fluctuation is nearly ten feet dating back to 1924. Future modifications and improvements to the boat launch will need to address this potential fluctuation with the ramp design. Occasional dredging to create a channel for watercraft access maybe required. In

addition, the existing floating boarding dock will need improved accessibility from shore. A ramping system is a possible solution.

Snail Lake Boulevard Trail Tunnel

The tunnel underpass that allows for a grade separated trail crossing under Snail Lake Boulevard, connecting the Snail Lake picnic area with the Corridor section of the park, has been flooded due to the overflow water from Snail Lake. The development concept proposes a new trail segment which will act as a tunnel bypass and connect to the crosswalk at the intersection of Snail Lake Boulevard and Mackubin Street.

Corridor Segment / Wetland A Area

The Corridor segment of Vadnais-Snail Lake Regional Park is composed of paved trails surrounding the southern half of the corridor. The trails encircle the wetland complex, called “Wetland A” by the Ramsey-Washington Metro Watershed District. In addition, trails run north to the Highway 96 Regional Trail and south under Gramsie Road connecting to the Grass Lake segment of the regional park. This north-south connection of in-park trails provides a critical link for bicycle commuting and recreation. The Snail Lake Picnic Area segment connects on the west side via a tunnel under Snail Lake Boulevard and to city trails along Snail Lake Boulevard. The trails affected by flooding lay mainly along the east side of the wetland complex, and on the south end where high water flowing north during large flooding events over-topped the trail for extended periods. In addition, the trail connecting to the tunnel under Gramsie road has been consistently flooded for years.

Flooding in this segment is due to multiple factors. Historically, this area has always had a wetland with varying water elevations. The timeframe in which the trails were constructed represented one of the driest multiple-year periods for this region. The basin itself is the lowest elevation in the City of Shoreview. The basin is affected by groundwater, stormwater from residential development and streets, and high water flowing north from Grass Lake. Before development of the community, it was likely a wetland connected directly to Grass Lake but was separated by agricultural practices and now modern residential development.

The topography and many other factors need to be considered when making design decisions about relocating the trail system. The following list includes public comments, operational needs, and regulatory compliance that have been considered in the development of the proposed planned trails:

- Trail connectivity and trail loop creation are main goals of the project. For the in-park trail system, re-creating trail loops for flooded areas or continuing the effort to complete new ones was a large part of the feedback received during public engagement.
- To keep trails from future flooding, the elevation of 886.0 feet needs to be maintained in the Corridor segment / Wetland A area and Grass Lake segment.
- Impervious surfaces for trail systems, both existing and proposed, will need to meet regulations for volume and water quality standards as determined by the Ramsey-Washington Metro Watershed District.
- Trail conditions created by surfacing (i.e., paved vs. natural); boardwalk plank materials; and trail width, slopes, and structure approach (for boardwalks and bridges) all need to be considered for relocating trails or creating new ones.
- Consideration is given to how boardwalk structures or shelters may be viewed by park users from other locations within the park. Because the Ramsey County park system is an urban park system surrounded by residential property, adjacent land uses need to be considered when proposing new locations for infrastructure.

- Boardwalks are typically used in wetland or lake settings where regular paved trails cannot be used. Fixed foundation boardwalks are set at a defined elevation and supported either by drilled pile foundations or on a pan-type surface foundation. The foundation type is determined by soils and water conditions. Typically, fixed boardwalks work best in wetland areas or shallow lakes. Floating boardwalks can appear identical to fixed boardwalks but are supported only on sealed floats. They work well in open water and lake environments but are limited if the water levels vary too much due to the ramp connections that are required at each end. Boardwalks may have metal or wood frames, as well as metal, wood, plastic, or concrete plank material. Both systems can have railings, fishing nodes, or seating areas incorporated into them.
- Construction equipment access, erosion potential, adjacent slope, and accessibility all need to be considered when determining the appropriate trail surface within the park.
- Pavement or boardwalk surfaces, vegetation, tree removal, snow removal, ski trail grooming, and equipment size, are just a few of the maintenance issues that have been addressed in the planning process.

East Side of the Corridor (Wetland A) – Study of Short-Term Solutions to the Flooded Trails

