

Metropolitan Parks and Open Space Commission

Meeting date: December 6, 2016

For the Community Development Committee meeting of December 19, 2016

For the Metropolitan Council meeting of January 11, 2017

Subject: River to River Greenway Regional Trail Master Plan, Dakota County

District(s), Member(s): MPOSC District G, Rachel Gillespie

Policy/Legal Reference: MN Statute 473.313

Staff Prepared/Presented: Michael Peterka, Planner (651-602-1361)

Division/Department: Community Development, Regional Parks and Natural Resources

Proposed Action

That the Metropolitan Council:

1. Approve the River to River Greenway Regional Trail Master Plan.
2. Require Dakota County to submit estimated land or easement acquisition costs and specific parcel locations that were not identified in the master plan for Metropolitan Council review and approval prior to seeking future grants for acquisition.
3. Require that prior to initiating development, Dakota County send preliminary plans to Scott Dentz, Interceptor Engineer Manager at Metropolitan Council Environmental Services, so he may assess the potential impacts to the regional interceptor system.

Background

Dakota County has submitted a master plan for the River to River Greenway Regional Trail, formerly known as the North Urban Regional Trail. This master plan updates and replaces the North Urban Regional Trail Master Plan that was approved by the Metropolitan Council in 1997. The River to River Greenway Regional Trail is an east-west corridor that connects the Mississippi River at Lilydale to the Mississippi River at South St. Paul. The regional trail travels eight miles through the cities of Lilydale, Mendota Heights, West St. Paul, and South St. Paul providing connections to the Big Rivers and Mississippi River Regional Trails and the planned Mendota to Lebanon Hills Greenway Regional Trail. As the trail exists today, there is a continuous path for trail users, but it lacks many features and enhancements that would distinguish it as a regional destination trail.

Rationale

The River to River Greenway Regional Trail Master Plan is consistent with the requirements of the *2040 Regional Parks Policy Plan* including the section on regional destination trails in Planning Strategy 1. It is also consistent with other Council policies.

Thrive Lens Analysis

The River to River Greenway Regional Trail Master Plan

- Protects the region's natural resources (Stewardship) by maintaining native plant communities and treating stormwater on site.
- Balances investments across the region (Prosperity) by enhancing a regional trail corridor in an urban and suburban portion of Dakota County.

- Enhances quality of life in the region (Livability) through promoting bicycling for transportation, encouraging recreation and healthy lifestyles, and increasing access to nature.

Funding

The estimated cost to implement the master plan is \$13,160,620, which includes \$2,558,320 for land protection and \$10,602,300 for development.

Approval of this master plan makes the acquisition and development costs eligible for regional parks funding, but does not commit the Council to any funding. Future funding based on this master plan may be awarded through the Regional Parks Capital Improvement Program (CIP), the Parks and Trails Legacy Fund, and the Park Acquisition Opportunity Fund. Council action is required to approve the CIP and specific grants to Dakota County.

Known Support / Opposition

The Dakota County Board of Commissioners has approved and adopted the master plan. The cities of Mendota Heights, West St. Paul, and South St. Paul have adopted resolutions of support for regional trail master plan. There is no known opposition to the master plan.

Analysis

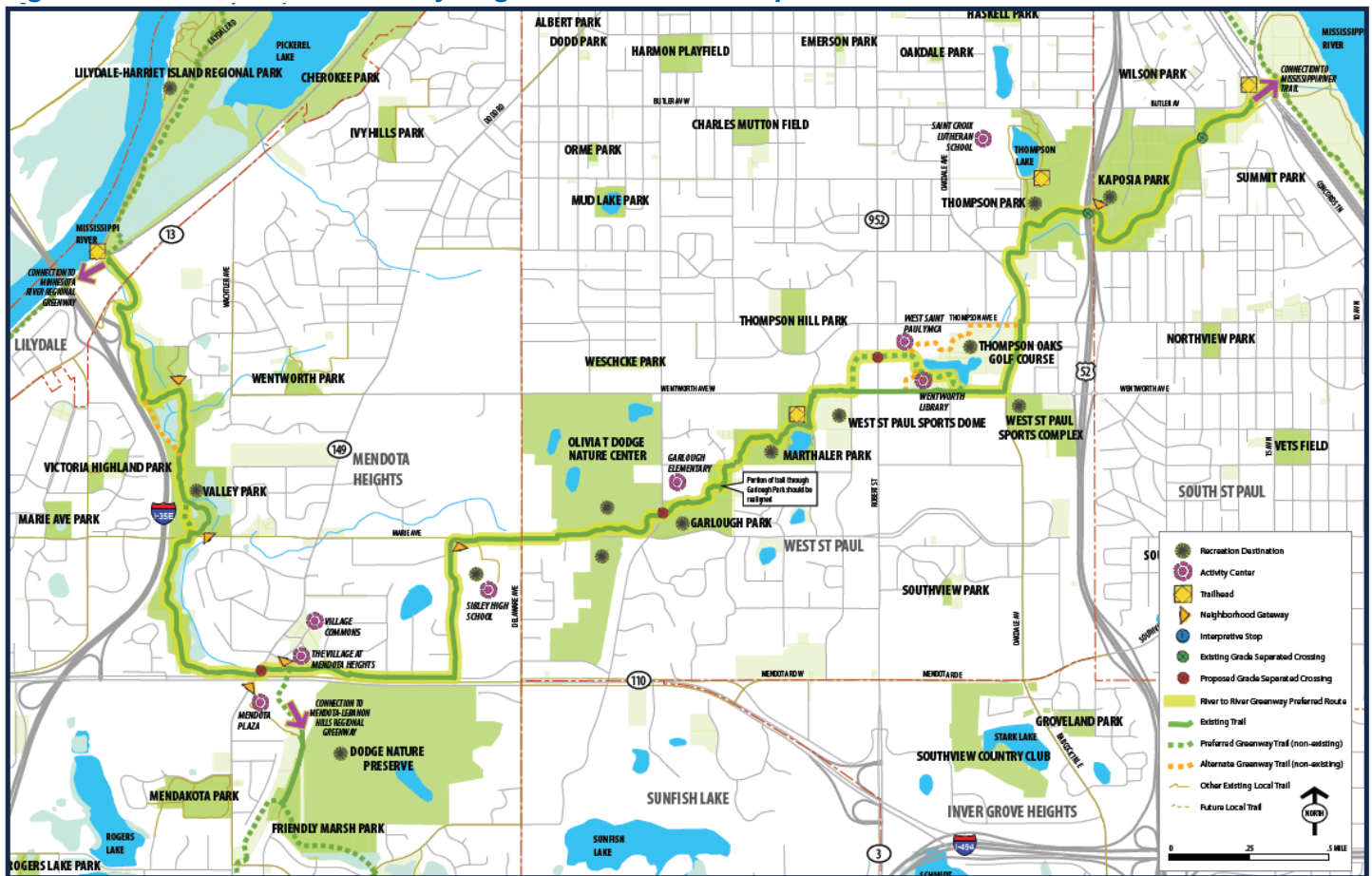
Planning Strategy 1 of the 2040 Regional Parks Policy Plan requires that master plans for regional parks address the eleven items listed below.

