

METROPOLITAN COUNCIL

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DATE: January 3, 2012
TO: Metropolitan Parks and Open Space Commission
FROM: Jan Youngquist, AICP; Planning Analyst-Parks (651) 602-1029
SUBJECT: (2012-xxx) North Creek Greenway Regional Trail Master Plan, Dakota County (Referral No. 50015-1)
Metropolitan Parks & Open Space Commission District H (Barbara Schmidt)

INTRODUCTION

Dakota County has submitted the North Creek Greenway Regional Trail Master Plan for Metropolitan Council review and approval.

The *2030 Regional Parks Policy Plan* (Chapter 2 – Planning Strategy 1), describes the role of the master plan in the regional park system. The policy requires that any project proposed for funding in the Metropolitan Regional Parks Capital Improvement Plan (CIP) be consistent with a Metropolitan Council approved regional park master plan.

This staff report contains a review of the North Creek Greenway Regional Trail Master Plan based on its consistency with the *2030 Regional Parks Policy Plan* and recommends approval of the master plan.

AUTHORITY TO REVIEW

Minnesota Statute 473.313, Subdivision 1 requires Regional Park Implementing Agencies to “prepare, after consultation with all affected municipalities, and submit to the Metropolitan Council, and from time to time revise and resubmit to the council, a master plan and annual budget for the acquisition and development of regional recreation open space located within the district or county, consistent with the council’s policy plan.” (i.e., the *2030 Regional Parks Policy Plan*)

Minnesota Statute 473.313, Subdivision 2 authorizes the Metropolitan Council to review, with the advice of the Metropolitan Parks and Open Space Commission, master plans for the regional parks system. Plans are reviewed for their consistency with the *2030 Regional Parks Policy Plan* and other Council policy plans. If a master plan is not consistent with Council policy, the Council should return the plan to the implementing agency with its comments for revision and resubmittal.

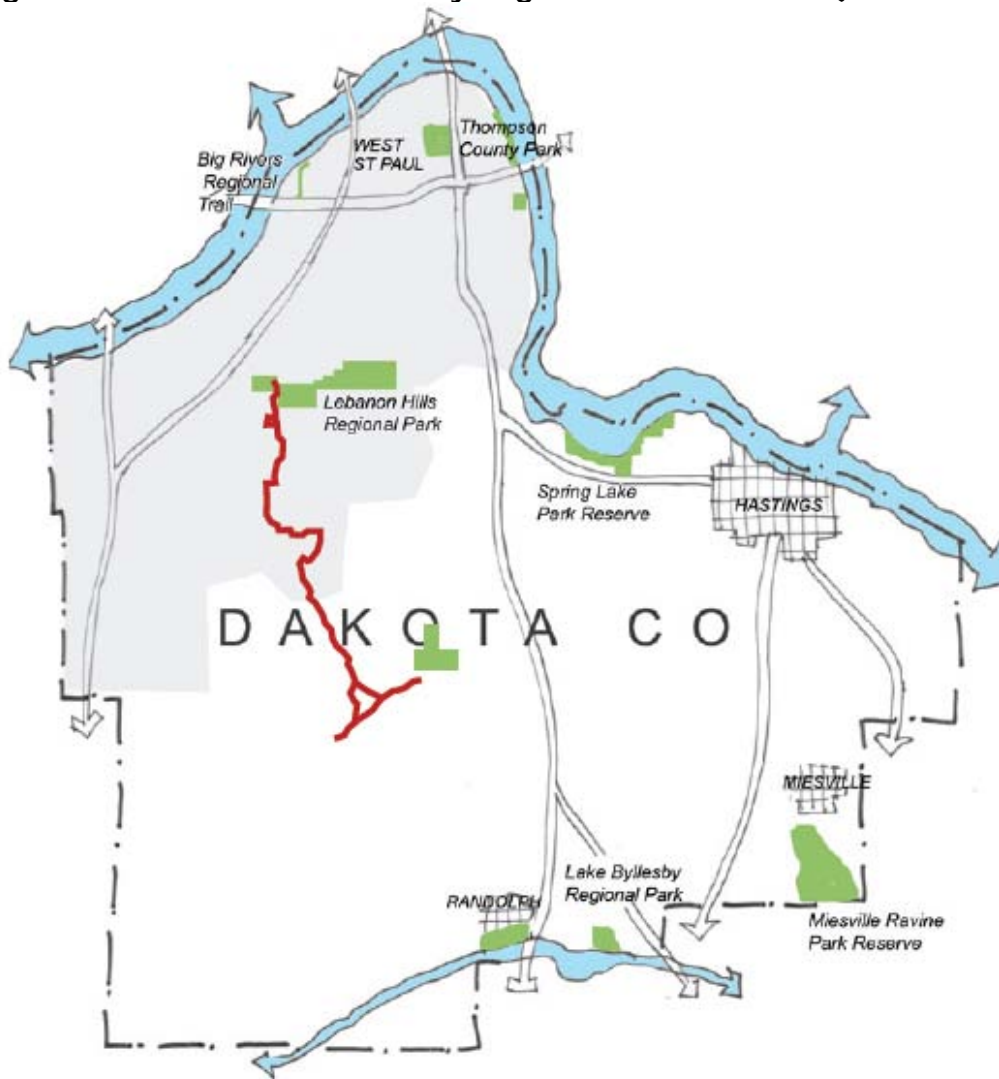
BACKGROUND

The *2030 Regional Parks Policy Plan* identifies a regional trail search corridor to connect Lebanon Hills Regional Park in Eagan and Apple Valley to a regional trail search corridor along the Vermillion River in Empire Township. This regional trail search corridor was

incorporated into the *2030 Regional Parks Policy Plan* based on Dakota County's *2030 Parks System Plan*, which developed a strong focus on greenway planning. Dakota County's vision for its greenways is to provide multiple benefits of water quality, habitat, recreation and nonmotorized transportation.

