

**Environment and Natural Resources Trust Fund
2009 Phase 2 Request for Proposals (RFP)**

LCCMR ID: 045-B1

Project Title: Coon Rapids Dam - Water Quality Improvement Project

Total Project Budget: \$ \$80,000

Proposed Project Time Period for the Funding Requested: July 2009-December 2010

Other Non-State Funds: \$ \$60,000.00

Priority: B1. Reduce Soil Erosion

First Name: Karen

Last Name: Blaska

Sponsoring Organization: Anoka County Parks and Recreation Department

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Region:	County Name:	City / Township:
Metro	Anoka	Coon Rapids

Summary: This project is necessary to reduce erosion and peak water flows in an effort to improve the quality of water flowing into the Mississippi River.

Main Proposal: 0908-2-021-proposal-ravine_2009_main_proposal.doc

Project Budget: 0908-2-021-budget-ravine_lccmr_2009_Project Budget.xls

Qualifications: 0908-2-021-qualifications-Project Manager Qualifications and Organization D

Map: 0908-2-021-maps-context.pdf

Letter of Resolution: 0908-2-021-resolution-resolution_lccmr grant.pdf

MAIN PROPOSAL

PROJECT TITLE:

Coon Rapids Dam Regional Park - Water Quality Improvement Project

I. PROJECT STATEMENT

The Riverside Creek ravine is located in Coon Rapids Dam Regional Park in Anoka County. The ravine has been severely degraded over the last several years due to large amounts of storm water run-off. This project will use bioengineering and restoration strategies to reverse the degradation of ecosystem functions and mitigate impacts in the severely degraded ravine. This project is necessary to reduce erosion and peak water flows in an effort to improve the quality of water flowing into the Mississippi River.

The restoration area represents 900 lineal feet of an open ravine conveyance system that receives direct runoff from 103 acres consisting of approximately 98% wooded area and an indirect tributary area of 909 acres of single family residential which is conveyed by a series of drainage ditches and culverts. The runoff volume created by the direct tributary area during a 100-year, 24-hour storm event is 26.7 acre-feet, with a peak discharge rate of 387 cfs. The runoff volume created by the indirect tributary area during a 100-year, 24-hour storm event is approximately 309 acre-feet, with a peak discharge rate of approximately 353 cfs, when routed through the upstream ditch system.

These high levels of runoff being conveyed to the Mississippi River are the direct cause of the ravine's severely degraded condition. While the reduction in runoff rates/volumes and sedimentation have not yet been modeled or quantified, the goal of this project would be to reduce peak discharge rates by approximately 15 percent and to reduce sedimentation volumes by approximately 20 percent. This translates to reducing the peak discharge rate of the direct tributary area to approximately 329 cfs during a 100-year, 24-hour storm event, and to 300 cfs for the indirect tributary. A 20 percent reduction in sediment runoff translates to 21.3 acre-feet for the direct tributary during the 100-year, 24-hour storm event, and to 247.2 acre-feet for the indirect tributary.

The ravine's restoration is critical to its ecological function of cleaning and filtering run-off before it enters into the Mississippi River and to the ecological function of the riparian river edge.

Restoration will occur through a variety of in-stream, riparian and upland best management practices that will reduce erosion; stabilize the banks of the ravine; and improve water quality and reduce peak flows into the Mississippi River. Restoration techniques will utilize materials indigenous to the ecosystem and will be incorporated into the dynamics of the river system in an attempt to create conditions in which ecosystem processes can withstand and diminish the impact of runoff. Slope grading will help stabilize the eroded banks and allow the establishment of natural vegetation. If necessary, rock armoring will be used at the bottom of the most severely eroded banks. Minimally intrusive bioengineering techniques will address the eroding banks and native vegetation will be planted that will tolerate the fluctuating wet and dry conditions experienced at the site.

II. DESCRIPTION OF PROJECT RESULTS

Result 1: Reduce peak discharge rates and sedimentation volumes flowing into the Mississippi River. **Budget: \$161,198**

This project will entail design and engineering, mobilization of equipment, clearing the site for grading, grading and filling the banks of the ravine to obtain a 2:1 and 2.5:1 slope. Gravel and cobble stones will be laid along the banks to retain grades and prevent erosion. Topsoil will be spread and 500 bare root dogwood shrubs will be planted to retain help retain the soil. A prairie seed mix will be used as well. Mulch and erosion control blankets will be used to prevent erosion and sediment run-off until the vegetation has become established. Silt fencing will be installed prior to construction to prevent erosion and run-off from being conveyed directly into the Mississippi River.