Boundaries and Acquisition

The River to River Greenway Regional Trail travels through the cities of Lilydale, Mendota Heights, West St. Paul, and South St. Paul. The regional trail connects to the Big Rivers and Mississippi Regional Trails and the future Mendota to Lebanon Greenway Regional Trail. Additionally, the regional trail provides access to local destinations including local parks, schools, and commercial areas.

An overview of the River to River Greenway Regional Trail can be seen in *Figure 1*. The trail currently exists as a paved path. However, the master plan details many enhancements that need to be incorporated to improve the quality of trail. These enhancements focus on developing a continuous 10-foot minimum paved trail width and incorporating amenities such as signage, trailheads, and landscape improvements.

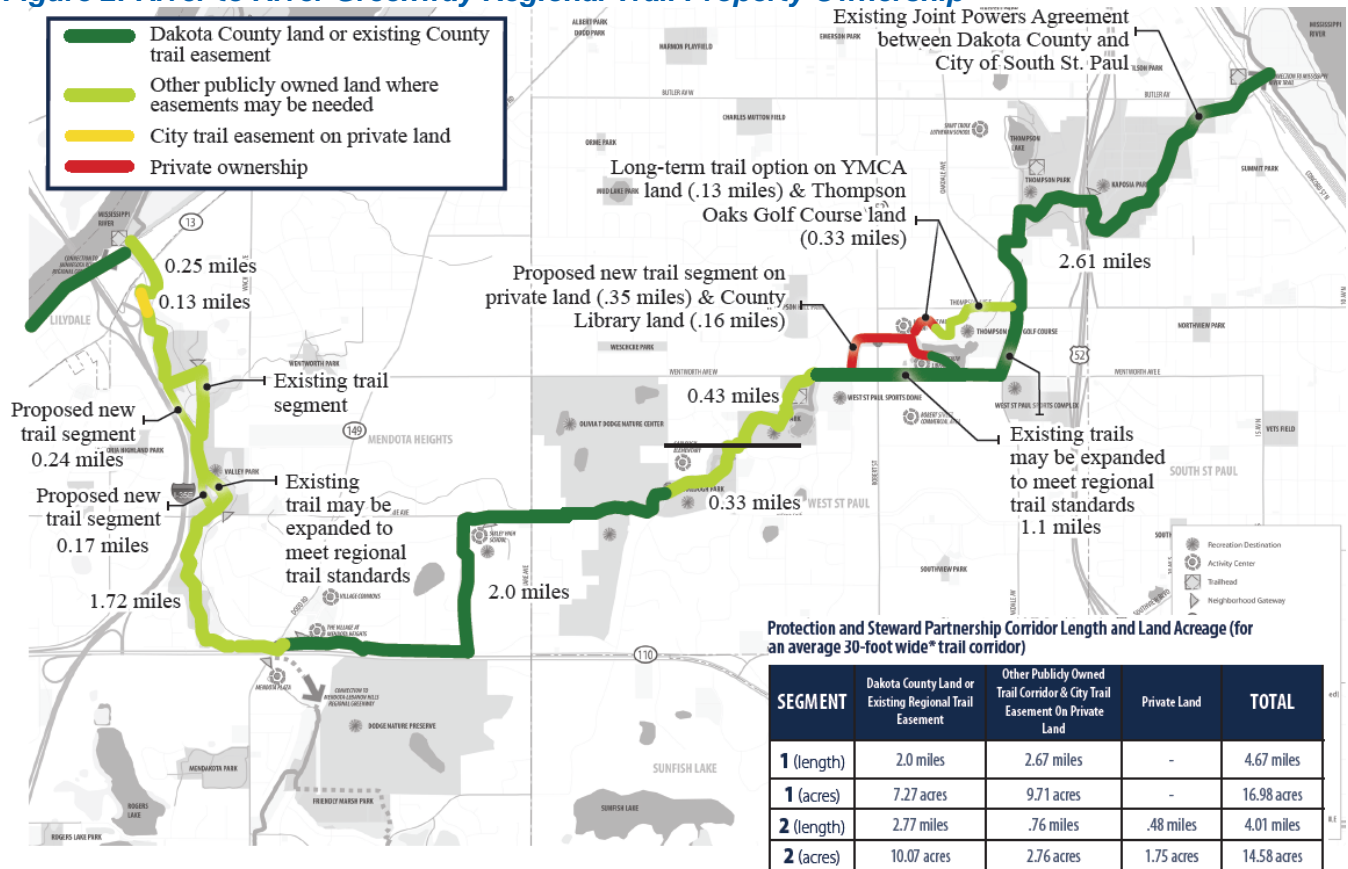
Figure 1: River to River Greenway Regional Trail Route Map



The master plan envisions a 100-foot-wide greenway, although the regional trail corridor will be 30 feet wide. Having existed as the North Urban Regional Trail for several years, most of the land has been secured for the corridor. Along its length, the 30-foot-wide regional trail corridor consists of approximately 31.56 acres. The entire trail corridor, apart from 1.75 acres of private land, is owned by Dakota County, other public agencies, or has an existing regional trail easement. Additionally, many sections of trail may require further land protection to allow existing trail segments to be expanded to meet regional trail standards. Dakota County's land protection strategies include: park dedication,

direct purchase with resale of land not required for the trail, permanent easements, land donation, bargain sale, life estate, and negotiations with cities and developers. *Figure 2* depicts the trail route, property ownership, and the locations where the trail corridor width may be expanded in the future.

Figure 2: River to River Greenway Regional Trail Property Ownership



If, in the future, Dakota County needs to acquire land for greenway expansion, County staff will provide the Metropolitan Council with an estimate of costs to acquire land for the greenway prior to a request for funding. Several locations have been identified as priority acquisition areas. These sites include: a proposed Robert Street grade-separated crossing and long term trail realignment through the Thompson Oaks Golf Course; Livingston Ave expanded right-of-way; Crawford Drive right-of-way; and properties along Robert Street.

Dakota County estimates the total land protection costs for the River to River Greenway Regional Trail to be approximately \$2.6 million. This amount is based on an estimated cost of \$90 per linear foot where land protection is necessary.

Demand Forecast

Active living, popularity of trail-based activities, interest in nature, history and culture, transportation and connectivity, aging actively, and population growth are current trends that indicate visits to Dakota County regional trails are likely to increase.

By 2030, the population of communities along the regional trail corridor is expected to increase by 13% from the 2013 population estimates. Population estimates for communities along the corridor can be seen in *Figure 3*. The combination of recreation trends and increases in population indicates an increase in demand for recreation facilities in Dakota County. This justifies the enhancements to the River to River Greenway Regional Trail.