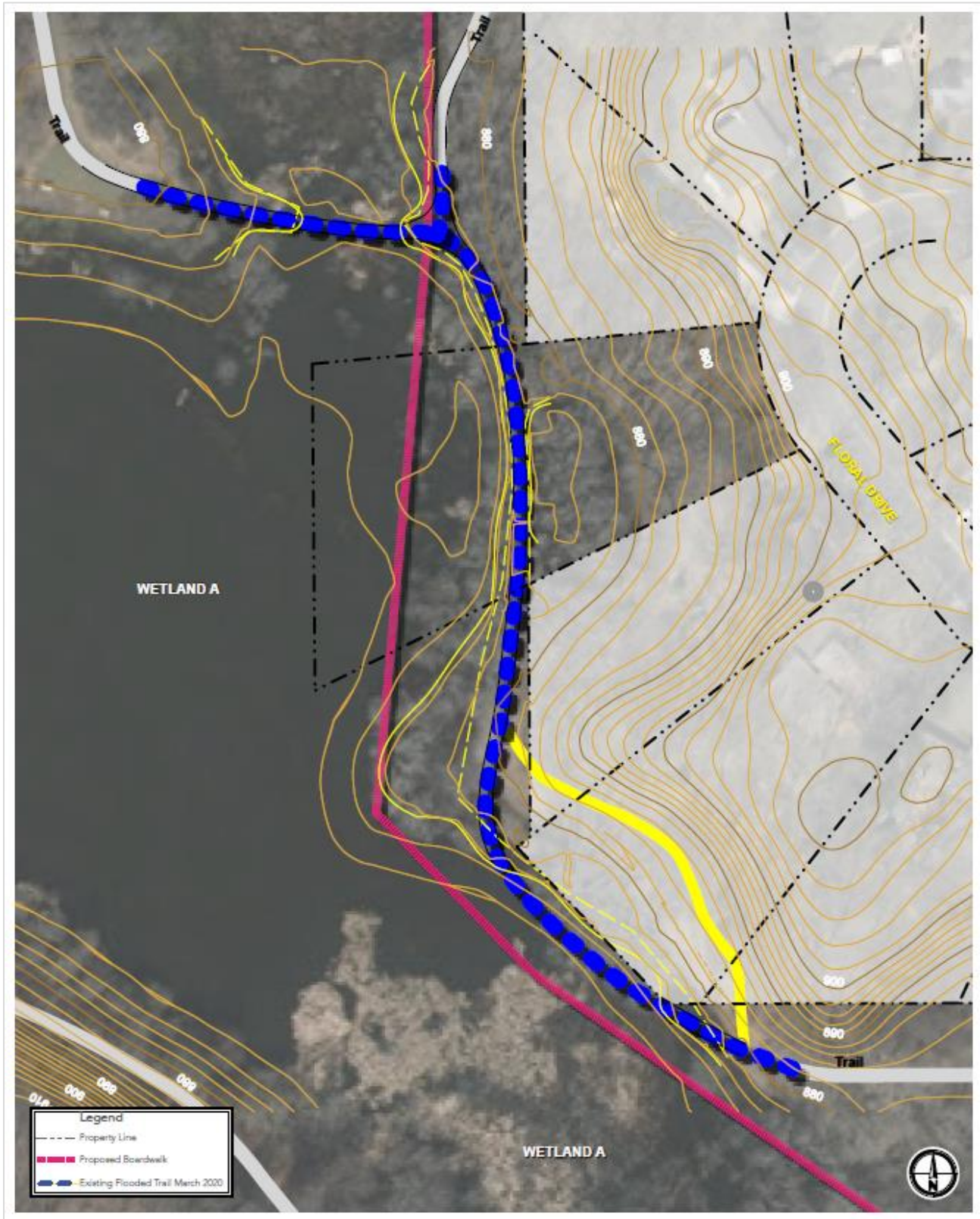
Ramsey County staff looked at possible short-term solutions for the flooded sections of the Wetland A trail system. The sustained flooded area is approximately 1,200 feet long with water elevations that fluctuate multiple feet.

Staff considered alternatives such as raising the trail and using temporary boardwalks as short-term alternatives. Besides a fixed boardwalk, the only option that will meet permitting and floodplain requirements, codes, and ADA guidelines is a floating boardwalk. However, a floating boardwalk presents issues with ramping on either end when water elevations move up and down significantly like they do in this area. When lower or no water conditions are present, the floating boardwalk may need to rest on an elevated foundation to prevent wetland vegetation impacts and keep the boardwalk stable which increases its cost substantially.

The cost of a floating boardwalk is similar to that of a fixed boardwalk, which could be the permanent solution. Due to these findings, the County will not recommend a temporary solution. Instead, the plan includes a fixed boardwalk system that could be installed in phases. This allows for a flexible solution to seek multiple funding sources over multiple years and funding cycles.

During the fall of 2018, there was discussion about the possibility of acquiring an easement from one of the private properties where the public had made an unauthorized path to get around some of the high water on the east side of Wetland A (Figure 5). The County, working with the City of Shoreview, completed a topographic and boundary survey to determine elevations and property boundaries along the east side of Wetland A. Since then, the water has risen even higher and the unauthorized path extended across four properties rather than just one. In addition, the private property to the north is very low and has wetlands on it which does not allow for a paved trail to cross. This presence of this wetland makes purchasing easements across the other properties irrelevant since it would have to dead-end at the wetland. In addition, the elevation the trail would need to be at on these properties to be resilient to future high water would have a negative impact for these properties as the trail would need to travel a significant distance on their property.

Figure 5: Corridor segment/ Wetland A area - East side flooded trails plan (MPA Fig. 9)



With limited funds, no guarantee of succeeding with easements agreements, and with unknown future water elevations, the County decided to use boardwalks that can be made resilient to future high water. The boardwalk system proposed would have minimal wetland or floodplain impacts, and could be completed in phases to create smaller, less costly projects which fit better into park infrastructure funding. Flexibility to include boardwalks in combination with existing paved trail will be required with the proposed trail system.

