



Environment and Natural Resources Trust Fund (ENRTF)

M.L. 2019 ENRTF Work Plan (Main Document)

Today's Date: August 23, 2018

Date of Next Status Update Report: January 15, 2020

Date of Work Plan Approval:

Project Completion Date: June 30, 2021

Does this submission include an amendment request? No

PROJECT TITLE: Minnesota Spring Inventory Final Phase

Project Manager: Paul Putzier

Organization: Minnesota Department of Natural Resources

College/Department/Division: Ecological and Water Resources Division

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Email Address: paul.putzier@state.mn.us

Web Address: http://www.dnr.state.mn.us/waters/groundwater_section/mapping/springs

Location: Statewide

Total Project Budget: \$71,000.00

Amount Spent: \$0

Balance: \$71,000

Legal Citation: M.L. 2019, Chp. xx, Sec. xx, Subd. xx

Appropriation Language:

I. PROJECT STATEMENT:

Springs are an important natural resource that occur all across Minnesota. It is vital to inventory, assess, and monitor springs on a comprehensive, statewide basis because they are all of the following:

- Sources of trout streams
- Of cultural significance
- Sources of cool water fisheries
- Maintainers of integrity against aquatic invasive species
- Special places to enjoy and experience
- Assemblages of unique and rare plants, animals and insects
- Sources of wetlands
- Sustainers of base flow in streams
- Windows into the health of groundwater system

Healthy springs across Minnesota may be threatened by overuse of groundwater, development, land-use changes, and changing climate, and many springs have never been located, mapped or characterized. The Minnesota Spring Inventory is designed to find, map and make information about this important and threatened natural resource widely available to private industry, private citizens, academia, and government to assist in resource management and protection.

Phase I of the Minnesota Spring Inventory is complete. It established processes and procedures to conduct the statewide inventory including the evaluation of existing documentation and uncovering documents and data sets that had been lost.

Phase II of the Minnesota Spring Inventory is nearing completion. It includes developing exploration techniques and standards and exploring and cataloging of springs. The work focused on the Targeted Spring Provinces and public lands (see figure). Approximately 2000 springs were documented through the Phase II work to date.

Phase II also produced the Minnesota Springs Citizen Reporting App which allows the public to add springs to the DNR catalogue using their portable devices. More than 250 candidate springs have been submitted to date.

The Final Phase of the Minnesota Spring Inventory (proposed project) will allow for the completion of work finding and mapping springs in the Targeted Spring Provinces (see map), the evaluation of springs still requiring verification, and refinement of the spring inventory web presence to make information more accessible. With the tools developed the spring inventory can continue to expand with input from the DNR, other state and federal agencies, local organizations and citizens. Much of the data from the first two years of the project is already available and being used.

II. OVERALL PROJECT STATUS UPDATES:

First Update: January 15, 2020

Second Update: July 15, 2020

Third Update: January 15, 2021

Final Report: August 15, 2021

III. PROJECT ACTIVITIES AND OUTCOMES:

ACTIVITY 1 Title: Complete field inventory of Targeted Spring Provinces and refine web-products

Description: This project includes final field evaluations to locate, map and characterize the presence and type of springs in the Targeted Spring Provinces, the evaluation of springs still requiring verification, refinement of the spring inventory web presence to make information more accessible and the continuation of the Minnesota

Springs Citizen Reporting App. The project also includes presentation of the final results in publications (MGWA Newsletter, news releases, and DNR notifications) and potentially at conferences such as the Minnesota Water Resource Conference.

ACTIVITY 1 ENRTF BUDGET: \$71,000

Outcome	Completion Date
1. Complete field inventory of Targeted Spring Provinces & verification of candidate springs	April 30, 2020
2. Final additions and refinement of publicly available web-products	May 30, 2020
3. Publication and presentation of results	June 30, 2020

First Update: January 15, 2020

Second Update: July 15, 2020

Third Update: January 15, 2021

Final Report: August 15, 2021

IV. DISSEMINATION:

Description:

The Minnesota Spring Inventory database provides the capability to share data with all Minnesotan’s – citizens, organizations, agencies, universities and schools. The data is compatible with the University of Minnesota karst feature database and the Minnesota Geospatial Commons, typically accessed by researchers. Updates, notifications of project status, availability of data, and any final reports will be made via the DNR website, DNR’s GovDelivery system (1,000’s of email addresses), through news releases, and through presentations at public meetings and conferences.

The Minnesota Environment and Natural Resources Trust Fund (ENRTF) will be acknowledged through use of the trust fund logo or attribution language on project print and electronic media, publications, signage, and other communications per the [ENRTF Acknowledgement Guidelines](#).