Figure 3: Forecasted Population of Communities along the Regional Trail

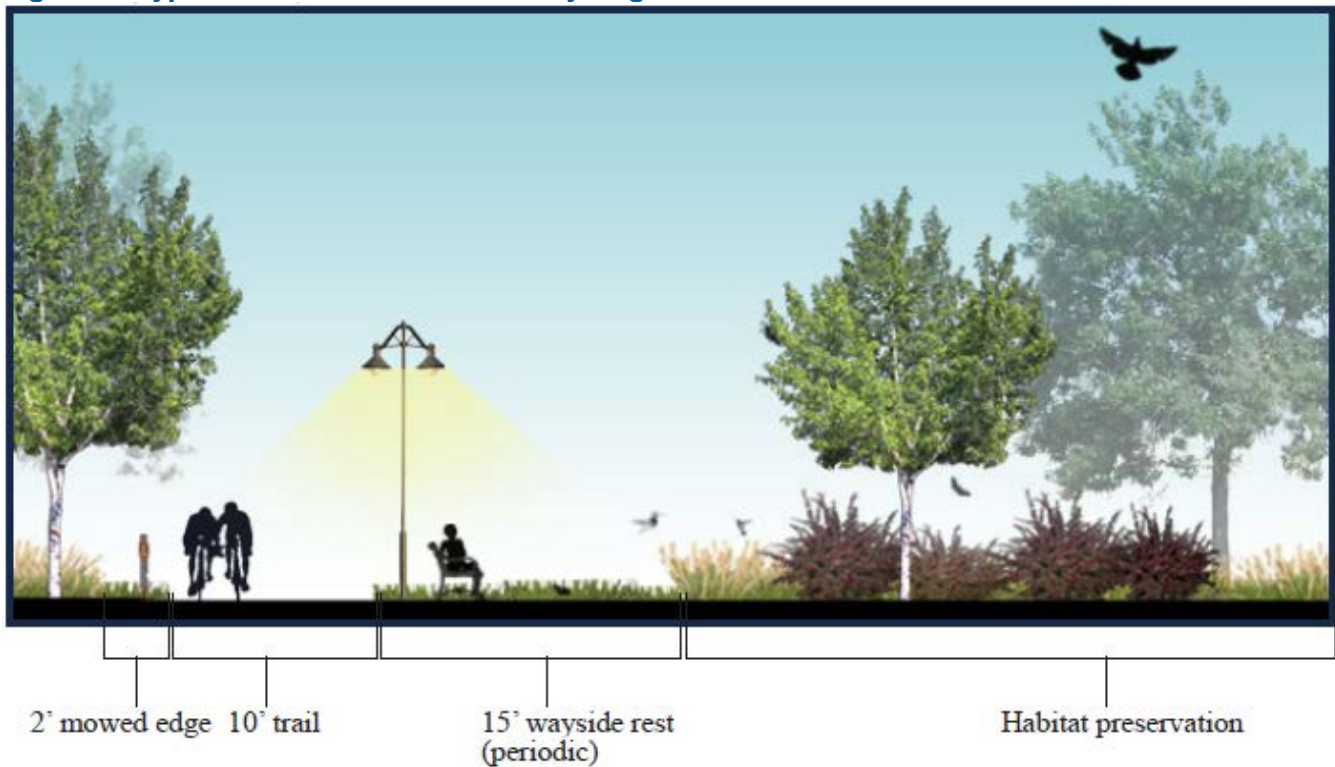
Year	Mendota Heights	West St. Paul	South St. Paul	Sunfish Lake	Lilydale	Dakota County
2013 Estimate	11,163	19,648	20,441	526	900	408,732
2030 Forecast	13,000	22,900	22,000	520	940	501,950

Development Concept

The greenway corridor will vary in width from 100 feet to more than 300 feet; however, the development concept described in the master plan focuses on the 30-foot-wide regional trail corridor to be constructed and operated by Dakota County.

The regional trail will be a bituminous trail designed in accordance with applicable American Association of State Highway Transportation Officials guidelines, Minnesota Department of Transportation bicycle design guidelines, and Dakota County trail standards. The trail will be a minimum of 10 feet wide with a two-foot grass clear zone on each side. Anticipated uses include walking, jogging, inline-skating, and bicycling. The trail will be maintained for winter use and lighted where appropriate. A typical cross-section of the trail corridor can be seen in *Figure 4*.

Figure 4: Typical River to River Greenway Regional Trail Cross-Section



Access to the River to River Greenway Regional Trail will be provided at trailheads for local and regional access, as well as at neighborhood gateways. Access points will typically be located at recreation destinations, activity centers, and trail intersections.

Trailheads will occur every 3 to 5 miles and will include the following amenities:

- Water
- Motor vehicle parking
- Secure bicycle parking
- Picnic areas or facilities
- Wayfinding and traffic control
- Local or regional trail connections
- Restrooms
- Interpretation
- Benches
- Food, where there are opportunities
- Shelter and shade

Neighborhood gateways will be located at convenient intervals between trailheads. Where possible, facilities will be shared with other uses and will be located near a recreation destination or activity center. Neighborhood gateways will include:

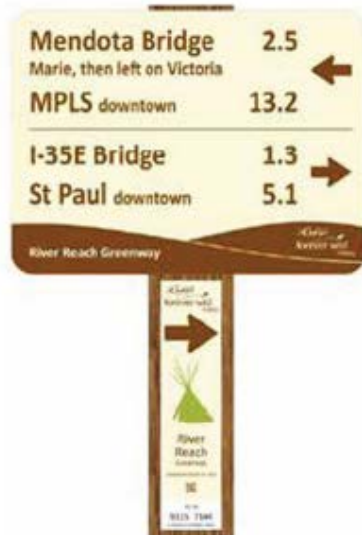
- Benches
- Secure bicycle parking
- Wayfinding and traffic control
- Local or regional trail connections
- Water
- Interpretation

For the Dakota County greenway system, a consistent wayfinding system is essential for orientation navigation, and safety. Signage is planned throughout the corridor. Wayfinding examples can be seen in *Figure 5*, and signage locations can be seen in *Appendix A*.

