



Environment and Natural Resources Trust Fund (ENRTF)

M.L. 2018 ENRTF Work Plan (Main Document)

Today's Date: September 4, 2018

Date of Next Status Update Report: July 1, 2019

Date of Work Plan Approval:

Project Completion Date: June 30, 2022

Does this submission include an amendment request? No

PROJECT TITLE: Lake Redwood Reclamation and Enhancement Project

Project Manager: Kerry Netzke

Organization: Redwood-Cottonwood Rivers Control Area (RCRCA)

College/Department/Division:

Mailing Address: 1424 E. College Drive, Suite 300

City/State/Zip Code: Marshall, MN 56258

Telephone Number: 507-532-1325

Email Address: kerry.netzke@rcrca.com

Web Address: www.rcrca.com

Location: SW Minnesota, Redwood County, City of Redwood Falls

Total Project Budget: \$7,300,000

Amount Spent: \$0

Balance: \$7,300,000

Legal Citation: M.L. 2018, Art. 6, Chp. 214, Sec. 4, Subd. 6(2)

Appropriation Language: Lake Redwood Reclamation \$7,300,000

For a grant to the Redwood-Cottonwood Rivers Control Area, a joint powers entity, to predesign, design, construct, and equip the reservoir reclamation and enhancement of the 65-acre Lake Redwood Reservoir, to remove approximately 650,000 cubic yards of sediment and increase its depth from approximately 2.8 feet to 20 feet in order to secure renewable energy capacity of the hydroelectric dam which is impeded by the lack of water capacity, reduce the flow of pollutants to the Minnesota River, and increase fish habitat and enhance recreational opportunities.

I. PROJECT STATEMENT: The Lake Redwood Reclamation and Enhancement Project will restore the lake by removing up to 650,000 cubic yards of sediment which will be land applied in a dewatering basin. The current average lake depth of 2.8 feet will be increased to up to 20 feet to enhance the lake's recreational opportunities, wildlife habitat and fisheries, and guarantee a stable water source for the City's hydroelectric power plant. Removal of the sediment and establishing the natural, undulating bottom contours and depths of the lake is expected to improve and maintain a higher quality fishery and aquatic plant community. Black Bullhead, Bluegill, Channel Catfish, Green Sunfish, Northern Pike, Walleye, White Crappie, and Yellow Perch species have historically been in the lake, however the existing shallow depth promotes winter kill. An improved fishery will attract a variety of waterfowl and the lake may become a resting spot for migrating birds.

II. OVERALL PROJECT STATUS UPDATES:

First Update July 1, 2019

Second Update January 1, 2020

Third Update July 1, 2020

Fourth Update January 1, 2021

Fifth Update July 1, 2021

Sixth Update January 1, 2022

Final Report by August 15, 2022

III. PROJECT ACTIVITIES AND OUTCOMES:

ACTIVITY 1 Title: CONTRACT FOR PROFESSIONAL ENGINEERING SERVICES

Description: RCRCRA will enter into contract with Houston Engineering, Inc. to perform the necessary tasks needed for project completion. These tasks will include: renew/reapply for all permits which have expired; secure the fee title for the dewatering pond site; prepare RFP and let bids for construction of dikes and holding cells at the dewatering pond site; facilitate the contract between RCRCRA and the contractor; oversee construction and certify completion of dewatering pond site; oversee dredging project with constant communication with dredge operations; inspection journal entries to record progress or any challenges encountered; monthly progress reports to be shared with the Redwood Falls City Council, Redwood County Board of Commissioners, and RCRCRA Board of Directors; approve monthly invoices from the contractor(s) and forward to RCRCRA for approval and payment; and prepare as-built plans and prepare necessary reports upon project completion.

NOTE: Houston Engineering, Inc. (HEI) is the chosen consultant through a Qualifications-Based Selection process. HEI produced the plans and specifications for the proposed project (January 2008), facilitated the acquisition of the prior permits, and retains the digital and intellectual rights to the documents. HEI has been a loyal partner through the years while construction funding was being secured, and ready to commence the project as soon as approvals have been received.