Corridor (Wetland A) Trail System Improvements

The proposed plan uses the existing paved trails and combines a fixed boardwalk running north and south along the east side of the corridor and two boardwalk segments that cross the wetland east and west (Figure 6). This layout creates a loop trail approximately 1.33 miles in length, with 3,330 feet of boardwalk or approximately 47% of the total loop trail length. The remainder is existing bituminous trails. Access to the boardwalk will occur at three main locations: Dennison Avenue, Floral Drive, and Hanksa Court. Dennison Avenue and Floral Drive have existing natural trail surface connections to the in-park trails. Hanksa Court has a paved trail connection to the park trails. The proposed trail connections at Floral Drive and Dennison Avenue will be made on parcels of city property that serve sanitary sewer connections to the Metropolitan Council trunk sewer line in the regional park under the existing paved trail.

The proposed location of the north-south boardwalk will reconnect the trail system where it has been consistently flooded. The existing 10-foot-wide trail is located in what has become a consistently inundated area and is bound by large trees with little or no shoulder. This is not an optimal location to install a new boardwalk system due to the proximity of the trees. A new alignment to the west is proposed where the trees can be avoided and deteriorated pavement does not interfere with boardwalk foundations. Existing trail pavement that is deteriorated due to inundation and that will be bypassed by a future boardwalk will be removed and reestablished as wetland. The proposed boardwalk will need to be implemented in multiple phases, which will be determined by high water extents and climate cycles at the time of each project. This will allow for more flexible implementation to meet trail failures and available funding. In addition, final elevations of proposed boardwalks or trails will be determined with additional citizen and regulatory agency input for each individual project.

The existing inundated paved trail that historically connects the east trails to the west trails in the middle of the Wetland A complex will require approximately 500 feet of boardwalk to reestablish the connection at the flood resilient elevation. A new east-west connection is also proposed at Hanksa Court for a flood resilient loop in the event other existing paved trails become inundated in the future.

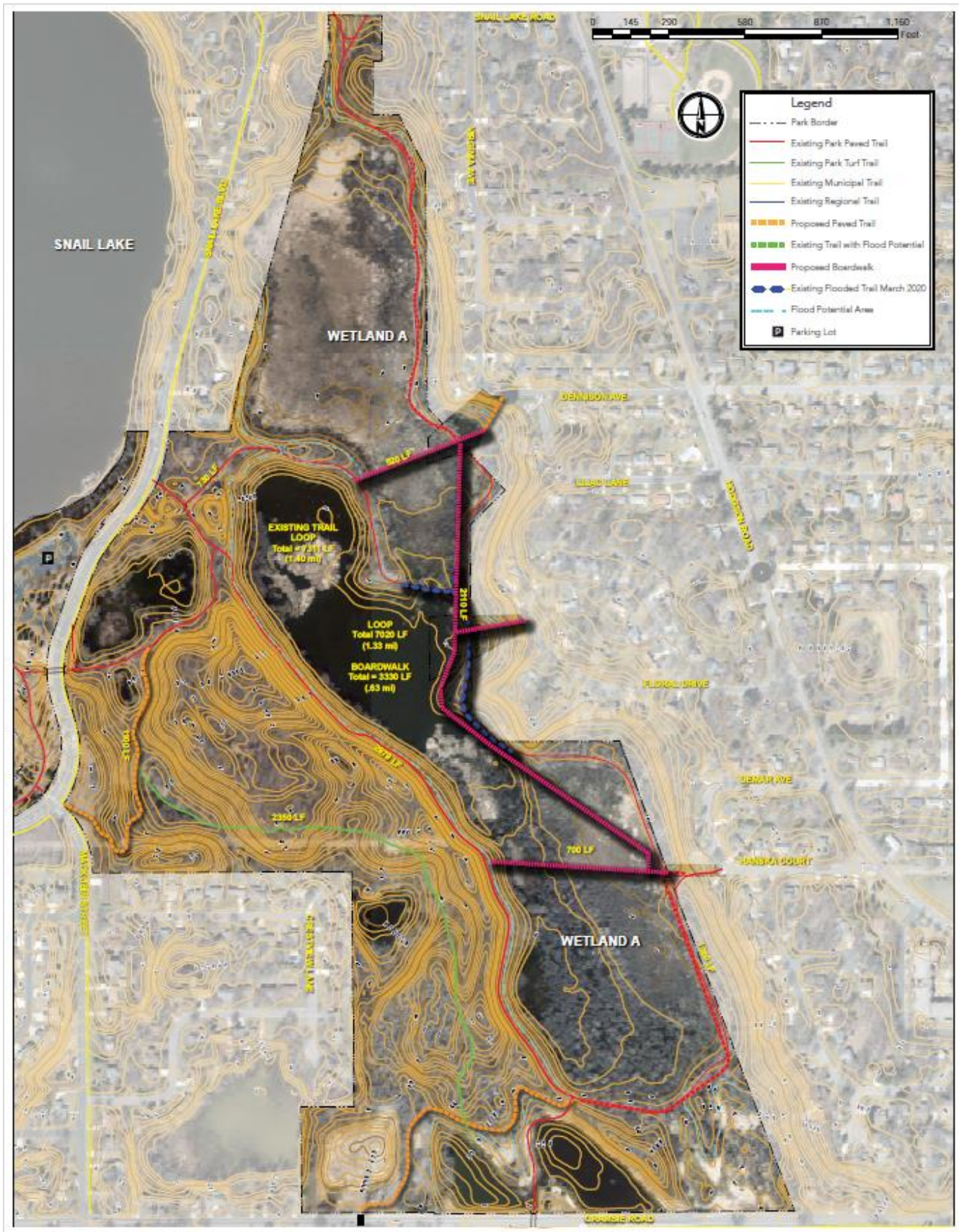
All proposed boardwalks will be ten feet wide and require guardrails on both sides.