Figure 5: Wayfinding Examples



Mile Marker



Directional Sign



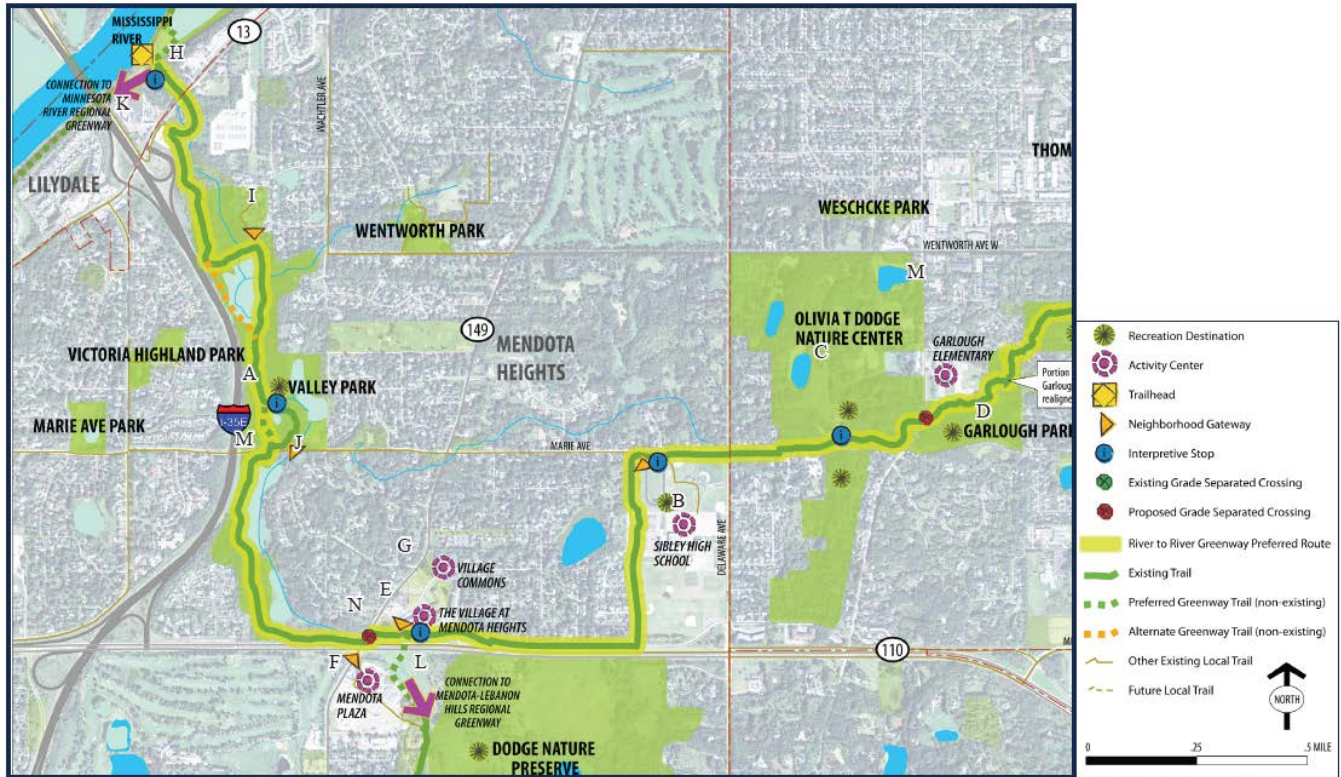
Kiosk

For planning purposes, the River to River Greenway Regional Trail corridor has been divided into two segments.

Segment 1, the western segment, is 4.3 miles in length and travels from Big Rivers Regional Trail in Lilydale to Garlough Park in West St. Paul. Segment 1, as depicted in *Figure 8*, includes the existing trailhead at the Big Rivers Regional Trail. The segment also contains five neighborhood gateways and a connection to the planned Mendota-Lebanon Hills Greenway Regional Trail, Valley Park, Dodge Nature Center, Garlough Park, The Village at Mendota Heights, and Henry Sibley High School.

The master plan identifies two alternate trail alignments for 1.4 miles of trail that pass through Valley Park in Mendota Heights. The existing trail has several sharp turns and areas of steep slopes. The alternative segments would solve the curve and grade issues. Traveling east along the trail, an underpass is proposed at Dodd Road and Highway 110. At the eastern edge of segment 1, the trail passes through Garlough Park where a trail realignment is recommended to reduce areas of steep slopes, sharp curves, and tree encroachment.

Figure 8: Segment 1 of the River to River Greenway Regional Trail



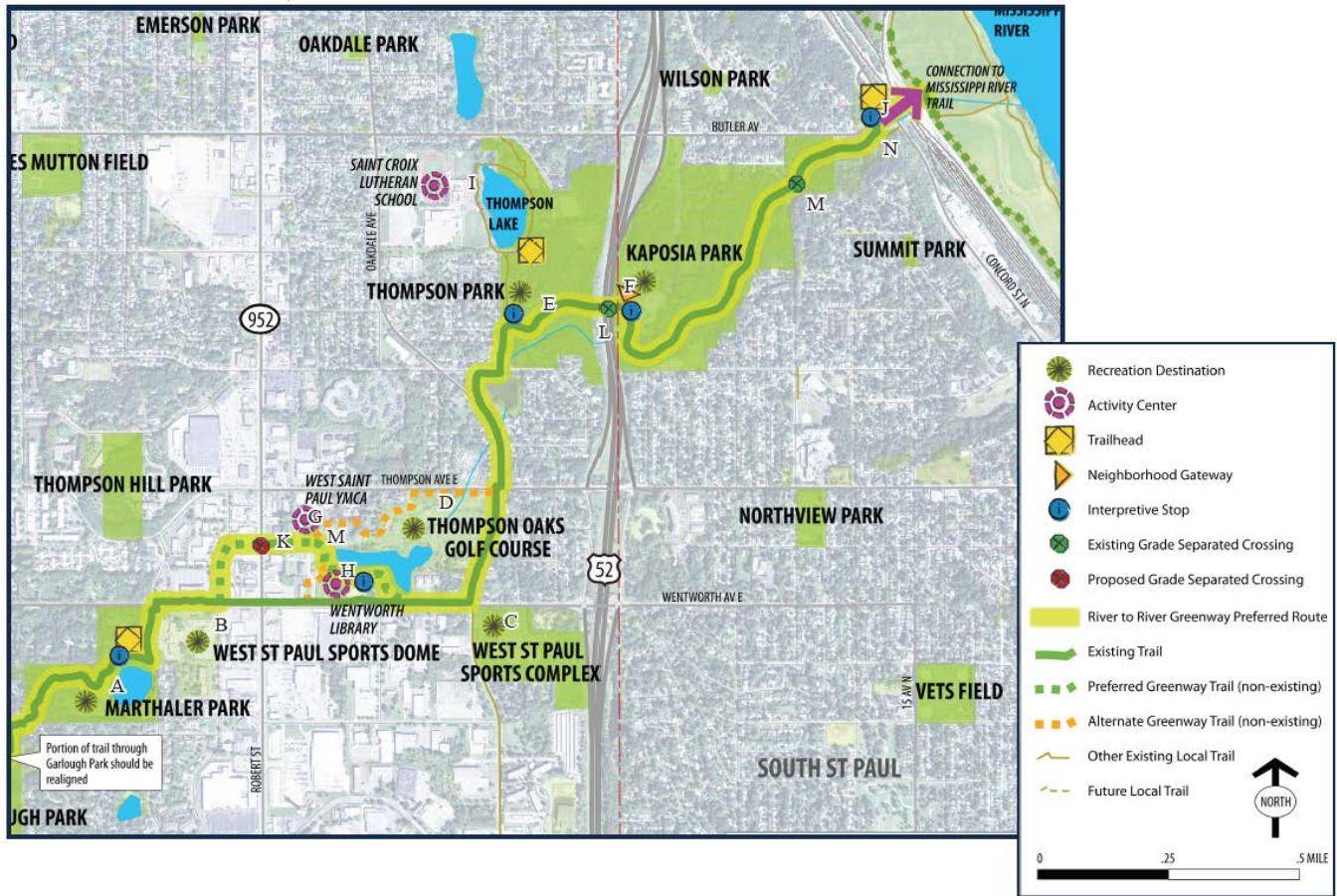
Segment 2, is 3.3 miles in length and travels from Marthaler Park in West St. Paul to a connection with the Mississippi River Regional Trail in South St. Paul. Segment 2, as depicted in *Figure 9*, includes proposed trailheads at Marthaler Park and Thompson Park and an existing trailhead at Simon's Ravine. A neighborhood gateway will also be incorporated into the existing facilities in Kaposia Park.

As the trail passes through Marthaler Park, several recommended improvements are included in the master plan. The improvements include constructing a loop trail around Marthaler Lake; rerouting the trail to avoid busy areas and reduce steep slopes and sharp curves. Continuing east, the trail crosses Robert Street. The master plan proposes a grade-separated crossing of Robert Street in West St. Paul. A bridge or tunnel will provide a much needed safe crossing and deliver a more continuous greenway experience. If funding is not secured for a grade-separated crossing, the greenway will continue to use the at-grade crossing of Robert Street at Wentworth Avenue. A long term alternate trail route is suggested from the east side of the proposed Robert Street grade-separated crossing through the northern portion of Thompson Oaks Golf Course. This alternate route would be explored only if future redevelopment of the golf course were to occur.