The North Creek Greenway Regional Trail will be approximately 14 miles long and will travel through Eagan, Apple Valley, Lakeville, Farmington and Empire Township as it connects Lebanon Hills Regional Park to the Vermillion River area. The regional trail will generally follow North Creek for much of the route. In addition to the connections between Lebanon Hills Regional Park and proposed trails along the Vermillion River, the North Creek Greenway Regional Trail will also connect to several schools, local parks and trails; the Minnesota Zoo; and a Minnesota Valley Transit Authority transit station. *Figure 1* depicts the general location of the North Creek Greenway Regional Trail.

Figure 1: North Creek Greenway Regional Trail Location (shown in red)



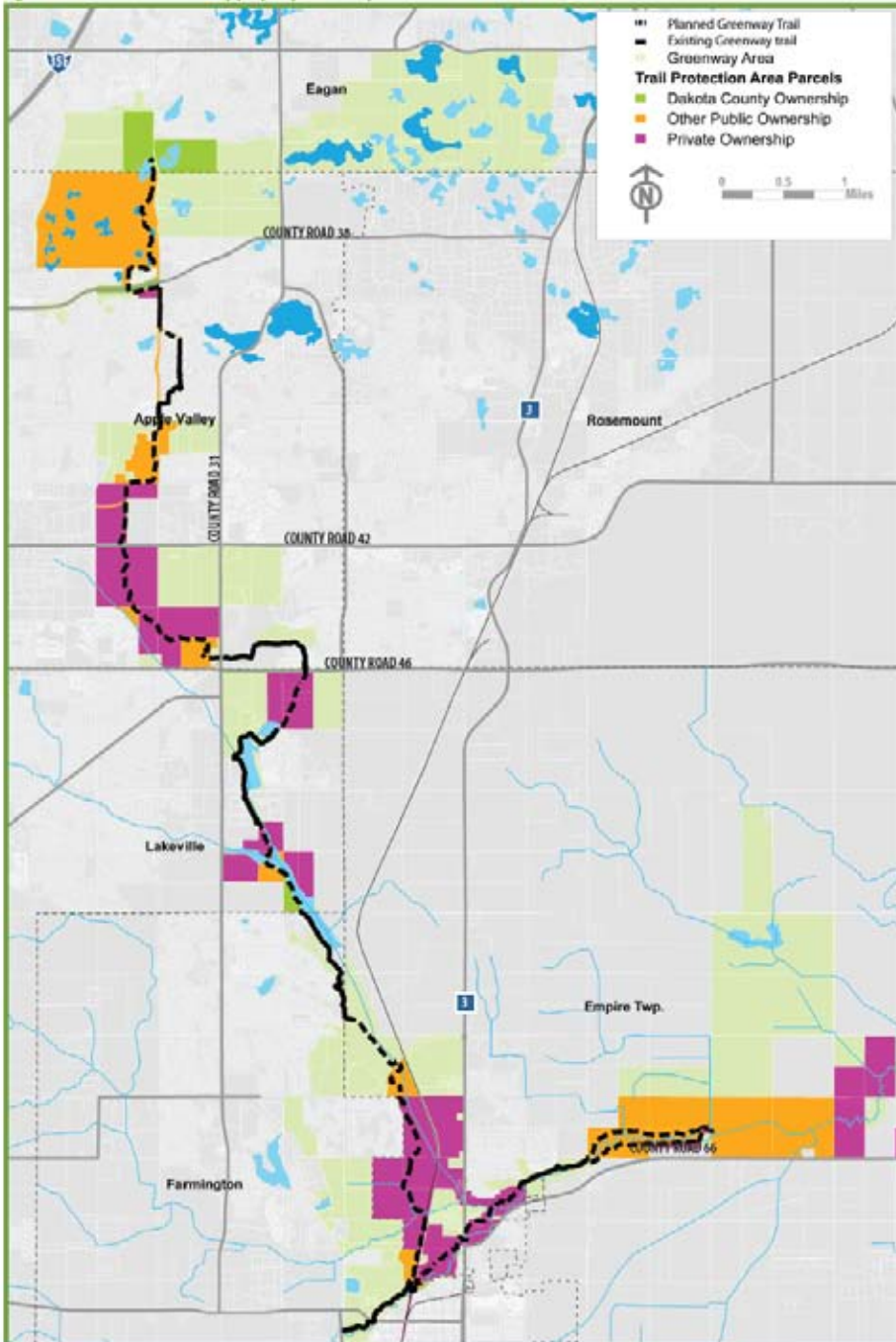
MASTER PLAN REVIEW ANALYSIS

The *2030 Regional Parks Policy Plan* requires that master plans for regional destination trails address the eleven items listed below.