Existing paved trails that fall below the 886.0 elevation but have not flooded will remain and be maintained as paved when conditions allow. These trails will be considered no net fill conditions by Ramsey-Washington Metro Watershed District regulations and will not be allowed to be raised without compensatory floodplain storage or wetland mitigation. Trails along the west side of the corridor and those running north to the Highway 96 Regional Trail are typically above the elevations that have flood potential. They will remain in the same alignment as part of this master plan amendment.

Natural Surface Trails

Several natural surface trail sections exist west of the wetlands on the ridges of the corridor segment. Historically, these have been part of the cross-country ski trail system and used by the public in the non-winter months as part of the trail system. These trails will remain in their current alignment and maintained as natural surface trails as requested by the public.

Figure 6: Corridor segment - Preferred plan (MPA Fig. 10)



Flooded Pedestrian Tunnel Bypass Trails

There are three existing tunnels that connect the Corridor segment to the rest of the Vadnais-Snail Lake Regional Park segments. A tunnel is located on the west side of the Corridor segment under Snail Lake Boulevard, on the north side of the Corridor (Wetland A) under Snail Lake Road, and one on the south end under Gramsie Road. The tunnel to the west that connects the corridor segment to the Snail Lake Picnic Area is flooded as a result of overflow waters from Snail Lake collecting on the south and east side of Snail Lake Boulevard. The plan illustrates a new at-grade connection via a new trail section through the ridge portion of the park to the controlled intersection of Snail Lake Boulevard and Mackubin Street. The existing tunnel will remain and be utilized when waters recede in the area.

No changes are proposed for the tunnel under Snail Lake Road as there are no flooding issues.

The Gramsie Road tunnel originally constructed by the City of Shoreview in the early 1990s has been inundated with groundwater and surface water from Grass Lake. The City owns and operates the existing tunnel underpass. The tunnel has been modified with stop logs for flood management by the Ramsey-Washington Metro Watershed District and will need to be used for flood management in the future. To address the flooded tunnel, a new tunnel bypass was proposed to reconnect the Corridor segment to the Grass Lake segment using an at-grade mid-block crosswalk west of the where the existing tunnel is located. This mid-block crossing has excellent sightlines and low non-peak average daily traffic. Ramsey County consulted with the Metropolitan Council's Regional Parks Manager prior to constructing the trail bypass. The bypass aligns with the existing Snail Lake Regional Park Master Plan (1992), helping adapt the park's trail system to persistent, complex flooding conditions. The City of Shoreview led the engineering design for this trail bypass and it was completed in the fall of 2020. Ramsey County has assumed responsibility for the operation and maintenance of the trail. The existing tunnel will remain and be utilized when waters recede in the area.

Corridor (Wetland A) Segment Metropolitan Council Environmental Services Regional Sewer Interceptor Coordination