ACTIVITY 1 ENRTF BUDGET: \$620,000

Outcome	Completion Date
1. Enter into contract with Houston Engineering, Inc.	October 31, 2019
2. Obtain all required permits	June 30, 2019
3. Obtain fee title for the dewatering pond site	March 31, 2019
4. Prepare RPF and let bids for dredging services and dewatering pond site construction	March 31, 2019
5. Facilitate dredging contract between RCRCA and dredge contractor	June 30, 2019
6. Oversee construction of dewatering pond site with onsite construction inspector	October 31, 2019
7. Monthly dredge progress reports and approval of invoices	Monthly through October 31, 2019
8. Oversee completion of dredging project	October 31, 2020
9. Prepare as-built plans and file necessary reports upon completion	January 31, 2021
10. Increase the water source capacity and water quality for the City of Redwood Falls 500KW hydroelectric power generator for the next 75 years (estimated).	
11. Improve fish and wildlife habitat as indicated by DNR population surveys and potential fish stocking of the reservoir.	
12. Improve recreational use of the lake as indicated by increased fishing, swimming, boating/canoing/kayaking, jet skiing, and water skiing.	
13. Future development of the lake/Perk's Park as indicated by the addition of fountains for improved aeration and visual aesthetics, extending the walking/biking trail that will encircle the lake and feature a pedestrian bridge.	

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ACTIVITY 2 Title: GRANT ADMINISTRATION

Description: RCRCA, as fiscal agent, will provide Grant Administration and will submit semi-annual and final reports to LCCMR. RCRCA will hold the contracts for services with Houston Engineering, Inc. for professional engineering services and with the contractor selected for dredge operations and construction of the dewatering pond.

RCRCA will oversee Houston Engineering, Inc. and will issue all payments related to the project with LCCMR funds. Submittal of the required forms and notifications, as well as the annual confirmation of intended property use, will be the responsibility of RCRCA.

Houston Engineering, Inc. will oversee all engineering, permitting, bidding, contract development, and construction inspection and contractor management aspects of the dredging project.

ACTIVITY 2 ENRTF BUDGET: \$85,000

Outcome	Completion Date
1. Prepare and submit semi-annual reports and budget expenditures to LCCMR as required	July 1, 2019 Jan 1 and July, 1 2020 Jan 1 and July 1, 2021 Jan 1, 2022
2. Prepare and submit the final report and budget expenditures to LCCMR.	August 15, 2022
3. Contract for professional engineering services (Houston Engineering, Inc.) and dredge operation and spoil material disposal services (Contractor TBD) for tasks to complete the project.	June 30, 2022
4. Process invoices and reimbursement requests to MPCA on a timely basis.	Monthly; or quarterly at a minimal depending on the work completed.
5. Ensure that all necessary forms and notifications are provided to LCCMR and the State of MN agencies pertaining to land acquisition, intended use of property declaration (annually by December 1), and various other permit requirements.	Ongoing throughout project
6. Ensure submittal to LCCMR of intended use of property confirmation.	Annually by December 1

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ACTIVITY 3 Title: WATER QUALITY SAMPLING OF DEWATERING POND EFFLUENT

Description: RCRCA will conduct water quality monitoring of any effluent from the dewatering pond site as required by permit. Parameters to be tested have not been determined, nor the frequency of sample collection. Monitoring will coincide with dredge operations and will cease when effluent discharge from the pond ceases. For planning purposes, estimated sample collection up to one year past completion of the active dredging is included in this work plan. Testing of the samples will be performed by Minnesota Valley Testing Laboratories (MVTL) in New Ulm, MN as it is the nearest State-certified laboratory to the project location. RCRCA holds several water quality monitoring contracts with the State of Minnesota where water samples are delivered to MVTL on a weekly or biweekly schedule which allows for cost-efficiency for this project. Dewatering pond effluent samples will be transported to the laboratory via vehicle or shipping, whichever is more cost-effective and meets the holding time requirements for the sample parameters.