1. Boundaries and Acquisition Costs

As the route for the North Creek Greenway Regional Trail travels through Eagan, Apple Valley, Lakeville, Farmington and Empire Township, it consists of existing trails as well as planned trail segments. The master plan envisions a 100 to 300 foot wide greenway, although the regional trail corridor will be 30 foot wide. Along its length, the regional trail corridor consists of approximately 59.6 acres. Half of the acreage is publicly owned, either by Dakota County or other agencies; half is privately owned. *Figure 2* depicts the trail route and the property ownership.

Figure 2: North Creek Greenway Regional Trail Property Ownership



Strategies for protection of land for the regional trail include:

- Park dedication
- Direct purchase with the resale of land not required for the trail corridor
- Permanent easements
- Use agreements
- Land donation
- Bargain sale
- Life estate
- Negotiations with cities and developers

Dakota County estimates that acquisition costs for the North Creek Greenway Regional Trail are \$3,923,100.

2. Demand Forecast

Dakota County estimates that if open today, the North Creek Greenway Regional Trail could expect approximately 250,000 annual visits. The master plan cites Metropolitan Council studies, which indicate that 50 percent of regional trail users live within three-quarters of a mile from the trail (the core service area) and 75% percent of users live within 3 miles of the trail (the primary service area). The core service area of the trail includes the communities through which the trail travels: Eagan, Apple Valley, Lakeville, Farmington and Empire Township. The primary service area includes the core service area and extends into Burnsville, Rosemount, Eureka Township and Castle Rock Township. The majority of trail users are anticipated to come from these service areas.

3. Development Concept

The primary recreation feature of the North Creek Greenway Regional Trail will be a continuous destination trail for nature-based recreation and nonmotorized transportation. 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 (AASHTO) guidelines, Minnesota Department of Transportation bicycle design guidelines and Dakota County trail standards. The trail will be 10 to 12 feet wide with a 3 foot grass clear zone on each side. Anticipated uses include walking, jogging, inline-skating and bicycling. The trail will be cleared for winter use and lighted, where appropriate.

Access to the North Creek 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:

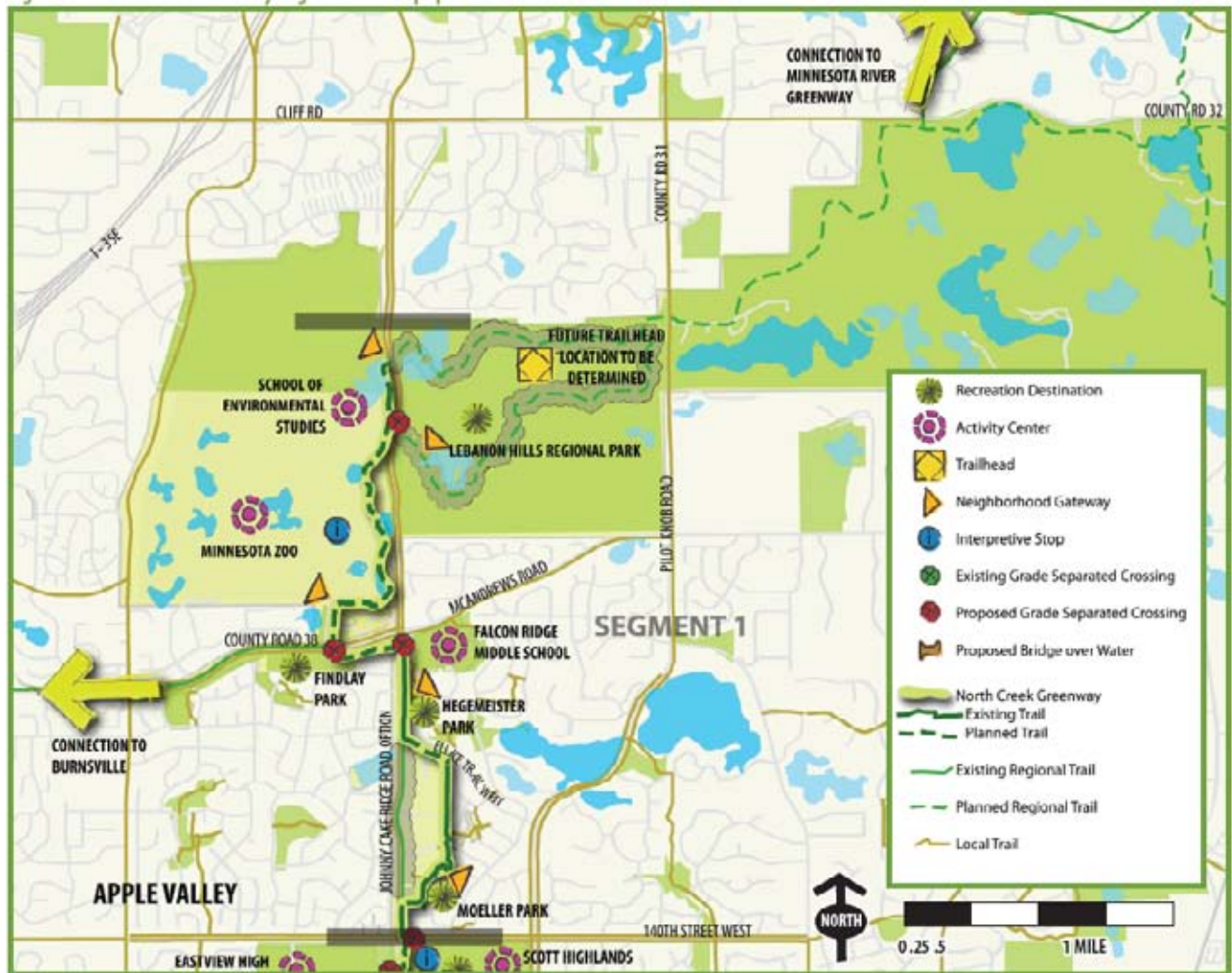
- Water
- Motor vehicle parking
- Secure bicycle parking
- Picnic areas or facilities
- Wayfinding and traffic control
- Local or regional trail connections
- Restrooms
- Interpretation
- Benches
- Food, where there are opportunities
- Shelter and shade