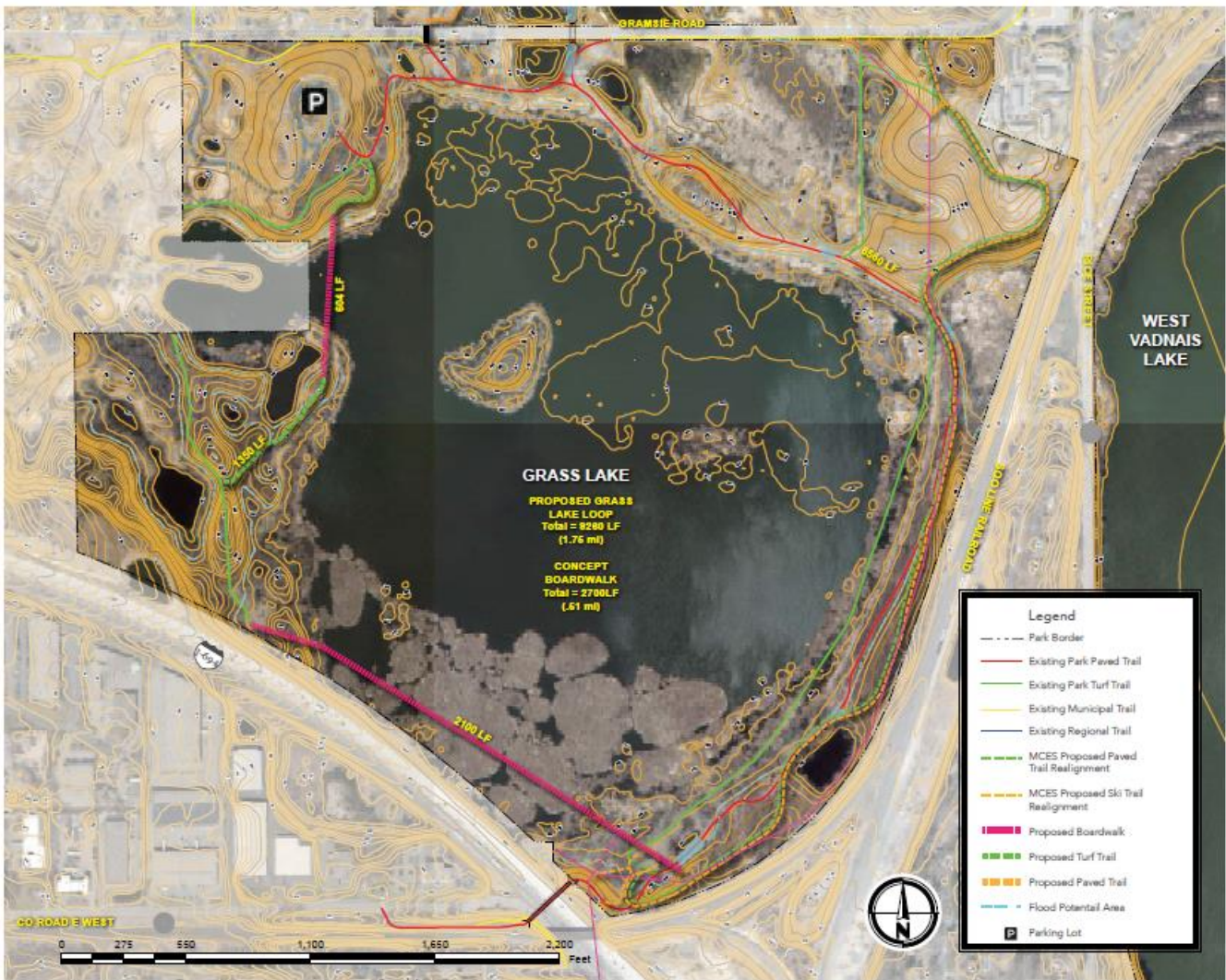
Metropolitan Council Environmental Services (MCES) owns and operates the regional sanitary sewer interceptor line that runs through the entirety of Vadnais-Snail Lakes Regional Park from Interstate 694 to Highway 96. In many areas, the paved trail system is located close to the main sewer alignment and manholes. This is advantageous for maintenance access to the sewer line structures which have routine inspection and maintenance requirements. Ramsey County Parks & Recreation staff has been working with MCES to consider shared recreational facilities that can be used both as trails and for maintenance equipment access to the trunk sewer line structures. For the Corridor (Wetland A) segment, MCES is working on future improvements to the infrastructure. The proposed boardwalk improvements would need to be modified to accommodate the weight and width of MCES maintenance equipment if needed.

Grass Lake Segment

The Grass Lake segment is bordered on the north by Gramsie Road, the Canadian Pacific (Soo) Railroad and Rice Street on the east, and Interstate 694 to the south (Figure 7). This segment has trail connections to local municipal trails via a pedestrian bridge over Interstate 694. Additionally, the City of Shoreview operates an east-west trail along the Gramsie Road corridor that connects to the Grass Lake trail system. The tunnel underpass under Gramsie Road has been flooded for several years. The property bordering the west side of the park is home to a large regional communications tower. The guy wires for the tower extend to the edge of Grass Lake.

In 2018, the Ramsey-Washington Metro Watershed District worked with Ramsey County staff to raise a section of existing trail near Gramsie Road as part of a flood water prevention project. Berms were

Figure 7: Grass Lake Segment Preferred Plan (MPA Fig 11)



constructed and the trail located on top of the berm, with a turf ski trail bench graded to the side. In addition, a section of trail was lowered to elevation 884.0 approximately one quarter mile to the southeast to allow for a more desirable southeast Grass Lake overflow area.

Grass Lake Segment Metropolitan Council Environmental Services Regional Sewer Interceptor Coordination
 Metropolitan Council Environmental Services (MCES) owns and operates the regional sanitary sewer interceptor line that runs through the entirety of Vadnais-Snail Lake Regional park from Interstate 694 to Highway 96. In many areas, the paved trail system is close to the main sewer alignment and manholes. This is advantageous for maintenance access to the sewer line structures which have routine inspection and maintenance requirements. Ramsey County staff has been working with MCES to consider shared recreational facilities that can be used both as trails and for maintenance equipment access to the trunk sewer line structures. The sewer easement runs from Interstate 694 to Gramsie Road on the east side of the park turning north through an existing prairie area.

Because many of the existing manholes and pipe alignment are located in what is now Grass Lake, MCES has decided to relocate the pipe and structures through the park. The proposed alignment will shift the pipe to the east into existing oak woodlands for the southern half of the easement. The pipe will be shifted to higher elevation through the open prairie south of Gramsie Road. MCES is also proposing to move the pipe and southern half of the existing trail alignment in the park to an elevation

that is at or above 886 feet. Due to the impact from the reconstruction of the pipe, significant woodland restoration will be required. Restoration of natural resources as a result of this project implementation is included in the natural resource section of the master plan amendment. In addition, area cleared for the pipe will be used for a new 12-foot-wide paved trail to handle recreation and maintenance equipment. A 10-foot-wide turf ski trail will parallel the new trail alignment. A new segment of paved trail will be located on an existing natural surface trail that will add additional connections to the city trail network and create a one-mile loop utilizing the city and in park trail systems.