ACTIVITY 3 ENRTF BUDGET: \$5,000

Outcome	Completion Date
1. Consistent and accurate collection of water quality samples and delivery to the MVTL laboratory in New Ulm.	October 31, 2021
2. All sample results will be cataloged by sample date and submitted to the proper agency.	October 31, 2021

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IV. DISSEMINATION:

Description: The project will follow ENRTF acknowledgment guidelines as required. Press releases and web-based products will be used to provide public information and stakeholder notification of project goals, progress and accomplishments on a monthly basis. RCRCA and the City of Redwood Falls will continue to engage our partners, local units of government, government agencies, and local/state/federal legislators with information of project progress. Related websites are: www.rcrca.com and <https://ci.redwood-falls.mn.us/>.

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V. ADDITIONAL BUDGET INFORMATION:

A. Personnel and Capital Expenditures

Explanation of Capital Expenditures Greater Than \$5,000: N/A

Explanation of Use of Classified Staff: N/A

Total Number of Full-time Equivalents (FTE) Directly Funded with this ENRTF Appropriation:

Enter Total Estimated Personnel Hours: 1485 RCRCA Staff: Grant Administration 1285 hrs Water Quality Monitoring 200 hrs	Divide by 2,080 = TOTAL FTE: 0.71
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Total Number of Full-time Equivalents (FTE) Estimated to Be Funded through Contracts with this ENRTF Appropriation:

Enter Total Estimated Personnel Hours: Houston Engineering, Inc.: 4194 <i>Update Plans and Specs, permits, contract administration, construction management, construction staking, inspection, closeout/reporting</i> Dewatering Pond Construction: 2100 <i>30 working days x 10 hrs/day x 7 operators</i> Dredge Operations Contractor: 6240 <i>65 ideal working days x 16 hrs/day x 6 crew members</i> NOTE: Actual working days are anticipated to be more due to inclement weather or breakdown/maintenance.	Divide by 2,080 = TOTAL FTE: 6.0
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B. Other Funds:

SOURCE OF AND USE OF OTHER FUNDS	Amount Proposed	Amount Spent	Status and Timeframe
Other Non-State \$ To Be Applied To Project During Project Period:			
City of Redwood Falls local cash funds	\$ 900,000	\$	Committed to the project
Other State \$ To Be Applied To Project During Project Period:			
	\$	\$	
In-kind Services To Be Applied To Project During Project Period:			
	\$	\$	
Past and Current ENRTF Appropriation: N/A			
	\$	\$	
Other Funding History: N/A			
	\$	\$	

VI. PROJECT PARTNERS:

A. Partners outside of project manager’s organization receiving ENRTF funding

Houston Engineering, Inc. – Professional Consultant Engineers

Paul H. Larson Heirs, et al. – Property owners of the dewatering pond site who have secured their commitment with a Letter of Intent (signed February 24, 2015 and expires December 31, 2018).

Dredge Operations and Dewatering Pond Contractor (to be selected by competitive bids)

B. Partners outside of project manager’s organization NOT receiving ENRTF funding

City of Redwood Falls

Redwood County

Redwood Soil & Water Conservation District

Minnesota Pollution Control Agency

VII. LONG-TERM IMPLEMENTATION AND FUNDING:

The continued use of established conservation programs (local/state/federal) in the Redwood River watershed above Lake Redwood, will help maintain the accomplishments well beyond the 70-year life expectancy of the lake; a conservative life expectancy. With the current siltation rate of 0.13 feet per year, it would take approximately 140 years to reach the current sedimentation level of today. It is anticipated that the current rate of adoption of conservation practices in the upstream watershed will extend the lake’s life expectancy beyond the 140 years. The City of Redwood Falls will conduct periodic depth contours with sonar to determine if and when future sediment removal may be needed. Installed conservation practices in the watershed above the lake continue to be most cost effective approach for maintaining this project. These practices include: streambank restoration, wetland restoration, buffer/filter strip initiatives, water and sediment control basins/small dams and marginal working land retirement. These are currently the goals and focus of conservation programs that RCRCA and its member Soil and Water Conservation Districts are implementing with conservation cost share programs which have proven effectiveness by reducing the sedimentation rate from 1.5 feet per year to the current 0.13 feet per year.