Neighborhood gateways will be located at convenient intervals between trailheads. Where possible, facilities will be shared with other uses and will be ideally located where there is 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
- Restrooms, parking, picnicking and food, where there are opportunities

For planning purposes, the North Creek Greenway Regional Trail corridor has been divided into four segments.

Figure 3: Segment 1, North Creek Greenway Regional Trail



Segment 1 is 2.5 miles in length and is located at north end of the regional trail corridor, between Lebanon Hills Regional Park and 140th Street West in Apple Valley, as shown in *Figure 3*.

The trail will begin at Lebanon Hills Regional Park near the border of Eagan and Apple Valley. The trail will then travel through the Minnesota Zoo property. The Minnesota Zoo will be reconfiguring its public entry and picnic area in the future; therefore,

Dakota County will coordinate with the zoo to plan the trail alignment and identify shared use of facilities, such as water, restrooms and bike parking that will benefit both zoo visitors and regional trail users. Existing trails along both sides of Johnny Cake Ridge Road will be used as interim routes until this trail segment can be constructed. South of the zoo, most of the regional trail exists between McAndrews Road and 140th Street West.

Segment 1 will include a trailhead at Lebanon Hills Regional Park and five neighborhood gateways. In addition to the connections to Lebanon Hills Regional Park and the Minnesota Zoo, Segment 1 will provide connections to three local parks and a middle school. Two grade separated crossings will be needed for this trail segment. A grade separated crossing is also proposed at Johnny Cake Ridge Road between the Minnesota Zoo and Lebanon Hills Regional Park. This crossing will most likely to be included in a future master plan for the regional park, however.

Figure 4: Segment 2, North Creek Greenway Regional Trail



Segment 2 is 3 miles in length and extends from 140th Street West in Apple Valley to 160th Street West in Lakeville, as shown in *Figure 4*. Most of the trail in this area does not exist at this time. Between the Apple Valley Aquatic Center and Quarry Point Park is an area slated for development in the future. The regional trail alignment and design in this area will be coordinated with future development plans, which will present opportunities to integrate new parks, storm water treatment and grade separated crossings into the trail corridor. Heading east from Quarry Point Park, the trail is already built and crosses Pilot Knob Road via an existing underpass, where it connects to existing trails at Cobblestone Lake. From Cobblestone Lake, the trail crosses 160th Street West via an existing underpass.

Segment 2 will have 4 neighborhood gateways and will connect to three local parks, a middle and a high school, a transit station, and a commercial area. Four grade separated crossings are needed for this segment of the trail. Another grade separated crossing is suggested if there is an easterly extension of 153rd Street, but this will be determined as part of the future development planning of the existing aggregate mining area.

Segment 3 is 3.5 miles in length and extends from 160th Street W (County Road 46) in Lakeville to Rambling River Park in Farmington, as shown in *Figure 5*. Heading south from 160th Street, the trail will travel through an aggregate mining area that will be developed in the future, then to East Lake Park, which is a local park in Lakeville. From this park, the trail will follow North Creek, through North Creek Park to the future Fairhill Park at 195th Street West in Farmington. Much of the trail in this area is constructed, although some gaps exist. From Fairhill Park, the trail will head south to Rambling River Park. Segment 3 will have five neighborhood gateways and will connect to six local parks, an elementary and a middle school, several local trails and downtown Farmington.

This segment of the regional trail will require three bridge crossings: one at the north branch of North Creek in an area to be developed in the future, one at the wetland near 189th Street in Farmington, and one at Middle Creek north of downtown Farmington. A trailhead is planned at East Community Park in Lakeville and at the southwest edge of Rambling River Park. These trailheads will provide opportunities to share existing parking and restroom facilities and add picnicking, interpretation and wayfinding.