Grass Lake Trail Loop

In addition to the existing paved trail improvements on the east and north side of the lake, the planning process gained feedback on the creation of a future Grass Lake trail loop that would encircle the entire lake utilizing paved trails, natural surface trails, and boardwalks. The Proposed loop requires 2,100 feet of boardwalk to connect the east and west trails along the southern park boundary, paralleling Interstate-694. Natural surface trails will be used on the west side of the lake. Paved trails are not achievable due to limited equipment access. An additional 600 feet of boardwalk is required to connect the west natural surface trail to the existing trails along the north side of the lake. Trail connections over land are not possible due to the communications tower and guy wire locations. When complete, the Grass Lake loop will be 1.75 miles in length.

Implementation

The phasing and prioritization of the improvements proposed within this master plan amendment focus first on the existing infrastructure that requires replacement due to the flooding. Based on community feedback, the trail system will be given the highest priority followed by the picnic shelter relocation and then improvements to the park that do not currently exist.

Short Term (2-5 years)

- 1,200-foot boardwalk in area of primary flooding and east-west peninsula connection (Corridor segment / Wetland A area)
- Grass Lake overflow trail grade separation (Grass Lake segment)
- Metropolitan Council sewer line realignment (Grass Lake segment)

Mid Term (5-10 years)

- Small shelter and lower parking lot redevelopment (Snail Lake Picnic Area segment)
- Boat launch improvements (Snail Lake Picnic Area segment)
- Playground replacement (Snail Lake Picnic Area segment)
- 600-foot Dennison Avenue connection, Floral Drive connection (Corridor segment / Wetland A area)

Long Term (10+ years)

- 700-foot east-west connecting boardwalk (Corridor segment / Wetland A area)
- 1,200-foot Snail Lake Boulevard tunnel bypass (Corridor segment / Wetland A area)
- Grass Lake trail loop boardwalk project, west side trail improvements (Grass Lake segment)

Accessibility

Ramsey County uses the United States Access Board guidelines for Outdoor Developed Areas as a minimum standard of accessibility on all new or substantially altered capital projects within the regional parks system. In addition, Ramsey County uses an ADA transition plan that identifies deficiencies in older park infrastructure that require updates. As projects are designed, items from the transition plan are included with the capital projects.

Public Awareness

Ramsey County will use a variety of tools to promote awareness and use of the regional park and trail system. This includes electronic and print communication methods such as websites, trail maps, brochures, email notification, Twitter, Facebook, and press releases to local newspapers. The department will provide necessary information and updates to the department's website.

Ramsey County will also collaborate with Roseville, City of Shoreview, Vadnais Heights, Ramsey Washington Metro Watershed District, and the Metropolitan Council to promote the trails through their websites, newsletters, and brochures.

Wayfinding signage within the trail corridor will be updated as needed following the existing Ramsey County Parks & Recreation Department Wayfinding Master Plan for consistency with other regional parks and trails.

The regional park is readily accessible via Metro Transit bus services that serve the City of Shoreview and surrounding area. Bus stops are located on major transportation corridors including Rice Street at Gramsie Road, Hodgson Road at multiple intersections, Victoria at Gramsie Road, Lexington Ave at County Road F, and Highway 96 at the Community Center/Library Complex. These bus routes are identified as all-day local route 62 and rush hour route 262. Most of the stops along Hodgson Road are, or are planned to be, connected to the park by an off-street trail. Most of these trails are owned and operated by the City of Shoreview. Where there is no off-street trail, the stops are typically at low-volume residential streets.

Natural Resources

The native vegetation (present at the time of the public land survey, between 1847 -1907) in this area consisted of "Big Woods" or hardwoods like oak, maple, basswood, and hickory. Areas mapped as wet prairie, oak openings, barrens and lakes were present as well.

The park segment is located in the Minnesota and Northeast Iowa Morainal ecological section. This ecological section is a long band of deciduous forest, woodland, and prairie that stretches nearly 350 miles from Polk County in northwestern Minnesota to the Iowa border. Within the section, there are multiple ecological subsections. Interestingly, this park straddles the mapped boundary between two ecological subsections. The eastern half of the park is located in the Anoka Sand Plain ecological subsection, with the western half located in the St. Paul - Baldwin Plains ecological subsection.

Current vegetation within the Corridor consists of mixed woods, cultivated conifers, converted native prairie, old field, shrub swamp, wetland, active use areas and open water consisting of Grass and Snail lakes, open water wetlands and storm water ponds. These land cover classes were created for the system plan so that restoration management practices and costs could be projected across the park system with greater ease.

The oak woodlands and wetland portions of the Corridor section and all of the Grass Lake section are classified by Ramsey County as Environmental Natural Areas, which have significant, sensitive, and/or unique natural resources that warrant extended preservation. 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.

The oak woodlands and Grass Lake are also recognized by the Minnesota County Biological Survey as sites of biodiversity significance.

The natural resources within the Snail and Grass lakes section will be restored and managed according to the goals stated in the natural resources section of the Ramsey County Parks & Recreation Department's 2018 System Plan. Restoration and maintenance of natural areas will be a priority throughout the park to carry out the mission of providing adequate sustainable habitat to support populations of native wildlife species.