First Update: January 15, 2020

Second Update: July 15, 2020

Third Update: January 15, 2021

Final Report: August 15, 2021

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:

Any classified position paid for with ENRTF funds will either be 1) backfilled with a new position or 2) the work previously done by this position will be delayed, eliminated, or completed by the start of the project.

One unclassified position, Hydrologist 1 (0.5 FTE), will conduct the bulk of the work – including field work, data management, web updates and dissemination/presentations.

There are two classified positions currently working on a separate ENRTF project to be paid partially by this grant: 1) Hydrologist 3 (0.1 FTE) provides technical expertise in the subject matter adding value to the continuing database modifications, final field investigation planning and preparation of outreach materials and presentations 2) Hydrologist Supervisor (0.1 FTE) who will be managing the project including providing updates and assisting with dissemination activities.

Total Number of Full-time Equivalents (FTE) Directly Funded with this ENRTF Appropriation: 0.7 FTE

Enter Total Estimated Personnel Hours for entire duration of project: 1,456	Divide total personnel hours by 2,080 hours in 1 yr. = TOTAL FTE: 0.7
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Total Number of Full-time Equivalents (FTE) Estimated to Be Funded through Contracts with this ENRTF Appropriation: 0.0 FTE

Enter Total Estimated Contract Personnel Hours for entire duration of project: 0	Divide total contract hours by 2,080 hours in 1 yr. = TOTAL FTE: 0
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VI. PROJECT PARTNERS:

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

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

VII. LONG-TERM- IMPLEMENTATION AND FUNDING:

The Minnesota Spring Inventory is part of a long-term continuing need to identify, assess, and monitor all parts of the hydrologic cycle so that changes can be accurately interpreted and responded to. This project provides the tools (network, data, and a web platform) for others agencies and citizens to build on the Minnesota Spring Inventory in the future with non-ENRTF funding sources.

VIII. REPORTING REQUIREMENTS:

- Project status update reports will be submitted January 15 and August 15 each year of the project.
- A final report and associated products will be submitted between June 30 and August 15, 2021.

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. 2019 Budget Spreadsheet



Legal Citation:
Project Manager: Paul Putzier
Project Title: Minnesota Spring Inventory Final Phase
Organization: Minnesota Department of Natural Resources
Project Budget: \$71,000
Project Length and Completion Date: two years, June 30, 2021
Today's Date: August 23, 2018