Figure 5: Segment 3, North Creek Greenway Regional Trail



Segment 4 is 2 miles in length and extends east from downtown Farmington along the Vermillion River, where it will connect with a future regional trail which will lead to the planned regional park in Empire Township. East of Biscayne Avenue, the trail alignment

will be developed in coordination with the Minnesota Department of Natural Resources, the Metropolitan Council and Empire Township, which are the primary stakeholders in this area. The terminus of the trail is at the Metropolitan Council's Empire Wastewater Treatment Plant. The master plan shows options for the trail both on the north and the south side of the Vermillion River in this area; the location of the trail will be determined in the future in coordination with the stakeholders identified above. The North Creek Greenway Regional Trail will also connect in the future to the proposed Vermillion River Greenway Regional Trail. *Figure 6* depicts this segment of the regional trail.

Figure 6: Segment 4, North Creek Greenway Regional Trail



Segment 4 will connect to one local park, the Vermillion Highlands Wildlife Management and Aquatic Management Area, and upon future development of another regional trail, the planned regional park in Empire Township.

The estimated development costs for the regional trail are \$16,676,531, as shown in *Figure 7*. These costs include trail construction, wayfinding signage, landscaping, lighting, site furnishings, trailhead and neighborhood gateway amenities, and grade separated crossings. The master plan identifies potential partnership opportunities for these projects and costs. Some trail segments can be coordinated as part of future development and redevelopment projects. Dakota County will also work with local municipalities and the Minnesota Department of Transportation regarding the grade separated crossings, which are a large expense in the total development costs.

Figure 7: North Creek Greenway Regional Trail Proposed Development Costs

Segment	Proposed Development Cost
1	\$4,838,800
2	\$3,964,640
3	\$2,731,140
4	\$1,493,960
Contingency (10%)	\$1,302,854
Design/Engineering (18%)	\$2,345,137
TOTAL	\$16,676,531

4. Conflicts

The surrounding land uses are generally compatible with the regional trail corridor. Minor conflicts may arise from private encroachment or residents' sensitivity to trail recreation or maintenance uses. Dakota County will work with individual landowners to resolve these issues on a case-by-case basis.

5. Public Services

No significant new public services will be needed to accommodate the regional trail. Proposed trailheads and neighborhood gateways are served by the existing road network. If utilities are not available, options such as solar-powered lighting, self-composting toilets or wells will be considered.

6. Operations

Dakota County will be responsible for the operations of the 30 foot regional trail corridor and will enter into a joint powers agreement with partner agencies where there are opportunities for operational partnerships. Once the North Creek Greenway Regional Trail is complete, an additional .5 year-round park keeper position and a .5 to 1 seasonal FTE will be needed to operate and maintain the trail.

The regional trail will be open 24 hours/day for transportation purposes. Operating hours for the wider greenway will likely be from sunrise to sunset. Hours may vary and change seasonally based on the type of use and the amount of existing lighting. Dakota County will work with local jurisdictions to resolve differences between trail use hours and the hours of the local parks through which the regional trail travels.

Regular maintenance for the North Creek 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.

Dakota County estimates that annual operations and maintenance costs for the North Creek Greenway Regional Trail will be \$275,000.

7. Citizen Participation

Dakota County led a yearlong planning process with advice from a technical advisory group (TAG). The TAG included representatives from:

- Cities of Eagan, Apple Valley, Farmington
- Empire Township
- Minnesota Department of Natural Resources
- Vermillion River Watershed Joint Powers Organization
- Minnesota Historical Society
- Dakota County Historical Society
- Dakota County Departments of Public Health, Parks and Open Space, and the Office of Planning and Analysis

The responsibilities of the TAG included providing guidance and technical assistance, identifying partnerships opportunities and discussing concurrent projects. Five TAG meetings were held between July 2010 and May 2011.

An open house was held in December 2010 to gather input on the trail alignment and another open house was held in July 2011 to review the master plan. The draft master plan was posted on a project website as well as on the County's website, which allowed opportunities for public feedback. All project stakeholders also were provided a copy of the master plan for review.

The City Councils of Apple Valley and Farmington have directed city staff to work with Dakota County to seek Federal Transportation Enhancement funding for portions of the regional trail.

8. Public Awareness

Dakota County promotes awareness of its regional parks and trails through the County website, direct mail, press releases, brochures, on-site promotion, signage and paid advertising. Dakota County also collaborates with cities, businesses, the Metropolitan Council and others to promote its facilities, programs and services.