VIII. REPORTING REQUIREMENTS:

- The project is for 4 years, will begin on October 1, 2018 (estimated), and end on August 15, 2022.
- Periodic project status update reports will be submitted January 1 and July 1 of each year.
- A final report and associated products will be submitted between June 30 and August 15, 2022.

IX. SEE ADDITIONAL WORK PLAN COMPONENTS:

A. Budget Spreadsheet

B. Visual Component or Map

C. Parcel List Spreadsheet

D. Acquisition, Easements, and Restoration Requirements

E. Research Addendum

**Attachment A:
Environment and Natural Resources Trust Fund
M.L. 2018 Budget Spreadsheet**



Legal Citation: M.L. 2018, Art. 6, Chp. 214, Sec. 4, Subd. 6(2)
Project Manager: Kerry Netzke, Executive Director
Project Title: Lake Redwood Reclamation and Enhancement Project
Organization: Redwood-Cottonwood Rivers Control Area (RCRCA)
Project Budget: \$7,300,000
Project Length and Completion Date: 4 Years; June 30, 2022
Today's Date: September 4, 2018

ENVIRONMENT AND NATURAL RESOURCES TRUST FUND BUDGET	Budget	Amount Spent	Balance
Personnel (Wages and Benefits)			
<i>Redwood-Cottonwood Rivers Control Area</i>	\$85,000		\$85,000
<i>Executive Director (Kerry Netzke) -- responsible for oversight of Houston Engineering, Inc.'s services, fiscal tracking including all payments with LCCMR funds, semi-annual and final LCCMR reporting, annual property compliance reporting, and all communications with project partners. 1285 hours estimated @ \$60/hr billable rate. 0.62 FTE. 77% salary/23% benefits Payment will be for actual hours worked on the project. Netzke is a Contract for Services employee from Area II Minnesota River Basin Projects; a 9-county joint powers organization of which she is also Executive Director.</i>			
<i>Water Quality Technician (Shawn Wohnoutka) --responsible for collecting water quality samples from the dewatering pond effluent (if any), delivery to the laboratory, and reporting/recording of sample results. 200 hours estimated @ \$40/hr billable rate. 0.09 FTE; 79% salary/21% benefits</i>			
Professional/Technical/Service Contracts			
<i>Dredging Contractor (to be selected by competitive bid)</i>	\$5,600,000	\$0	\$5,600,000
<i>Houston Engineering, Inc. - Professional Engineering (selected by qualifications-based selection process)</i>	\$620,000		\$620,000
<i>Minnesota Valley Testing Laboratories at New Ulm, MN (selected by qualifications-based selection process, State-certified lab, current client through several State of MN grants, and closest proximity to the project location).</i>	\$5,000		\$5,000
Equipment/Tools/Supplies			
<i>Dewatering Pond - weed control and berm maintenance throughout the project period</i>	\$15,000	\$0	\$15,000
Fee Title Acquisition			
<i>120-acre dewatering pond x \$8,000/acre; title to be held by the City of Redwood Falls.</i>	\$960,000	\$0	\$960,000
Professional Services for Acquisition			
<i>Appraisal(s)</i>	\$5,000	\$0	\$5,000
<i>Surveying of dewatering pond property</i>	\$5,000	\$0	\$5,000
<i>Legal Services for land purchase and title transfer</i>	\$5,000	\$0	\$5,000
COLUMN TOTAL	\$7,300,000	\$0	\$7,300,000

