

Environment and Natural Resources Trust Fund (ENTRF) M.L. 2017 LCCMR Project Abstract
For the Period Ending June 30, 2020

PROJECT TITLE: Drainage Records Modernization Cost Share – Phase II

PROJECT MANAGER: Mark Hiles

AFFILIATION: BWSR

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FUNDING SOURCE: Environment and Natural Resources Trust Fund

LEGAL CITATION: M.L. 2017

APPROPRIATION AMOUNT: \$540,000

AMOUNT SPENT: \$526,398

AMOUNT REMAINING: \$13,602

Sound bite of Project Outcomes and Results

Grants provided to 12 103E public drainage authorities to advance local drainage records preservation and use for enhanced system management and provide hydrographic data in the statewide GIS Database. All grantees set up an account with Minnesota Geospatial Information Office (MnGeo) and uploaded public drainage system hydrography data to the Minnesota Geospatial Commons website.

Overall Project Outcome and Results

Minnesota has an estimated 20,000 miles of Minnesota Statutes Chapter 103E public drainage ditches (*Public Drainage Ditch Buffer Strip Study*, Feb. 2006), and estimated thousands of miles of Chapter 103E public subsurface tile systems. Records for these public drainage systems are kept by the current 96 drainage authorities (a drainage authority (DA) can be a county, joint county board, or a Watershed district). The drainage system records are in various conditions, including deteriorating hard copy materials and scanned documents with limited electronic access.

Use of consistent GIS database capabilities are needed to advance local management of public drainage systems and to improve public access to statewide hydrographic data. Hydrographic data about the location, type (ditch or tile), dimensions and profiles of public drainage systems are often sought for watershed modeling and water planning but have not been easily accessible. Several hundred systems records containing several thousands of miles of open ditch and tile have been scanned, indexed, digitized and uploaded to local drainage databases and GIS layers as well as MnGeo Commons website. Many of the drainage authorities have completed this work for all systems in their jurisdiction, some have plans to continue their efforts until all systems are complete. A summary of the accomplishments from each grantee is in the attached spreadsheet.

Project Results Use and Dissemination

All grantee organizations and hydrography data can be found at the Minnesota Geospatial Commons public website <https://gisdata.mn.gov/dataset/water-public-drainage-systems>. This link provides one location to find all the individual datasets. It lets people find the GIS data from which maps could be made, but there are no ready-made maps. In addition, all organizations have updated and posted easily accessible information on their organizational website and a link has been provided on the BWSR Drainage Records Modernization webpage <https://bwsr.state.mn.us/drainage-records-modernization>. This has advanced local drainage records preservation and use for enhanced drainage system management and provided hydrographic data about these drainage systems in the statewide GIS database.



Environment and Natural Resources Trust Fund (ENRTF)

M.L. 2017 LCCMR Work Plan Final Report

Date of Submission: August 14, 2020

Final Report

Date of Work Plan Approval: 06/07/2017

Project Completion Date: June 30, 2020

Does this submission include an amendment request? No

PROJECT TITLE: Drainage Records Modernization Cost Share – Phase II

Project Manager: Mark Hiles

Organization: BWSR

Mailing Address: 11 Civic Center Plaza, Suite 300

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Location: Statewide

Total ENRTF Project Budget:

ENRTF Appropriation: \$540,000

Amount Spent: \$526,398

Balance: \$13,602

Legal Citation: M.L. 2017, Chp. 96, Sec. 2, Subd. 03g

Appropriation Language:

\$540,000 the first year is from the trust fund to the Board of Water and Soil Resources to facilitate statewide modernization of public drainage records under Minnesota Statutes, chapter 103E, and integrate new specifications into existing drainage records modernization guidelines through matching cost-share grants to drainage authorities. This appropriation is available until June 30, 2020, by which time the project must be completed and final products delivered.

I. PROJECT TITLE: Drainage Records Modernization – Phase 2, Match Grants

II. PROJECT STATEMENT:

1. *Project Need:* Minnesota has an estimated 20,000 miles of Minnesota Statutes Chapter 103E public drainage ditches (*Public Drainage Ditch Buffer Strip Study*, Feb. 2006), and estimated thousands of miles of Chapter 103E public subsurface tile systems. Records for these public drainage systems are kept by the current 96 drainage authorities (a drainage authority (DA) can be a county, joint county board, or a Watershed district). The drainage system records are in various conditions, including deteriorating hard copy materials and scanned documents with limited electronic access. Use of consistent GIS database capabilities are needed to advance local management of public drainage systems and to improve public access to statewide hydrographic data. Hydrographic data about the location, type (ditch or tile), dimensions and profiles of public drainage systems are often sought for watershed modeling and water planning, but have not been easily accessible. As hydrologic modeling and planning for multipurpose water management become increasingly robust, the need for this public drainage system hydrographic data will continue to increase.