9. Accessibility

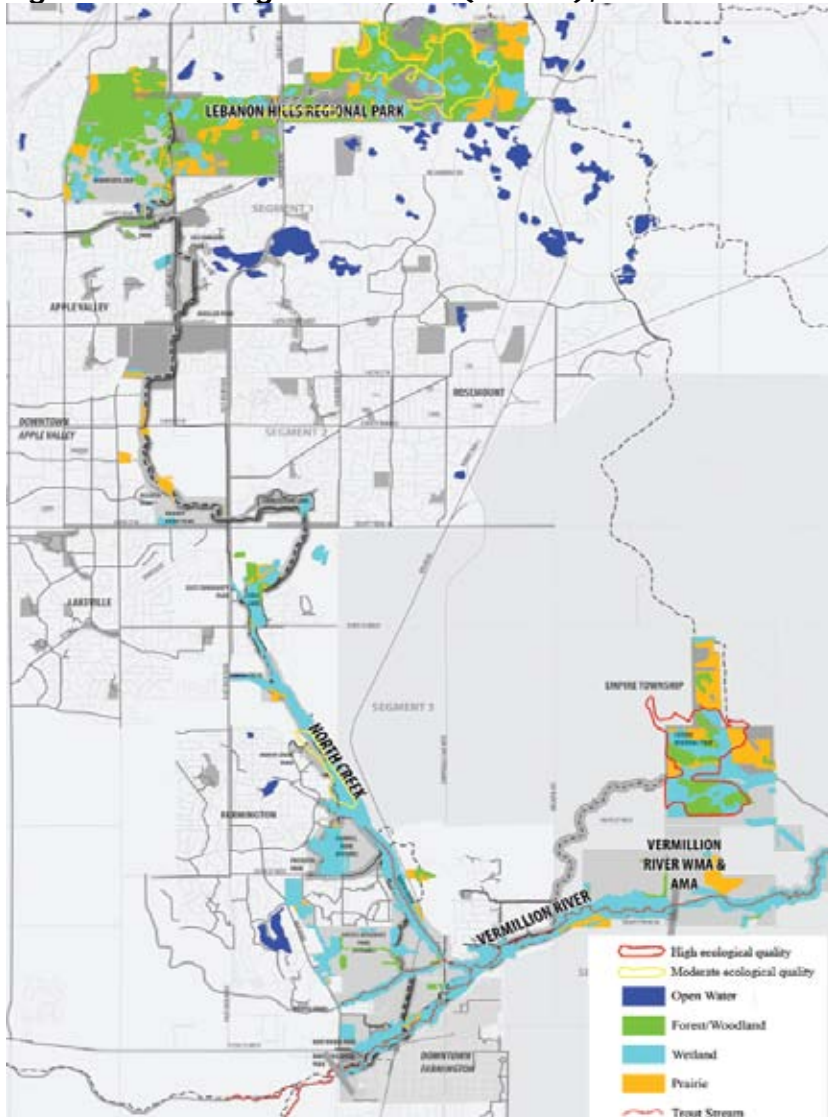
The master plan states that Dakota County is committed to offering universal accessibility at all trail facilities. The primary paved trail and all access points described in the master plan are located and planned for accessibility for all visitors.

10. Natural Resources

The existing natural resources along the planned greenway and regional trail corridor are typically small, fragmented and linear. The north and south ends of the corridor at Lebanon Hills Regional Park and the Vermillion River, respectively, contain the largest expanses of contiguous native plant communities. Lebanon Hills Regional Park contains native woodland, prairie and wetlands. The confluence of North Creek and the Vermillion River contains extensive wetlands. Additionally, within the corridor, the North Creek, Middle Creek and the Vermillion River are designated trout streams.

With the exception of Lebanon Hills Regional Park, areas along the Vermillion River in Empire Township, and part of North Creek Park, the ecological quality along most of the regional trail corridor is poor. The low ecological quality of the north portion of the regional trail corridor from the Minnesota Zoo to north of Farmington has been caused by habitat fragmentation due to urban roads and development patterns. The primary ecological impact to the wetland systems are due to hydrologic changes from stormwater inputs and the invasion of wetlands by reed canary grass. *Figure 8* shows the existing land cover along the North Creek Greenway Regional Trail corridor.