ATTACHMENT D. Acquisition, Easements, and Restoration Requirements

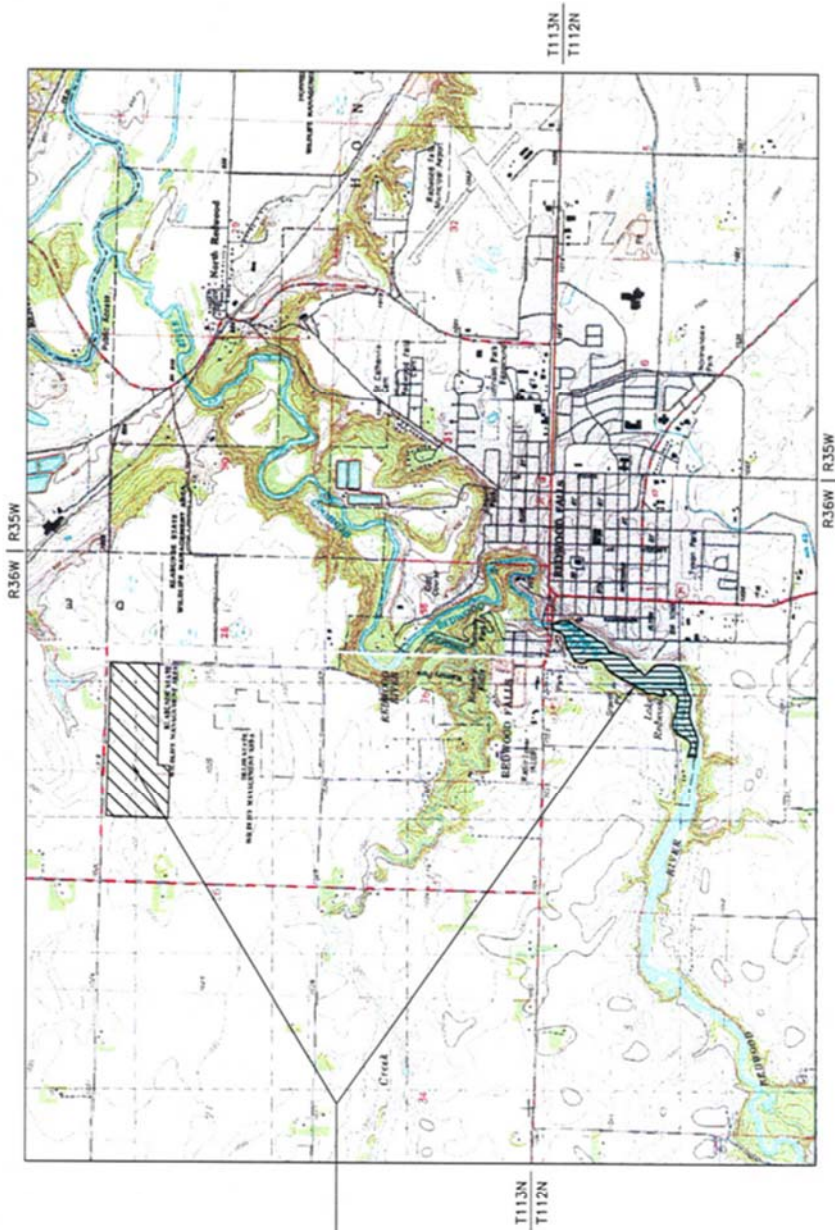


Fee Title Acquisition

1. As part of the development of the Plans and Specifications for the proposed project, Houston Engineering, Inc. identified several areas in close proximity to Lake Redwood that would be feasible; physically, environmentally and financially; to serve as a disposal/dewatering pond location where the pumped slurry of sediment and water will be pumped, allowing the sediment will settle out. Potential disposal sites were selected based on their location relative to the reservoir and ability to hold the dredged sediment volume.