The State of Minnesota has provided grants to drainage authorities in the past: 2009 - \$456,929 (County DAs \$349,308, Watershed District DAs \$107,621), 2011 - \$65,426 (County DA \$52,747. Watershed District DAs \$12,679)

2. *Project Goals:* The 2014 LCCMR 05c project titled “*Drainage Records Modernization and Statewide Geographic Information System Database*” was recommended and funded in part in 2014 (Phase 1). In calendar year 2016, the Phase 1 project is on track to:
 - a) develop a drainage records GIS database template with data standards for Chapter 103E drainage authority use, and a statewide GIS database for easy access to public drainage system hydrographic data in the Geospatial Commons on the Minnesota Geospatial Information Office (MnGeo) website;
 - b) update the *Drainage Records Modernization Guidelines* published by BWSR in September 2008;
 - c) develop associated web-based access for these tools; and
 - d) provide outreach to Chapter 103E drainage authorities about these new tools.

Drainage records database template development was based on experience from recent drainage records modernization projects and related pilot database development.

Phase 2 will advance local drainage records preservation and use for enhanced drainage system management and provide hydrographic data about these drainage systems in the statewide GIS database. This Phase 2 project will provide state grants matched at minimum 1:1 by local funding to complete the overall project utilizing the GIS database tools and guidance developed in Phase 1.

3. *Methods:* A Request For Proposal (RFP) will be prepared and sent out to all drainage authorities. The RFP will stipulate two eligibility criteria. First, a DA authority must agree to a.) use the Phase 1 database template and associated drainage records modernization guidelines and b.) to annually provide drainage system hydrographic data updates electronically to the associated statewide GIS database. Second, the drainage authority must provide a local match of at least 1:1 with higher ranking priority given to applications that provide greater than 1:1 match.

III. OVERALL PROJECT STATUS UPDATES:

Project Status as of January 15, 2018: The RFP for the Drainage Records Modernization Match Grants funded by this grant was developed and distributed. The RFP was open from August 28, 2017 to October 2, 2017. Sixteen

applications were submitted requesting a total of \$583,000. They were ranked with funding recommendation made to the BWSR Board on December 20, 2017. The Board awarded DRM Match Grants to 12 drainage authorities, funding 1 partially. The total amount of funds awarded was \$500,000.

Project Status as of July 15, 2018:

BWSR sent out grant agreements to the grantees in January 2018. Work plans were submitted by the grantees. The work plans were reviewed and approved by BWSR Board Conservationists and the BWSR Conservation Drainage Engineer with special consideration given to alignment of the work plans with this current project work plan submitted to and approved by LCCMR staff. Grant agreements were subsequently executed by BWSR. No reports have been received from the grantees for this reporting period.

Amendment Request:

Proposed changes include: Project Manager Change and End Date Change. Project Manager Change is due to a pending retirement. End date change is proposed to align with the original appropriation end date. **Amendment Approved by LCCMR 8/20/2018.**

Project Status as of January 15, 2019: Grantees received fifty percent of the grant funds up front when grants were executed. After the fifty percent is spent, grantees can report expenditures and request additional forty percent. The final 10 percent is available as reimbursement after all grant funds are spent and reporting is complete. Grantees are currently working with Board Conservationist to report activity completed in calendar year 2018 with 50 percent payment. BWSR Board Conservationists and Project Manager have been in communication with several grantees to monitor grant activity, answers questions, and review proposed changes to activities. Grantees are currently working with their Board Conservationist to report activity completed in calendar year 2018. BWSR grant reporting for calendar year 2018 is due for Board Conservationist review, by February 1, 2019. BWSR Board Conservationists will review and approve reporting in subsequent months after February 1. More detailed activity progress and updated budget information will be available for July 15, 2019 project status reporting. I have included Mark Hiles, Project Manager on Page 6 to Partners Not Receiving ENRTF Funding for project management, reporting and coordination section and to the Use of Other Funds section of the BWSR In-kind portion for the Other Funds Table. BWSR staff have spent State In-kind match funds on reporting and coordination as summarized in B. Other Funds table.