The existing trail along Oakdale Avenue is in poor condition, less than eight feet wide, close to the curb, and without trees, landscaping, or other amenities. Proposed improvements along Oakdale Avenue include narrowing the traffic lanes to 11 feet, removing parking on the west side of the road, and

expanding the trail and boulevard to enhance the greenway experience. Continuing east, the trail reaches a connection with the Mississippi River Regional Trail.

Figure 9: Segment 2 of the River to River Greenway Regional Trail



The estimated development costs for the regional trail are \$10,602,300. A table detailing both development and land protection costs can be found in *Appendix B*.

Conflicts

Dakota County anticipates that conflicts related to the River to River Greenway Regional Trail will be minimal. If minor conflicts to arise, Dakota County will work with individual landowners to resolve the issues on a case-by-case basis.

Public Services

The master plan does not identify any new public services that are needed to accommodate the regional trail.

Operations

Dakota County will be responsible for the operations of the 30-foot-wide regional trail corridor and will enter into a joint powers agreement with partner agencies where there are opportunities for operational partnerships. Once the River to River Greenway Regional Trail is complete, an additional 0.25 full time employee park keeper and a 0.25 seasonal full time employee will be needed to operate and maintain the trail.

Regular maintenance for the River to River Greenway Regional Trail will include:

- Sign maintenance
- Trash collection
- Sweeping and blowing
- Trail and bridge repair
- Winter trail clearing
- Trailhead facility repair and maintenance
- Mowing
- Tree trimming

The master plan also includes a pavement management schedule for long term maintenance of the regional trail.

Public use of the Dakota County parks system is controlled by County Ordinance 107. Visitors are informed of the park and trail rules via kiosks and signs that include information regarding hours of operation, permitted and prohibited activities, fees and directions. The County's Parks, Lakes, and Trails Officers patrol the parks and trails, educate visitors, and enforce ordinances. Local law enforcement and public safety agencies will be responsible for emergency and criminal complaints along the greenway corridor.

Current annual operations and maintenance costs for the River to River Greenway Regional Trail are \$56,000. Dakota County estimates that once the master plan trail enhancements are complete, annual operations and maintenance costs will increase to \$68,000.

Public Engagement and Participation

Dakota County conducted an eight-month-long planning process led by advice from a technical advisory group (TAG) that met regularly during the process. The TAG consisted of representatives from the cities of Mendota Heights, West St. Paul, and South St. Paul. The TAG also had members from Dakota County's Parks Department and Office of Planning.

In addition to the TAG, specific outreach was made to engage and get input from State Health Improvement Program (SHIP) priority populations. These populations include people over 55 years of age, children, people with lower median income, and people with mobility issues. Dakota County conducted a series of open houses and presentation/input sessions specifically targeting SHIP priority populations. These included going to senior group meetings and an open house in an apartment complex located near the corridor. Additionally, a questionnaire was distributed at several locations asking for feedback on trail accessibility, connections, and amenity enhancements.

The engagement process included a project website, a public review period, an open house that was used to gather input on the draft recommendations for trail alignment alternatives, greenway enhancements, interpretive themes, approaches to natural resource, and water quality improvements.

Master plan content resulting from engagement efforts included:

- Grade separated crossings at Charlton Avenue, Dodd Road, and Robert Street
- Wayfinding, trees, lighting, and benches in key areas
- Restrooms at all trailheads
- Connections to activity centers and recreation destinations

The cities of South St. Paul, Mendota Heights, and West St. Paul and the Dakota County Board of Commissioners have all approved resolutions supporting the master plan.

Public Awareness

Dakota County's Park Department will continue working with Dakota County's Communications Department to promote awareness and use of the County's park and greenway system. This will involve the use of many tools including, but not limited to, websites, direct mail, press releases,

brochures, on-site promotion, monument signage along roads, wayfinding within greenways and parks, and paid advertising. Dakota County also collaborates with cities, businesses, the Metropolitan Council, and others to promote its facilities, programs, and services and to educate the public about its resources.

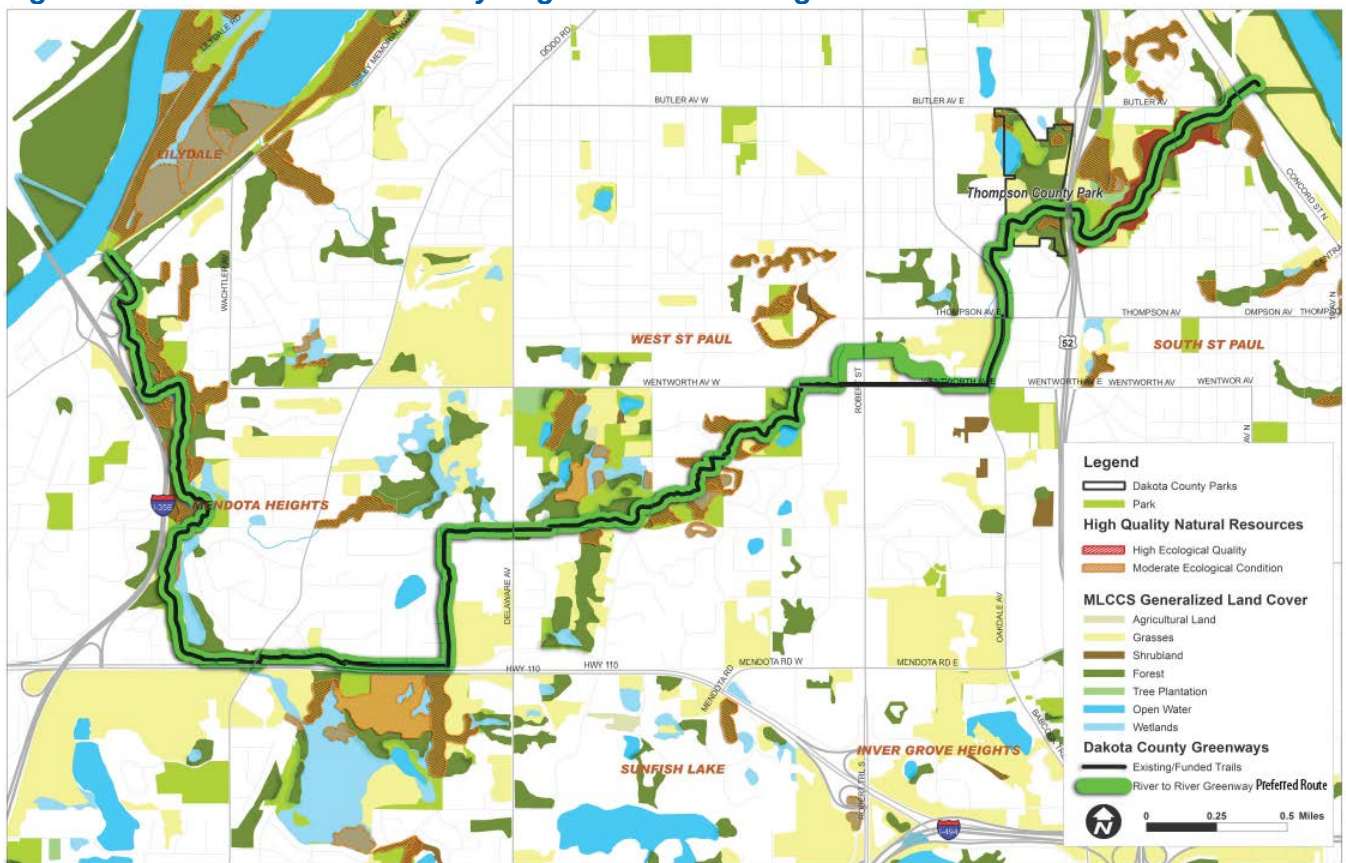
Accessibility

Dakota County is committed to offering universal accessibility at all trail facilities. The primary paved trail and all access points allow for universal accessibility in order to provide all visitors with a meaningful experience. Additionally, there are no entrance fees to access the trail and associated amenities.