Current restoration projects include an oak woodland and wetland buffer restoration project, and shoreline revegetation and stabilization project. Ramsey County is partnering with the Ramsey-Washington Metro Watershed District in both of these restoration efforts. The oak woodland and buffer project include all of the parkland north of Gramsie Road, south of Snail Lake Road and east of Snail lake boulevard, totaling over 65 acres. The focus of this work includes restoring the oak woodlands, adjacent mesic woods, wetland buffer, and conversion of 2.6 acres of old field to native prairie. The shoreline project is a native shoreline planting between the beach and boat launch in an effort to revegetate and stabilize this shoreline, which historically consisted of sparse vegetation and has erosion issues.

Future restoration and ongoing maintenance include an oak woodland restoration project west of Grass Lake which will include the removal of invasive species through 22 acres of oak woodlands. What remains to be restored, after the completion of restorations referenced, are small areas of mixed woods and unused turf, fields, and natural areas within the active use area. These areas will be assessed, and plans will be made to determine the need and cost effectiveness of habitat restoration. An example of this would be to assess the unused turf and brome fields within the active use area for conversion to native prairie or oak woodlands.

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).

The management and restoration of habitat will be prioritized based on the following features:

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 needed and may include remnants of native habitat
4. Highly degraded habitat, isolated, small size, no species of conservation need

Surface water features in the park include Snail Lake – of which the park has around 2,300 feet of mostly natural shoreline – Grass Lake, and the Wetland A complex, with some smaller isolated wetlands throughout the park. The surface waters within and abutting park land are the focus of which recreation and habitat revolves around, as Grass Lake and wetlands make up more than 60% of the land cover within the park's jurisdictional boundaries.

Ramsey County's objective is to protect and preserve all surface waters and wetlands within this section of the regional park and to keep and improve natural buffers, especially adjacent to existing developed areas. Surface water and wetland protection and preservation is a priority within the regional park and all local, state and federal wetland protection and regulations will be followed.

Consistency with Other Council Policies and Systems

Community Development - Local Planning Assistance (Eric Wojchik 651-602-1330) – This master plan amendment is consistent with *Thrive MSP2040* outcomes of stewardship and sustainability. Council staff has visited the park in recent years to observe the flooding issues with city, implementing agency, and watershed staff. This amendment makes improvements to the park to ensure that park amenities and infrastructure is resilient to changing climatic conditions.

This master plan amendment is a great example of planning for resiliency and multiple uses within the regional parks system.

Community Development - Housing (Ashleigh Johnson 651-602-1106) –The master plan amendment is consistent with the Council's *2040 Housing Policy Plan*. The plan does not require the acquisition of private residential land that could affect single or multi-family housing, however, there is one affordable housing development next to the park, The Meadowlands. Families earning 60 percent of Area Median Income (AMI) and below live in this housing development. Although the plan amendment does not explicitly state how the County engaged with nearby Meadowlands residents, it details how residents of different housing types were considered and that there was more intense outreach to areas nearby with high-density housing.

There are not any permanent trail connections proposed between The Meadowlands and park areas, however completing a proposed boardwalk along Gramsie would assist residents with accessing this amenity. Overall, providing and/or improving access to recreational and other amenities such as this regional park can contribute to residents' overall quality of life.

Community Development - Stormwater & Natural Resources (Cameran Bailey 651-602-1212)

The plan amendment is consistent with Thrive policies for natural resources and stormwater management. Council staff offer the following advisory comments for your consideration:

- Consider the development of solar canopies over the existing and proposed new surface parking lots on the sites.
- Prioritize the sourcing of new construction materials from the park and region itself. Parks and natural areas management often requires the trimming and cutting down of trees. It could serve as a great demonstration and education piece in resilient economies, natural resource management practices, and design and construction methods. Not to mention, local sourcing removes the embedded carbon emissions that come with our current transportation system

Environmental Services - Water Resources (Joe Mulcahy 651-602-1104) – The master plan amendment is accurate and complete for water resources impacts; potential water resource impacts appear to be addressed.

Environmental Services - Sewer (Roger Janzig 651-602-1119) – The construction of any new or updating of existing paths, trails, bridges, or any other construction project may have an impact on multiple Metropolitan Council interceptors in multiple locations. To assess the potential impacts to the interceptor system; prior to initiating any project, preliminary plans should be sent to Tim Wedin, Interceptor Engineering Assistant Manager at Metropolitan Council Environmental Services.

Metro Transit - Service Development (Stephen Baisden 612-349-7361) – Metro Transit Route 62 provides the nearest transit service adjacent to Vadnais-Snail Lake regional Park along Hodgson Road and Rice Street. Route 62 offers local transit service every 60 minutes during weekdays and 120 minutes on Saturday between Shoreview Community Center and downtown St. Paul.

Given current transit investments in the corridor now, the proposed master plan amendment will likely have a marginal effect on the existing transit network, if at all, and the implementation of this master plan amendment will likely not require an extension of the existing transit service.

Attachments

Attachment 1: Resolution B2021-083, a resolution to approve the Vadnais-Snail Lake Regional Park Master Plan for submission to the Metropolitan Council, Ramsey County Board of Commissioners

Attachment 2: Resolution No. 20-91, a resolution supporting the Vadnais-Snail Lake Regional Park Master Plan, Shoreview City Council



Board of Commissioners
Resolution
B2021-083

15 West Kellogg Blvd.
Saint Paul, MN 55102
651-266-9200

Sponsor: Parks & Recreation

Meeting Date: 4/6/2021

Title: Vadnais-Snail Lakes Regional Park Master Plan Amendment

File Number: 2021-069

Background and Rationale:

The Ramsey County Parks and Recreation department has prepared an amendment to the Vadnais-Snail Lakes Regional Park Plan to develop plans for the re-establishment of existing park infrastructure that has been impacted by high water. The area of the regional park this plan focuses on is located from the Snail Lake picnic area, south to I-694 encompassing all of Grass Lake and the corridor segment of the regional park south of Snail Lake Road. It does not address the eastern half of the regional park which encompasses the Vadnais and Sucker Lakes areas.