Project Status as of July 15, 2019: Activity 1 Complete. See Activity 2 for update.

Project Status as of January 15, 2020: Activity 1 Complete. See Activity 2 for update.

Overall Project Outcomes and Results: August 20, 2020:

Grants provided to 12 103E public drainage authorities to advance local drainage records preservation and use for enhanced system management and provide hydrographic data in the statewide GIS Database. All grantees set up an account with Minnesota Geospatial Information Office (MnGeo) and uploaded public drainage system hydrography data to the Minnesota Geospatial Commons website.

Minnesota has an estimated 20,000 miles of Minnesota Statutes Chapter 103E public drainage ditches (*Public Drainage Ditch Buffer Strip Study*, Feb. 2006), and estimated thousands of miles of Chapter 103E public subsurface tile systems. Records for these public drainage systems are kept by the current 96 drainage authorities (a drainage authority (DA) can be a county, joint county board, or a Watershed district). The drainage system records are in various conditions, including deteriorating hard copy materials and scanned documents with limited electronic access.

Use of consistent GIS database capabilities are needed to advance local management of public drainage systems and to improve public access to statewide hydrographic data. Hydrographic data about the location, type (ditch or tile), dimensions and profiles of public drainage systems are often sought for watershed modeling and water planning but have not been easily accessible. Several hundred systems records containing several thousands of miles of open ditch and tile have been scanned, indexed, digitized and uploaded to local drainage databases and GIS layers as well as MnGeo Commons website. Many of the drainage authorities have completed this work for all systems in their jurisdiction, some have plans to continue their efforts until all systems are complete. A summary of the accomplishments from each grantee is in the attached spreadsheet.

IV. PROJECT ACTIVITIES AND OUTCOMES:

ACTIVITY 1: Develop and Allocate Grants for Match Grant Program

Description: Implement a Match Grant Program and Allocate Grants with Agreements

Summary Budget Information for Activity 1:

ENRTF Budget: \$ 12,000
Amount Spent: \$ 12,000
Balance: \$ 0

Outcome	Completion Date
1. FY 2018 Match Grants program RFP developed, including eligibility, ranking criteria and associated policies	July – Aug. 2017
2. Drainage Records Modernization Match Grants RFP distributed to Chapter 103E drainage authorities and outreach provided via an associated webinar	September 2017
3. Rank applications, recommend, review and approve grant allocations	December 2017
4. Grantees prepare project work plans and budget details and BWSR Board Conservationists and Conservation Drainage Engineer review and approve	February 2018
5. Grant agreements are signed by grantees and BWSR	March 2018

Activity 1 Status as of January 15, 2018: The RFP for the FY 2018 Drainage Records Modernization Match Grants program was developed, including eligibility, ranking criteria and associated policies in the summer of 2107. Outreach was provided via an associated webinar and an email announcement to drainage authorities and their advisors. The RFP was opened for grant application by Chapter 103E drainage authorities on August 28, 2017. The application period closed at 4:30 PM on October 2, 2017. Applications were ranked according to the criteria established in the RFP by BWSR drainage staff on October 23rd. Funding recommendations were submitted to and reviewed by the BWSR Senior Management Team on November 14, 2017. The recommendation were submitted to the Grants Program and Policy Committee on November 28, 2017. They were sent on by the GPPC to the BWSR Board, who approved them on December 20, 2017.

Activity 1 Status as of July 15, 2018: Grant agreements were sent out by BWSR to grantees in January of 2018. Work plans and budget details were submitted by the grantees. BWSR Board Conservationists in coordination with the BWSR Conservation Drainage Engineer reviewed and approved the work plans. Grant agreements were signed by grantees and executed by BWSR on or before April 18, 2018. **Activity 1 is complete.**

Activity 1 Status as of January 15, 2019: Completed April 18, 2018

Activity 1 Status as of July 15, 2019:

Activity 1 Status as of January 15, 2020:

Final Report Summary: August 20, 2020

ACTIVITY 2: Drainage Authorities Implement Match Grant Agreements

Description: Implementation of Match Grant Agreements by Drainage Authorities, with MnGeo Technical Consultation and BWSR Oversight, and BWSR Survey of Drainage Authorities to Define Remaining Drainage Records Modernization Needs.