Natural Resources

The River to River Greenway Regional Trail corridor connects several forested parks and open spaces through urban and suburban areas. The overall quality of plant communities within the corridor range from moderate to high-quality and can be seen in the Minnesota Land Cover Classification System (MLCCS) map in *Figure 10*. The greenway corridor's only existing high-quality plant community is located in Kaposia Park's steep ravine.

Figure 10: River to River Greenway Regional Trail existing natural resources



The primary water resources along the greenway corridor is the Mississippi River which anchors both the western and eastern ends of the trail. Few lakes and wetlands are found along the corridor due to the highly developed landscape and drainage patterns. However, there are three small water bodies that include Marthaler Lake, the pond at Thompson Oaks Golf Course, and Thompson Lake.

Stewardship Plan

Restoration and protection efforts will be focused near trailheads. This will provide the greatest opportunity for users to see the results of stewardship and provide a high-quality experience. Due to the linear nature of the greenway, stewardship activities will be in cooperation with adjoining landowners, both public and private.

The master plan identifies and prioritizes key habitat investment areas for natural resource management. This was done by targeting areas with high-quality ecological resources and specific greenway use patterns. Since most of the area along the greenway corridor is developed at urban and suburban densities, the establishment of a continuous ecological habitat corridor will be difficult. Therefore, the stewardship plan will be focused on making improvements at key areas of the corridor and preservation/restoration of existing high-quality natural areas. The habitat investment areas are depicted in *Appendix C*.

Vegetation management activities will include the removal of invasive species, wetland buffer protection, and the establishment or reestablishment of disturbed areas. The master plan includes specific actions for individual sites along the regional trail route.

Surface water management practices at trailheads will include:

- Developing rain gardens alongside trailhead parking lots.
- Allowing stormwater to run onto surrounding grass for small parking lots surrounded by greenspace.
- Planting trees to capture and evaporate rainwater on their leaves and to create pores in the soil with their roots to allow water to soak in.
- Planting prairie plants around parking lots where their deep roots facilitate stormwater infiltration.

Review by Other Council Divisions

Community Development – Environment and Surface Water Management (Jim Larsen 651-602-1159) – No Comments

Metro Transit (Steve Mahowald 612-349-7775) – No Comments.

Environmental Services – Sewers (Roger Janzig 651-602-1119) – This project extends 8 miles through the communities of Lilydale, Mendota Heights, West St. Paul, and South St. Paul. The construction of any new or updating of existing trails may have an impact on multiple Metropolitan Council Interceptors in multiple locations. To assess the potential impacts to our interceptor system, prior to initiating any proposed project, preliminary plans should be sent to Scott Dentz, Interceptor Engineering Manager (651-602-4503) at the Metropolitan Council Environmental Services for review and comment.

Local Planning Assistance (Patrick Boylan 651-602-1438) – No Comments.

Conclusions

1. The River to River Greenway Regional Trail is consistent with the requirements of the *2040 Regional Parks Policy Plan*, including the section on regional destination trails. It is also consistent with other Council policies.
2. The regional trail is located in the vicinity of several Metropolitan Council Environmental Services facilities. Any construction may have an impact on these MCES Interceptors. In order

to maintain the integrity of the regional sewer interceptor system, Dakota County should submit preliminary development plans for the regional trail to the Metropolitan Council Environmental Services for review and comment.

3. The estimated cost to implement the master plan is \$13,160,620, which includes \$2,558,320 for land protection and \$10,602,300 for development. The master plan does indicate specific parcels needed for land or easement acquisition, however. Therefore, Dakota County will be required to submit estimated land or easement acquisition costs and specific locations for Council review and approval prior to seeking funding for acquisition.
4. Approval of this master plan makes the acquisition and development costs eligible for regional parks funding, but does not commit the Council to any funding at this time. Future funding based on this master plan may be awarded through the Parks Acquisition Opportunity Fund, the Regional Parks Capital Improvement Program (CIP), and the Parks and Trails Legacy Fund. Council action is required to approve specific grants to Dakota County.