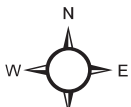
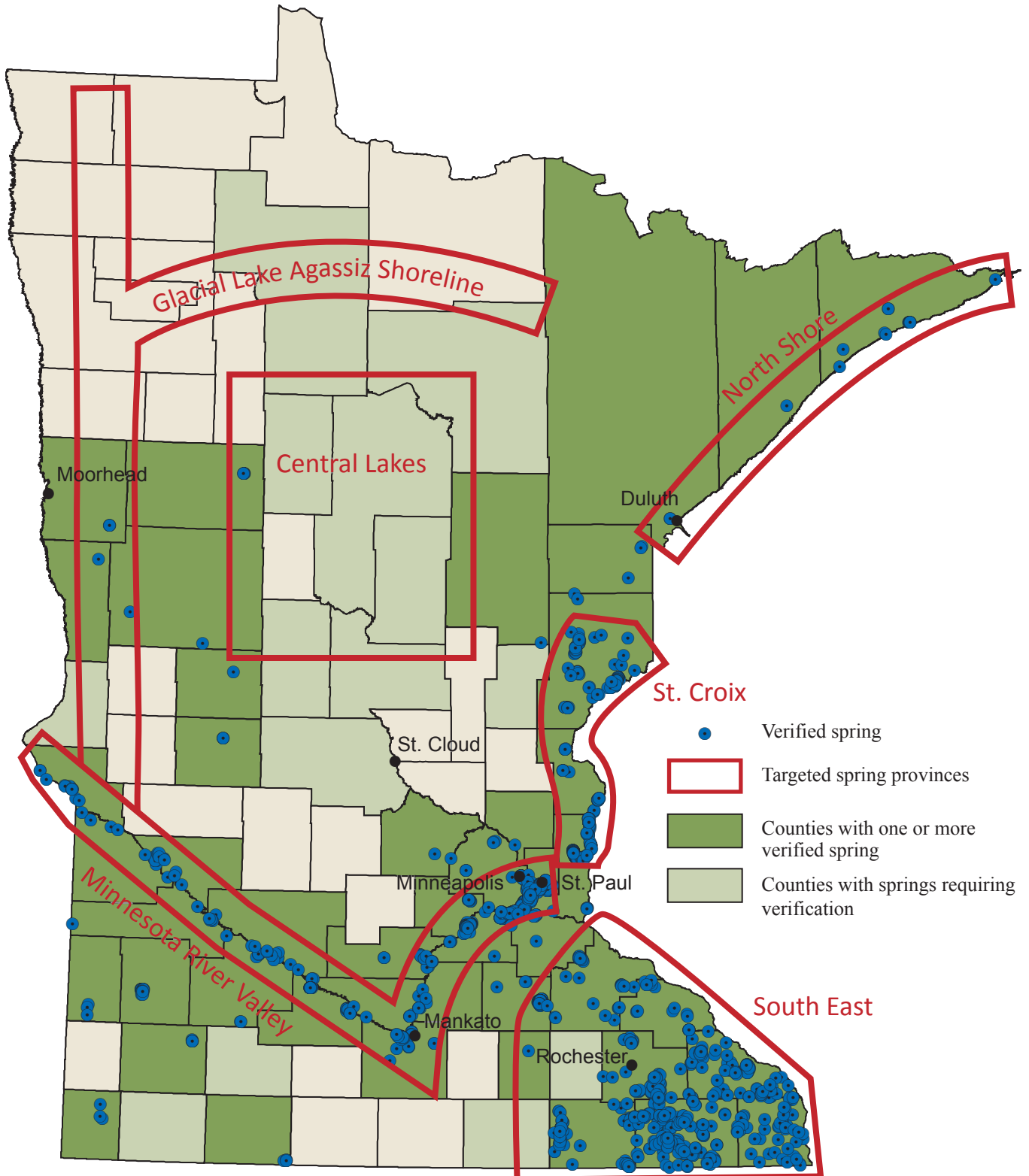
ENVIRONMENT AND NATURAL RESOURCES TRUST FUND BUDGET	Budget	Amount Spent	Balance
BUDGET ITEM			
Personnel (Wages and Benefits)	\$ 59,500	\$ -	\$ 59,500
Hydrologist Supervisor/Project Manager (classified): \$126,000; 0.1 FTE Hydrologist 3 (classified): \$119,000; 0.1 FTE Hydrologist 1 (classified or unclassified): \$70,000; 0.5 FTE Salaries include ~15-25% fringe benefits			
Professional/Technical/Service Contracts	\$ -		
N/A	\$ -	\$ -	\$ -
Equipment/Tools/Supplies			
Field equipment such as current meters, data loggers, specific expenses for use of specialized field data tablets to collect field data, waders, hip boots, GPS equipment, GIS or specialty software, and misc. tools and supplies for field data collection and equipment maintenance.	\$ 1,388	\$ -	\$ 1,388
Travel expenses in Minnesota			
In-state vehicle mileage (est \$1,500) and travel expenses (est \$1,000), primarily for locating new springs, field verification of locations provided by the public, water sample and field data collection for some locations.	\$ 2,888	\$ -	\$ 2,888
Other			
Expenses (\$500) to give project-related presentations at events such as the Minnesota Ground Water Association or the Minnesota Water Resources conferences as part of project results dissemination.	\$ 500	\$ -	\$ 500
*Direct and Necessary expenses: HR Support (~\$1034), Safety Support (~\$214), Financial Support (~\$824), Communication Support (~\$1,251), IT Support (~\$2,342), and Planning Support (~\$1,059) necessary to accomplish funded programs/projects.	\$ 6,724	\$ -	\$ 6,724
COLUMN TOTAL	\$ 71,000	\$ -	\$ 71,000

*Direct and Necessary expenses include Department Support Services (Human Resources, IT Support, Safety, Financial Support, Communications Support, and Planning Support). Department Support Services are described in the agency Service Level Agreement and billed internally to divisions based on rate that have been developed for each area of service. These services are directly related to and necessary for the appropriation. Department leadership services (Commissioner's Office and Regional Directors) are not assessed. Those elements of individual projects that put little or no demand on support services such as large single-source contracts, large land acquisitions, and funds that are passed through to other entities are not assessed Direct and Necessary costs for those activities.

OTHER FUNDS CONTRIBUTED TO THE PROJECT	Status (secured or pending)	Budget	Spent	Balance
Non-State:	N/A	\$ -	\$ -	\$ -
State:	N/A	\$ -	\$ -	\$ -
In kind:	N/A	\$ -	\$ -	\$ -

PAST AND CURRENT ENRTF APPROPRIATIONS	Amount legally obligated but not yet spent	Budget	Spent	Balance
Current appropriation: M.L. 2016, Chp. 186, Sec. 2, Subd. 03h	\$ 81,812	\$ 370,000	\$ 288,188	\$ 81,812
Past appropriations: M.L. 2014, Chp. 226, Sec. 2, Subd. 05b		\$ 200,000	\$ 200,000	\$ -

Minnesota Spring Inventory as of February 2018



0 25 50 100 Miles

0 25 50 100 Kilometers