Deliverable

Completion Date

- | | |
|--|--------------------|
| 1. Silt Fencing installed | August 15, 2009 |
| 2. Filled, graded and armored ravine banks | September 1, 2009 |
| 3. Topsoil spread, shrubs and seed mix planted | September 15, 2009 |

III. PROJECT STRATEGY AND TIMELINE

A. Project Partners

Project partners would include Anoka County, the City of Coon Rapids, Minnesota Conservation Corps (MCC) and the National Park Service. Anoka County will lead the project and coordinate construction efforts with the City of Coon Rapids and MCC. The City of Coon Rapids has identified the ravine as an issue to be addressed in the city's Storm Water Management Plan and will provide a portion of the funds required to mitigate for peak flows and erosion. MCC will provide a portion of the labor to install the plant material.

B. Project Impact

This project will impact water quality on a local level as well as on a state level. It will minimize run-off and sedimentation and improve water quality into the Mississippi River, through a coordinated effort of state and local agencies. Through the restoration process, the project will also impact the significant natural resources in the area, such as wildlife habitat and plant diversity, by restoring the natural resources that have been adversely impacted in the past. The project will also impact those living and recreating in the area, by enhancing opportunities for public outdoor recreation, education, and scenic enjoyment. It will provide an educational opportunity for shoreline preservation and restoration.

Educating the public about the critical importance of water quality and biological diversity will be a high priority of this project including the education and encouragement of upstream residents to implement small-scale native landscape buffer improvements to control runoff from these areas.

The Mississippi River floodplain ecosystem is important to the ecological health of North America, is a vital migration corridor and essential to sustaining the biological diversity of the continent.

C. Time

The timing of construction on this project should occur as soon as funds become available. The continuing erosion and sedimentation run-off will only continue to decrease the water quality flowing into the Mississippi River. This project is relatively straight forward and construction is anticipated to last approximately one month.

Project Budget

IV. TOTAL PROJECT REQUEST BUDGET

BUDGET ITEM (See list of Eligible & Non-Eligible Costs, p. 17)	AMOUNT	
Contracts:		
Design/Engineering Consultant	\$15,000	
Other:		
Mobilization/Demobilization of Equipment	\$8,100	
Site Clearing - 1 Acre	\$6,750	
Site Grading and Filling - 2000 CY	\$16,200	
Imported Topsoil - 600 CY	\$9,720	
Cobbles - Igneous Stone - 500 CY	\$33,750	
Gravel - 250 CY	\$15,188	
Igneous Boulders, 3' dia. - 200 Ton	\$16,200	
Gray Dogwood, 2" dia., bare root - 500 EA	\$4,050	
Shredded Hardwood Mulch, 4" deep - 20 CY	\$675	
Prairie Seed Mix - 1 Acre	\$4,725	
Erosion Control Blanket - 3500 SY	\$14,175	
Silt Fence - 1000 LF	\$3,375	
Sub-Total - Construction Costs	\$132,908	
Contingency - 10% construction costs	\$13,291	
TOTAL PROJECT COSTS	\$161,198	
TOTAL PROJECT BUDGET REQUEST TO LCCMR	\$ 80,000	

V. OTHER FUNDS

SOURCE OF FUNDS	AMOUNT	Status
Other Non-State \$ Being Leveraged During Project Period:		
Anoka County	\$20,000	<i>Secured</i>
City of Coon Rapids	\$40,000	<i>Pending</i>
In-kind Services During Project Period:	\$0	
In-kind Labor for installation of plant material, seed and mulch	\$21,198	