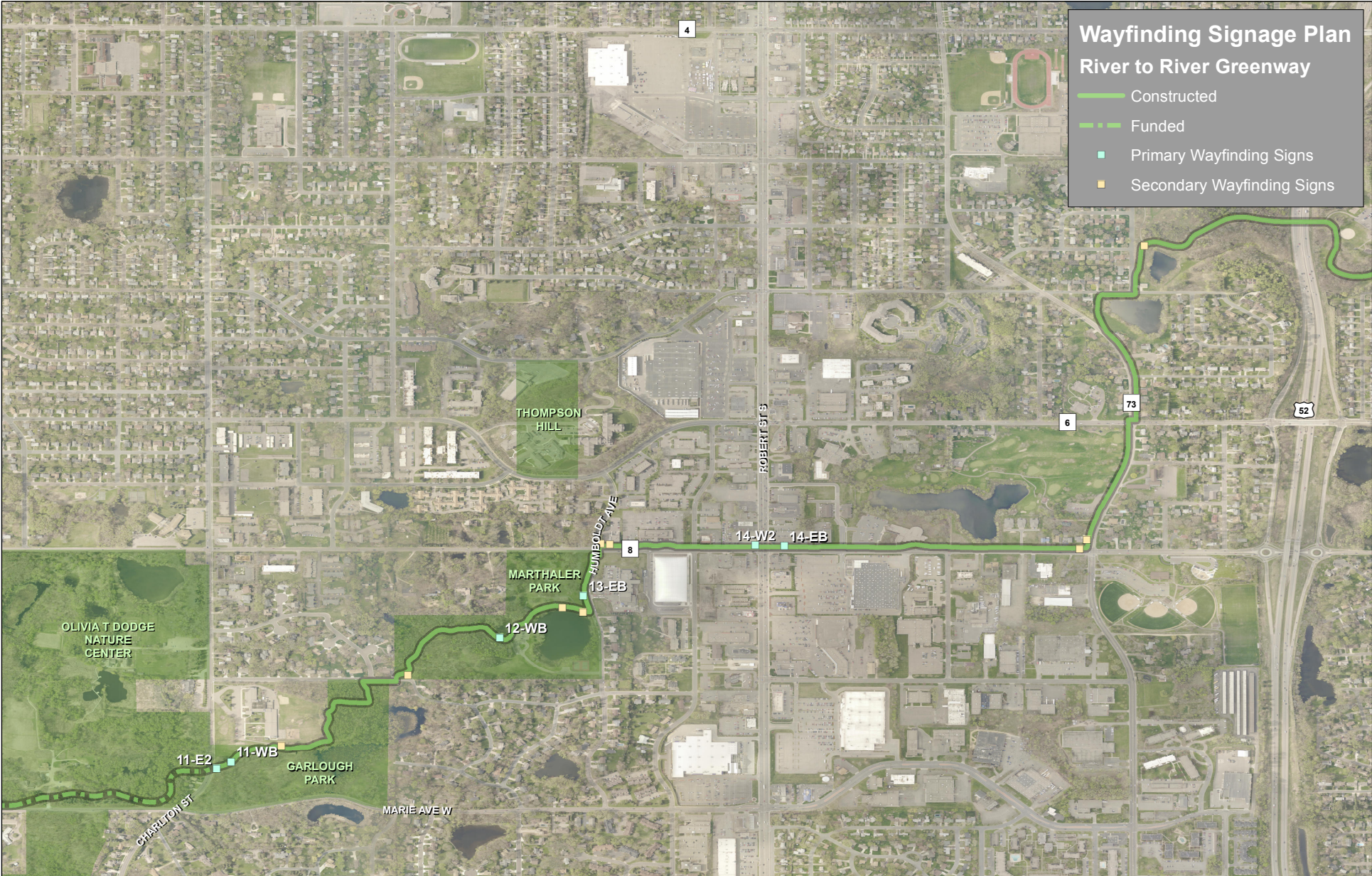
Appendix A: Wayfinding Signage Plan



Wayfinding Signage Plan

River to River Greenway

- Constructed
- - - Funded
- Primary Wayfinding Signs
- Secondary Wayfinding Signs



Appendix B: River to River Greenway Capital Development Cost Estimates

Project ID	Project Description	Priority	Potential Triggers/Partners	Estimated cost (Construction, Engineering, and Administration)		
				1st Priority	2nd Priority	Long-term
A	Big Rivers Trailhead - minor improvements, including bicycle parking, benches, trash receptacles, permanent restrooms (vault toilets), small picnic shelter, interpretive signage (Land is owned by Dakota County for this existing trailhead)	2nd			\$368,000 (cost included in MN River Greenway Master Plan)	
B	Trail improvements to segment from Big Rivers Trailhead to northern sharp turn in Valley Park	Long-term / As opportunities arise				\$225,000
	Land protection for existing trail corridor expansion from Big Rivers Trailhead to Dodd Rd (11,088 ft * \$90 / ln ft) -- through Project ID H	Long-term / As opportunities arise				\$997,920
C	Wayfinding signage at intersections of 35E & Hwy 13 and Hwy 13 & Lilydale Rd	1st		\$39,000		
D	Neighborhood Gateway to residential area in Valley Park - Minor improvements including bench, trash receptacle, wayfinding signage	2nd			\$39,000	
E1	Alternative 1 Trail construction	Long-term / As opportunities arise				\$895,000
	Land protection for Alternative 1 Trail corridor (1,270 ft * \$90/ln ft)					\$114,300
E2	Alternative 2 Trail construction	1st		\$45,000		
	Land protection for Alternative 2 Trail corridor (900 ft * \$90/ln ft)	1st		\$81,000		
F	Neighborhood Gateway in Valley Park just north of Marie Ave - minor improvements including wayfinding and interpretive signage, bicycle parking, benches, water fountain	2nd			\$39,000	
G	Valley Park - South Side Near TH 110 - Steep grades reduction	Long-term / As opportunities arise				\$79,000
H	Underpass at Dodd Rd - Including 10'x14' box culvert, utilities management, stormwater management, trail rerouting and paving, retaining walls	2nd				\$1,181,000
G2	Trail improvements to segment from Dodd Road to Warrior Drive (lighting, landscaping)	Long-term / As opportunities arise				\$304,000
I	Neighborhood Gateway at Village at Mendota Heights, including wayfinding and interpretive signage, benches, bicycle parking, and trash receptacle	2nd			\$39,000	
J	Alternative 3 Trail improvements and new rerouted trail segment in Garlough Park - Evaluate an alternate alignment, smooth out steep grades on alignment that would remain, restore existing trail area to grass	1st		\$76,000		
	Land protection for Alternative 3 Trail corridor (1,200 ft * \$90/ln ft)			\$108,000		
K	Trail improvements between Garlough and Marthaler Parks	2nd			\$110,000	
	Land protection for trail corridor expansion through Garlough and Marthaler Parks (4,000 ft * \$90/ln ft)				\$360,000	

Project ID	Project Description	Priority	Potential Triggers/Partners	Estimated cost (Construction, Engineering, and Administration)		
				1st Priority	2nd Priority	Long-term
L	Marthaler Park - Alternative Trail Construction - Evaluate an alternate alignment to reduce grades and avoid use of narrow concrete sidewalk; new alignment includes retaining wall to reduce impacts; additional alternatives should be evaluated to provide lower cost, lower impact options	1st	in coordination with City of West St. Paul park improvements	\$2,190,000		
	Land protection for Marthaler Park Alternative Trail corridor (1,400 ft * \$90/ln ft)			\$126,000		
M	Trailhead in Marthaler Park (The City of West St. Paul will retain ownership of the park and trailhead)	1st	in coordination with City project	\$300,000 (County contribution)		
N1	At-grade crossing improvements at Humboldt Ave and Wentworth Ave	1st		\$29,000		
N2	New trail on south side of Wentworth Ave from Humboldt to Livingston	2nd			\$45,000	
	Land protection for New Trail corridor from Humboldt to Livingston (675 ft * \$90/ln ft)				\$60,750	
O	New trail and grade-separated crossing of Robert St from Wentworth and Livingston to Wentworth and Marthaler Lane	1st	in coordination with City project and grant funding	\$3,500,000		
	Land protection for New Trail corridor from Livingston to Marthaler Lane (1,850 ft * \$90/ln ft)			\$166,500		
	Potential widening of existing trail along Wentworth from Livingston to Marthaler if grade-separation does not occur ¹			\$100,000 ¹		
	Land protection for potential trail expansion along Wentworth from Livingston to Marthaler (1,785 ft * \$90/ln ft) ¹			\$160,650 ¹		
P	Neighborhood Gateway at Wentworth Library - minor improvements including wayfinding signage, bicycle parking, stormwater management	2nd			\$39,000	
Q1	Trail along Wentworth Ave from Marthaler Lane to Oakdale Ave - Reconstruct trail to 10' width (.2 miles)			\$75,000		
	Land protection for Trail corridor from Marthaler Ln to Oakdale Ave (1,056 ft * \$90/ln ft)			\$95,040		
Q2	Trail improvements along Oakdale Ave from Wentworth Ave to Thompson Ave (does not include street reconstruction) with pedestrian crossing upgrade at Thompson Ave (.25 miles)	1st	coordinate with County Transportation Dept.	\$93,750		
	Land protection for Trail corridor from Wentworth to Thompson (1,320 ft * \$90/ln ft)			\$118,800		
Q3	Trail improvements along Oakdale Ave from Thompson Ave to just south of Emerson Ave (does not include street reconstruction) (.2 miles)	1st	coordinate with County Transportation Dept.	\$75,000		
	Land protection for Trail corridor along Oakdale north of Thompson (1,056 ft * \$90/ln ft)			\$95,040		
Q4	Trail improvements to existing trail off-road between Oakdale Ave and Emerson Ave (.1 miles)	1st		\$37,500		
	Land protection for Trail corridor off-road between Oakdale and Emerson (528 ft * \$90/ln ft)			\$47,520		
R	New trail through Thompson Oaks Golf Course, including through YMCA property	Long-term / As opportunities arise				\$156,550
	Land protection for New Trail corridor through Thompson Oaks Golf Course (1,305 ft * \$90/ln ft)					\$117,450