Figure 8: Existing Land Cover (MLCCS), North Creek Greenway Regional Trail

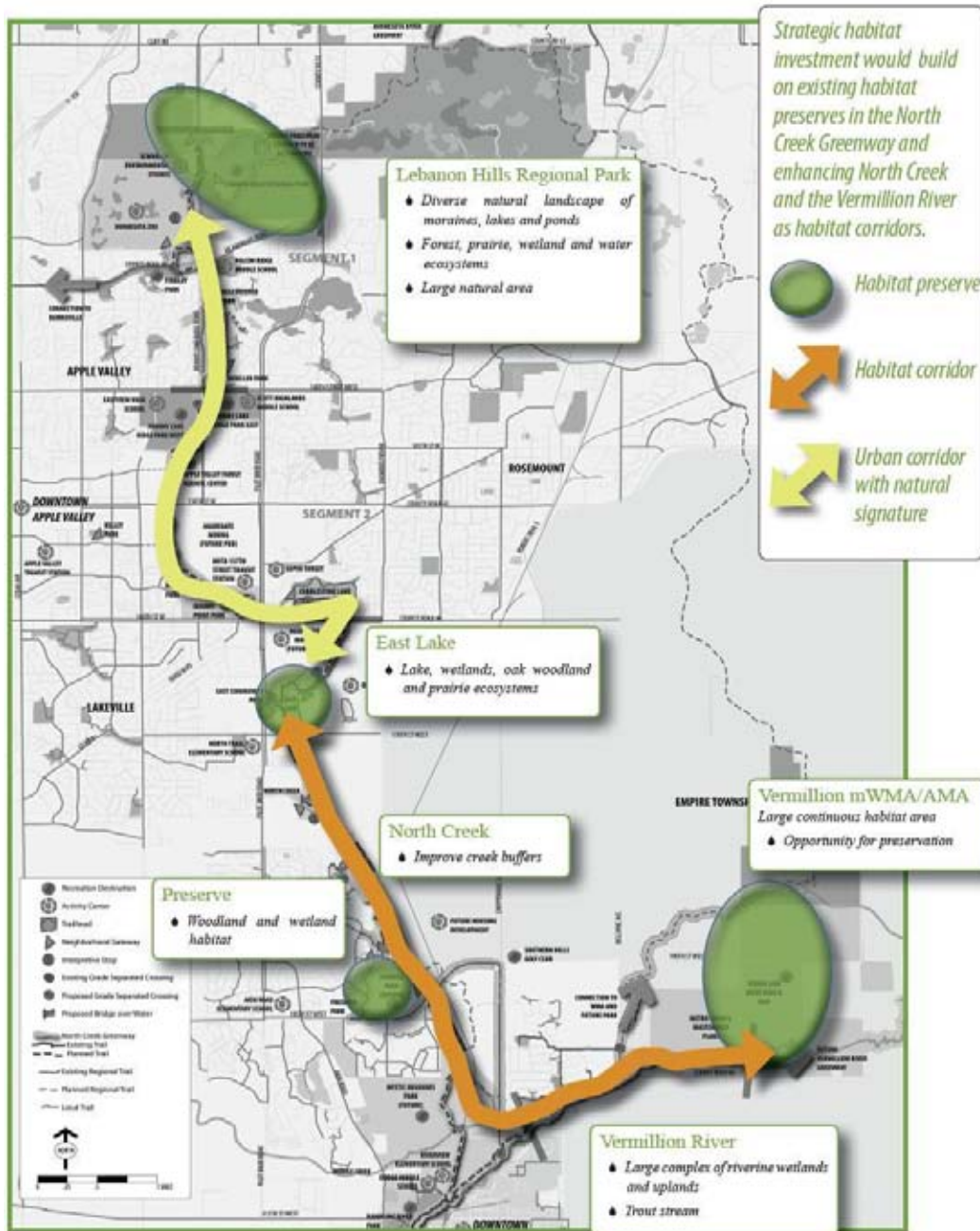


11. Stewardship Plan

Stewardship activities are proposed to be pursued in cooperation with adjacent landowners, both public and private. Dakota County will not be the lead agency in stewardship activities outside the 30-foot regional trail corridor and trailheads, but will work as steward partners with local agencies and landowners.

The master plan identifies and prioritizes key habitat investment areas for natural resource management, which are targeted to areas associated with high quality ecological resources and greenway use patterns. The top priority habitat restoration and management areas are the habitat preserves, with a secondary priority placed on habitat corridors. The habitat investment areas are depicted in *Figure 9*.

Figure 9: North Creek Greenway Regional Trail Habitat Investment Areas



Vegetation management activities will include the control and removal of invasive species, including reed canary grass, buckthorn, bluegrass, thistles and other weeds; wetland buffer protection using native plants; and the establishment or reestablishment of disturbed areas such as prairie and floodplain forest.

Stormwater management practices will include:

- Developing rain gardens alongside trailhead parking lots
- Creating planted depressed parking lot islands to capture stormwater
- Allowing stormwater to run onto surrounding grass for small parking lots surrounded by green space
- 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

Dakota County estimates that the costs associated with the capital projects for natural resource stewardship will be \$2,066,275 and the yearly maintenance costs associated with these projects will be \$51,725. The master plan identifies potential partnership opportunities for these projects and costs.

REVIEW BY OTHER COUNCIL DIVISIONS:

Community Development – Environment and Surface Water Management (Jim Larsen 651-602-1159) – Several miles of 10 to 12-foot wide bituminous trail are proposed to be interconnected/constructed within the greenway as the focal point of this master plan. The simple presence of this areal extent of asphalt paving in close proximity to a trout-supporting stream in its downstream main stem reaches, raises the concern for the probable elevation of background PAH (polycyclic aromatic hydrocarbon) concentrations within reaches of the Vermillion River. Additionally, routine maintenance of the trail as indicated in Table 55 is proposed to involve periodic seal coating of the trail surface. Sealcoat products, whether coal-tar based or asphalt-based, can contribute significant amounts of PAHs (potentially more than the initial trail construction) to storm water runoff from impervious surface of the trail following their application. Recent legislation passed by Minnesota banned the purchase of coal-tar sealcoat products by state agencies after July 1, 2010.

Some reaches of the Vermillion River and its tributary streams are currently listed on the Minnesota Pollution Control Agency's Section 303(d) Impaired Waters list for fecal coliform, E. coli, turbidity, low dissolved oxygen, and/or PCBs (polychlorinated biphenyl) in fish tissue, and proposed to be listed for biotic impairments to invertebrates and fish. Council staff recommends that the County keep these concerns in mind when determining initial trail composition and maintenance options, and give particular consideration to methods other than periodic seal coating to prolong the expected life of a planned bituminous trail that will not potentially create a new or exacerbate an existing water quality impairment.