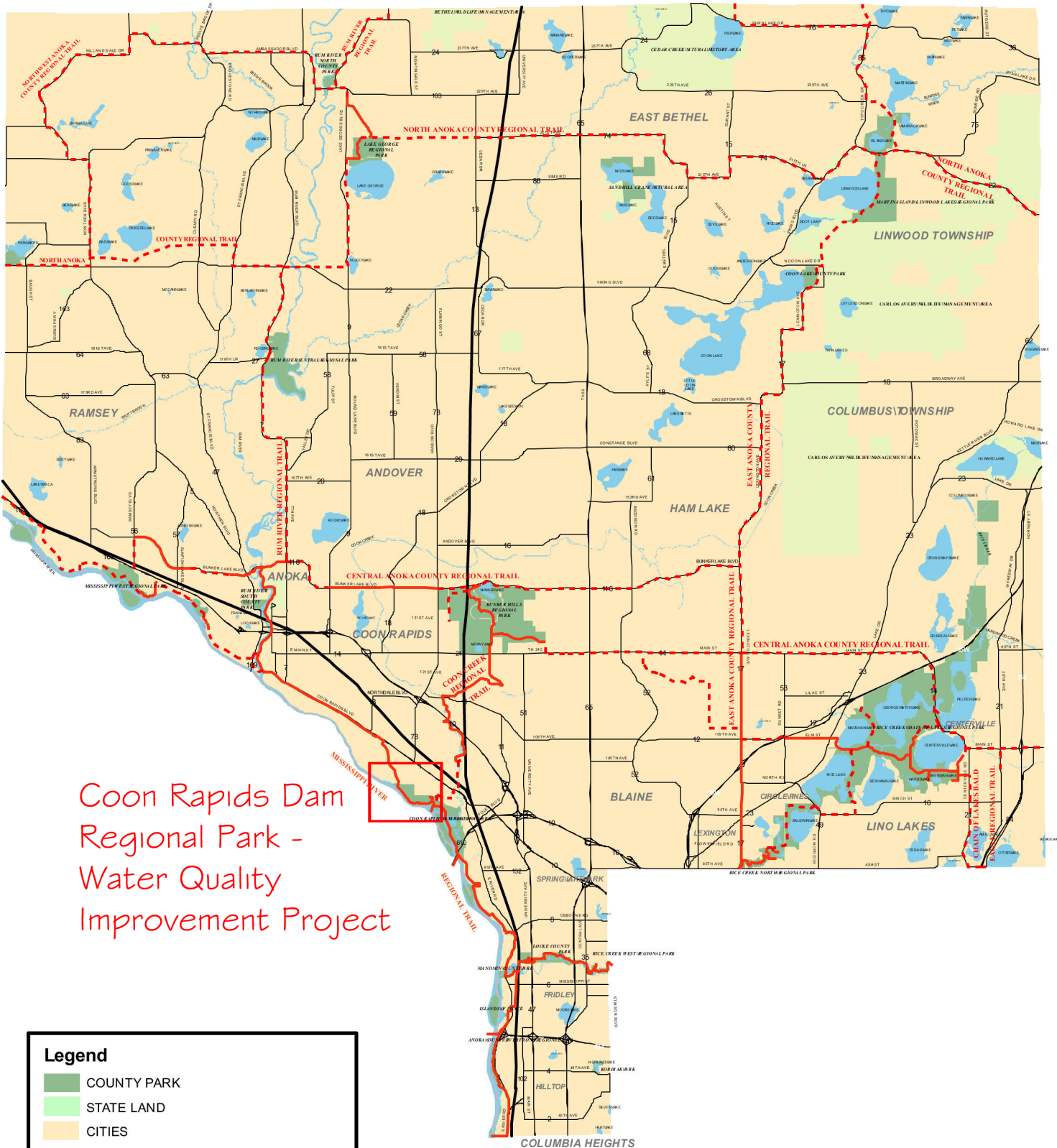
Project Manager Qualifications and Organization Description

The Anoka County Parks System was created in 1963 by the Anoka County Board of Commissioners with the authorization of the state legislature. By the early 1980's, the park system had grown to over 8,000 acres. Today's featured recreational opportunities include Bunker Beach Waterpark, Chomonix Golf Course, canoeing, hiking and biking, cross-country skiing, swimming, and much more. Currently, the Anoka County Park System contains over 10,000 acres, and has over 3.3 million visitors each year.

The Parks and Recreation Department consists of several different units that service and maintain the county and regional parks and trails. Those units include customer service, programming, administration, planning, maintenance, natural resources and park rangers.

The project will be managed by the Parks and Recreation Department. The project management team will consist of John VonDeLinde, Parks and Recreation Director, Jeff Perry, Operations Manager, Karen Blaska, Park Planner/Landscape Architect, Scott Yonke, Landscape Architect and Mike Jacobson, Parks Superintendent. Collectively, the department has over 50 years experience managing and constructing parks, trails and natural resource related projects. Karen Blaska will manage the project, procure a contractor for construction, coordinate in-kind labor and ensure project completion.