Project ID	Project Description	Priority	Potential Triggers/Partners	Estimated cost (Construction, Engineering, and Administration)		
				1st Priority	2nd Priority	Long-term
S	Trailhead in Thompson County Park - Minor improvements including wayfinding and interpretive signage	2nd			\$39,000	
T1	Trail improvements through Thompson County Park - Only minor grade issues, so no recommended improvements until trail rehabilitation is needed (.3 miles)	Long-term / As opportunities arise				\$112,500
T2	Trail improvements through Kaposia Park - No steep grade corrections are being recommended at this time as the trail is in good condition and the existing terrain will limit correction options; long-term add landings to various points along Kaposia Park trail to decrease overall length of continuous steep grade	Long-term / As opportunities arise				\$340,000
U	Neighborhood Gateway at western entrance of Kaposia Park - Minor improvements including wayfinding and interpretive signage	2nd			\$39,000	
T3	Address drainage concerns along the trail; swales along the trail and shallow culverts are recommended where feasible to keep the trail dry and prevent premature wear of pavement	2nd			\$17,000	
V	Wayfinding signage along entire corridor	1st		\$75,000		

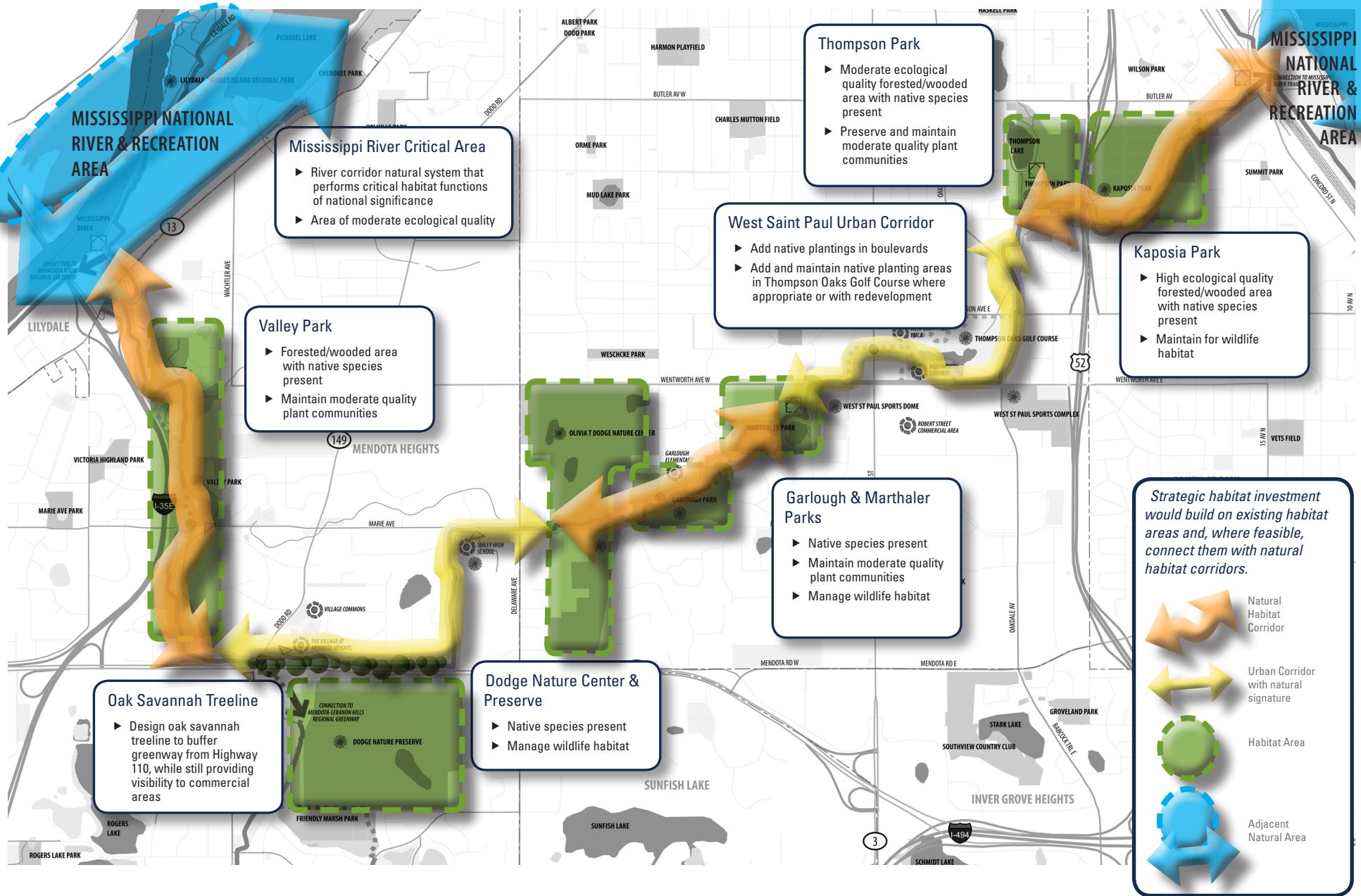
1st Priority Sub-Total	\$6,535,250		
1st Priority Land Protection	\$907,900		
2nd Priority Sub-Total		\$774,000	
2nd Priority Land Protection		\$420,750	
Long-term Sub-Total			\$3,293,050
Long-term Land Protection			\$1,229,670

Total cost of recommended improvements	\$13,160,620		
--	--------------	--	--

¹ Costs are not included in overall total cost amounts.

Appendix C: River to River Greenway Habitat Investment Areas

MISSISSIPPI NATIONAL RIVER & RECREATION AREA



Mississippi River Critical Area

- ▶ River corridor natural system that performs critical habitat functions of national significance
- ▶ Area of moderate ecological quality

Valley Park

- ▶ Forested/wooded area with native species present
- ▶ Maintain moderate quality plant communities

Thompson Park

- ▶ Moderate ecological quality forested/wooded area with native species present
- ▶ Preserve and maintain moderate quality plant communities

West Saint Paul Urban Corridor

- ▶ Add native plantings in boulevards
- ▶ Add and maintain native planting areas in Thompson Oaks Golf Course where appropriate or with redevelopment

Kaposia Park

- ▶ High ecological quality forested/wooded area with native species present
- ▶ Maintain for wildlife habitat

Garlough & Marthaler Parks

- ▶ Native species present
- ▶ Maintain moderate quality plant communities
- ▶ Manage wildlife habitat

Oak Savannah Treeline

- ▶ Design oak savannah treeline to buffer greenway from Highway 110, while still providing visibility to commercial areas

Dodge Nature Center & Preserve

- ▶ Native species present
- ▶ Manage wildlife habitat

Strategic habitat investment would build on existing habitat areas and, where feasible, connect them with natural habitat corridors.

- Natural Habitat Corridor
- Urban Corridor with natural signature
- Habitat Area
- Adjacent Natural Area