Dakota County response: Improving water quality is a primary goal of the Dakota Greenway vision. The portion of the North Creek Greenway that is adjacent to the North Creek will be designed in coordination with the Vermillion River Watershed. The watershed has recently completed a stream channel assessment that identifies potential ways to improve the function and quality of the North Creek. Using this recent assessment, Dakota County will partner with the Vermillion Watershed to pursue funding for greenway projects that provide recreation, water quality and habitat improvements for the North Creek.

Our current maintenance practice prohibits the use of coal-tar based products. Products are reviewed on a regular basis for impacts on the environment. Dakota County will work with Vermillion Watershed and adjacent communities on maintenance procedures that have minimal environmental impacts.

Environmental Services – Sewers (Roger Janzig 651-602-1119) – This trail project runs through the cities of Eagan, Apple Valley, Lakeville, Farmington, and Empire Township. It crosses the following Metropolitan Council’s Gravity Interceptors:

- (7203) in Lakeville. The interceptor was built in 1974 and is a 33 inch RCP.
- (7409) in Lakeville/Farmington. The interceptor was built in 1979 and is a 48 inch RCP.
- (7103-1) in Farmington/Empire Township. The interceptor was built in 1975 and is a 42 to 60 inch RCP.

To assess the potential impacts to our interceptor system, prior to initiating this 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.

Environmental Services Facilities Planning (Bryce Pickart 651-602-1091) – The Empire Wastewater Treatment Plant (WWTP) is an essential regional facility that serves many of the potential users of the proposed regional trail. Metropolitan Council Environmental Services (MCES) has worked, and will continue to work, with Empire Township, Dakota County, the Minnesota Department of Natural Resources and other stakeholders on land use planning issues in the area surrounding the Empire WWTP. We believe that all stakeholders’ needs should be addressed as part of the process to select final alignments of the regional trail along the Vermillion River.

A draft of this master plan was submitted to the Metropolitan Council for informal review in September 2011. The draft master plan showed the regional trail alignment on the north side of the Vermillion River near the Empire WWTP. Due to security and other concerns, MCES prefers the location of the regional trail on the south side of the Vermillion River to the maximum practical extent. MCES will work with Empire Township and Dakota County to facilitate that outcome.

MCES requested that Dakota County modify its North Creek Greenway Regional Trail Master Plan to show the trail extension alignment as a potential corridor along the Vermillion River, i.e. show south and north of river as alternative alignments which will be further evaluated prior to trail construction. The official master plan that was submitted to the Metropolitan Council included alignments on both the north and south side of the river, therefore this concern has been addressed. Dakota County should work with MCES as it prepares the initial development plans for this segment of the trail as well as during trail construction to minimize impacts to the Empire WWTP site.

Transportation Planning (Ann Braden 651-602-1705) – No concerns.

Transportation—Aviation (Russ Owen 651-602-1721) – It appears that the trail will not be located near a regional aviation system facility. The closest facility is Airlake Airport in Lakeville, approximately 5 miles from the trail. The master plan is in conformance with the *2030 Transportation Policy Plan* and consistent with Council aviation policy.

CONCLUSIONS:

1. The North Creek Greenway Regional Trail Master Plan is consistent with the requirements of the *2030 Regional Parks Policy Plan* and other Council policies.
2. The estimated costs to implement the master plan are \$22,665,906, which includes \$3,923,100 in estimated acquisition costs, \$16,676,531 in estimated construction costs, and \$2,066,275 in natural resource management and restoration costs.
3. The regional trail is proposed to follow the Vermillion River in the vicinity of the Metropolitan Council's Empire Wastewater Treatment Plant (WWTP). The master plan shows alternate alignments on both the north and the south side of the river. Due to security and safety concerns, Metropolitan Council Environmental Services (MCES) staff prefers that the trail be located on the south side of the river to the maximum extent possible. Dakota County should work with MCES as it prepares the initial development plans for this segment of the trail as well as during trail construction to minimize impacts to the Empire WWTP site.
4. A portion of the regional trail route is located in the vicinity of MCES interceptors and related easements. In order to maintain the integrity of the regional sewer system, preliminary development plans for the regional trail should be submitted to Metropolitan Council Environmental Services for review and comment.
5. Approval of this master plan does not commit the Council to any funding at this time. Future development funding based on this master plan would be done through the Regional Parks Capital Improvement Program (CIP) and Land Acquisition Opportunity Fund. Council action is required to approve the CIP and to approve specific grants to Three Rivers Park District.

RECOMMENDATIONS:

That the Metropolitan Council:

1. Approve the North Creek Greenway Regional Trail Master Plan (Referral No. 50015-1).
2. Require Dakota County to work with Metropolitan Council Environmental Services as the County prepares the initial development plans for the trail segment along the Vermillion River near the Empire Wastewater Treatment Plant, as well as during construction of this trail segment, in order to minimize impacts on the wastewater treatment plant site.
3. Require that prior to development of new trail segments along the entire length of the regional trail corridor, Dakota County should send development plans to Metropolitan Council Environmental Services for review and comment to ensure the integrity of the regional interceptor system.