Anoka County Trail System Plan



Coon Rapids Dam
Regional Park -
Water Quality
Improvement Project

Legend

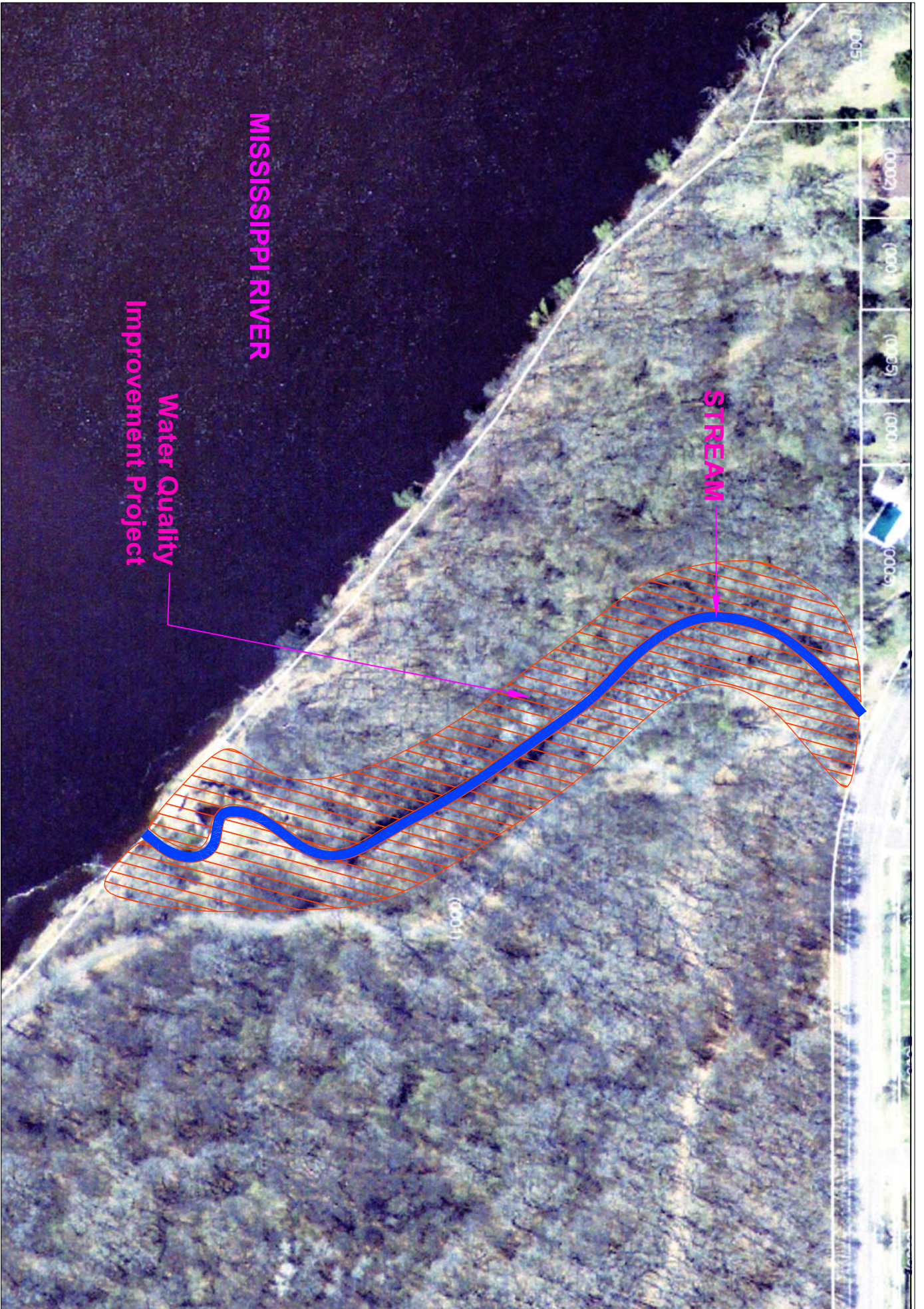
- COUNTY PARK
- STATE LAND
- CITIES

Regional Trails

- EXISTING COUNTY REGIONAL TRAILS
- PROPOSED COUNTY REGIONAL TRAILS



**COON RAPIDS DAM REGIONAL PARK
WATER QUALITY IMPROVEMENT PROJECT**



NOT TO SCALE