On March 24, 1992, by Resolution 92-251, the County Board, approved the original Snail Lake Regional Park Master Plan. On October 1, 1996, by Resolution 96-430, the County Board, approved the amendment including the Vadnais and Sucker Lakes sections of the Regional Park in cooperation with Saint Paul Regional Water Services.

The Snail Lake /Grass Lake segments of the Vadnais - Snail Lakes Regional Park, have had rising surface and ground-waters affecting the region over the past decade. Developed neighborhoods of habitable structures, park infrastructure, and regional transportation infrastructure have become adversely affected from the result of the high water. Reliance on the natural basins and wetland complexes for flood water storage in the overall watershed have become paramount to prevent further negative impacts to the regional transportation system, residential neighborhoods, and business districts. Much of the available storage for excess water is located within the park land that is encompassed by the regional park system.

The cause of high water has been influenced by a multitude of factors, including increased annual precipitation, past development in areas of low elevation, higher regional groundwater, segmenting of natural historic surface water course, and elimination of natural water storage basins.

Ramsey County Parks & Recreation department has been working with other agencies since 2016 to help address flooding in the short term and to help develop options for long term solutions, including Ramsey County Public Works, Ramsey-Washington Metro Watershed District, the City of Shoreview, the City of Vadnais Heights, the City of Little Canada, and the Department of Natural Resources. This ongoing agency coordination and partnership has been necessary to understand impacts beyond the regional park boundaries and the necessity of managing regional surface and ground water.

Staff initiated this master plan amendment in January 2020 at the request of the Metropolitan Council for the development of the master plan concepts and draft master plan amendment document. Master plan concepts are based on a public engagement process that occurred throughout 2020. This master plan amendment identifies long-term future capital improvement projects for the entire regional park that will re-establish flooded park infrastructure including but not limited to, paved trails, natural surface trail, additional trail connections, X-C ski trail improvements, swimming beach improvements, relocation of picnic shelter and associated recreation amenities,

and outdoor recreation and programming opportunities.

This proposed amendment reflects a master plan that was supported by the City of Shoreview in addition to the Ramsey County Parks and Recreation Commission in 2020.

The Parks department recommends approval of the Vadnais - Snail Lakes Regional Park Master Plan Amendment dated January 15, 2020. Following approval by the Ramsey County Board of Commissioners, the Master Plan Amendment will be forwarded to the Metropolitan Council for review and approval. Once the Master Plan Amendment is approved by the Metropolitan Council, costs associated with future land acquisition, and long-term future capital improvement projects will be eligible for grants administered by the Metropolitan Council for Regional Parks and Trails.


Recommendation:

The Ramsey County Board of Commissioners resolved to:

Approve the Vadnais-Snail Lakes Regional Park Master Plan Amendment dated January 15, 2021 for submission to the Metropolitan Council.

A motion to approve was made by Commissioner Frethem, seconded by Commissioner McDonough. Motion passed.

Aye: - 7: Carter, Frethem, MatasCastillo, McDonough, McGuire, Ortega, and Reinhardt

By: 
Janet Guthrie, Chief Clerk - County Board

**EXTRACT OF MINUTES OF MEETING OF THE
CITY COUNCIL OF SHOREVIEW, MINNESOTA
HELD NOVEMBER 16, 2020**

* * * * *

Pursuant to due call and notice thereof, a meeting of the City Council of the City of Shoreview, Minnesota was duly called and held at the Shoreview City Hall in said City at 7:00 PM.

The following members were present: Martin, Denkinger, Johnson, Quigley, Springhorn

And the following members were absent: None

Member Springhorn introduced the following resolution and moved its adoption.

RESOLUTION NO. 20-91

WHEREAS, Ramsey County completed a Master Plan for the Vadnais-Snail Lake Regional Park; and

WHEREAS, Ramsey County has submitted the Plan to the City of Shoreview, including advisory groups for review; and

WHEREAS, the 2020 master plan incorporates short and long-term site and infrastructure improvements, recreation improvements, and additional recreational opportunities throughout the Park and addresses the flooding that has occurred in the park area; and

WHEREAS, the City of Shoreview Bike and Trails Committee, Parks and Recreation Commission, Snail Lake Improvement District and staff have reviewed the plan and support the Master Plan; and

NOW, THEREFORE, BE IT RESOLVED the City Council of the City of Shoreview, Minnesota supports the Vadnais-Snail Lake Regional Park Master Plan.

The motion was duly seconded by Council Member Denkinger and upon a vote being taken thereon, the following voted in favor thereof: All Present

And the following voted against the same: None

Adopted this 16th day of November, 2020


Sandy Martin, Mayor
Shoreview City Council

ATTEST:


Terry Schwerm, City Manager