The disposal site will consist of large diked areas to facilitate settlement. Any effluent water will be released through a control structure for discharge back to the Minnesota River. Water quality requirements for the effluent discharge will be established by the MPCA with water quality monitoring performed by RCRC. The disposal site will be operated so that the water discharged does not contribute to the water quality impairments in the river. Over time, the settled sediment in the disposal site will dry out and eventually achieve normal moisture content. During the drying process, the surface of the material will require establishment of a cover crop for erosion control and weed control purposes. The time required for the drying process is dependent on a number of factors including the drainage properties of the existing soils at the site, internal drainage tiles/features incorporated at the site, the depth of the sediment layer, and other factors. It is uncertain how long it will take the disposal site to return to a productive agricultural condition; an engineering-based estimate of six years is being used at this time. Once the sediments are sufficiently dewatered, a seeding of native species including a variety of pollinators will be planted to utilize the abundance of nitrogen, phosphorus and other organics in the dewatered sediments. The berms which separate the dewatering cells will remain in place and will be seeded with native species.

The selected site was based on negotiations with the property owners, which developed into signed a Letter of Intent with Larson Heirs, etal which will expire December 31, 2018. This is the only site among those sites initially identified that wished to eagerly participate in the project development.



PROJECT LOCATION

Larson Property
Redwood County Hwy 25
Section(s) 25&26
TWP: Delhi



1:5,450
Redwood County
Larson Disposal Site Option
E1/2 NE1/4 of Section 26 and
NW1/4 of Section 25
By Jim Doering, RCRA
01/09/2008

2. There are no state, regional or local natural resource plans in which the 120-acre dewatering pond parcel is specifically identified.

3. The property is currently in agricultural production. Following the estimated six years for the sediments to adequately dry out, a restoration and management plan will be developed and adopted to address the seeding of native plant species to convert this area into a natural, green space for public enjoyment.

During the active dredging stage and the drying process that follows, erosion control will be maintained at all times and as required by permits. Mowing, weed control and other maintenance will be provided by the City of Redwood Falls utilizing local tax dollars. This property will be regarded with the same care and responsibility given to all properties under public ownership by the City of Redwood Falls.

The entire parcel is just over 229 acres in size of which 120 acres will be purchased with land surveying completed to establish permanent boundaries. The fee title for this parcel will be held by the City of Redwood Falls who will adopt the operation and maintenance responsibilities for the long-term care of the property. The dewatering pond berms will remain in place for future lake maintenance by means of sediment removal from the upstream-most shallow bay. The dewatering pond site will continue to serve its intended purpose while providing permanent protection of the land, providing a buffer for preventing sediments from reaching the river, and providing a natural green space for the public to enjoy as the native species bloom and pollinators attract the butterflies and other insects and birds.

4. This parcel will remain in ownership by the City of Redwood Falls and will not be transferred to a State of Minnesota entity.

5. Prior to final acquisition, written approval from the DNR Commissioner will be obtained at least 10 business days in advance and tax information provided to LCCMR.

Restoration

1. Restoration activities utilizing ENRTF fundings will be permanently protected under the parcel's public ownership by the City of Redwood Falls.

2. As part of this project, a restoration and management plan will be developed for the parcel by Houston Engineering, Inc. Restoration activities will address erosion and weed control during the active dredging of the lake sediments, during the estimated six years that dewatering of the sediments will occur, and also during the long-term maintenance phase when the seeding with native species and a variety of pollinators will be completed. The plan will also address restoration of the parcel should future sediment removal from the lake become necessary. This plan will be kept on file by RCRCA as well as the City of Redwood Falls.

3. The restoration and management plan developed by Houston Engineering, Inc. will utilize and follow the BWSR "Native Vegetation Establishment and Enhancement Guidelines" to promote ecological integrity and pollinator enhancement.

4. The City of Redwood Falls, as the owner of this parcel, has agreed to adopt the perpetual maintenance and management needs. Local tax dollars in the City's annual budget will be utilized for these needs.

5. After the development of the restoration and maintenance plan for the various phases of the parcel development and usage, should any restoration activities be able to be accomplished using Conservation Corps of Minnesota, consideration will be duly given to that organization.

6. Restoration and maintenance activities will be evaluated after initial completion, and again three years later as a follow-up. Evaluations will focus on whether the plan goals have been met, if any problems exist, or if improvements can be identified and implemented to improve the environmental protection of this parcel.