Summary Budget Information for Activity 2:

ENRTF Budget: \$ 528,000
Amount Spent: \$ 514,398
Balance: \$ 13,602

Outcome	Completion Date
1. Match Grants products. Chapter 103E Drainage authorities utilize the Phase 1 drainage records database template and Drainage Records Modernization Guidelines to develop a modern database for their drainage system records and to annually provide current public drainage system hydrographic data to the statewide GIS database. MnGeo will be contracted to provide technical consultation to drainage authority staff and/or consultants, and BWSR will provide grant project oversight.	June 30, 2020
2. BWSR conducts a survey of drainage authorities near the end of the project to define status and remaining needs for drainage records modernization and Match Grants	June 30, 2020

Activity 2 Status as of January 15, 2018: No work reported on Activity 2 within the period.

Activity 2 Status as of July 15, 2018: No work reported on Activity 2 within the period.

Activity 2 Status as of January 15, 2019: Grantees are currently working with Board Conservationist to report activity completed in calendar year 2018 with fifty percent payment. BWSR Board Conservationists and Project Manager have been in communication with several grantees to monitor grant activity, answers questions, and review proposed changes to activities. Grantees are currently working with their Board Conservationist to report activity completed in calendar year 2018. BWSR grant reporting for calendar year 2018 is due for Board Conservationist review, by February 1, 2019. BWSR Board Conservationists will review and approve reporting in subsequent months after February 1. More detailed activity progress and updated budget information will be available for July 15, 2019 project status reporting.

Activity 2 Status as of July 15, 2019: BWSR Allocated 50% (\$250,000) of grant funds to Local Government Drainage Authorities in 2018. Reports submitted to BWSR February 1, 2019 as part of annual report requirements and grant monitoring since February 1, 2019 indicate LGUs have spent \$114,618.22 of grant funds and \$225,224.37 of match funds as of July 1, 2018. BWSR field staff have reviewed and approved the reports of activity and expenditures submitted February 1, 2019. A summary spreadsheet is attached identifying the LGUs, amount of grants funds awarded and allocated, match expenditures, and a description of the drainage area coverage proposed in application. Individual detailed reports are available to be generated by eLINK upon request. We have coordinated with MNGEO and MNIT to clarify the expenditure submittal and payment procedure. I have received and approved MNGEO GIS support expenditures totaling \$3846 from April 2018 to June 2019.

Activity 2 Status as of January 15, 2020: Grantees are currently working with Board Conservationist to report activity completed in calendar year 2019 with grant payments made to date. BWSR Board Conservationists and Project Manager have been in communication with several grantees to monitor grant activity, answers questions, and review proposed changes to activities. BWSR grant reporting for calendar year 2019 is due for Board Conservationist review, by February 1, 2020. BWSR Board Conservationists will review and approve reporting in subsequent months after February 1. In addition, I have been in contact with Houston Eng. Inc. (HEI) who is the contractor for several grantees. They are currently working in close contact with several grantees to finish planned grant activity and have dedicated staff to insure timelines are met. A summary spreadsheet is attached identifying the LGUs, amount of grant funds awarded and allocated, match expenditures, and a description of the drainage area coverage proposed in application. Individual detailed reports are available to be generated by eLINK upon request. More detailed activity progress and updated budget information will be available for July 15, 2020 project status reporting. All grantees have contacted MNGEO and set up an account for MNGEO Commons to upload data. I have received and approved MNGEO GIS support expenditures totaling \$1,024 from July 2019 to Nov. 2019; total MNGEO GIS support expenditures to date are \$4,870.00.

Final Report Summary: August 20, 2020: Grants ended on April 30, 2020. Grantees coordinated with BWSR Board Conservations and Clean Water Specialist to finish reporting activity results and incurred expenses 30 days after April 30, 2020. Final reports are approved and final payments to grantees have been processed through eLINK. A summary spreadsheet is attached identifying the LGUs, amount of grant funds awarded, allocated and spent. In addition, match expenditures and a brief description of the actual results from grant activity are included. Individual detailed reports are available to be generated by eLINK upon request. All grantees have worked with MNGEO and uploaded information to MnGeo Commons. A confirmation email sent for each grantee from MNGEO and attached in eLINK. Total grantee match exceeded the expectations with \$833,909 local funds used to match the grant funds. MNGEO total budget expenditures totaled \$14,237. This project has built on past efforts to modernize, preserve and better utilize public drainage system records, including improving availability of public drainage system hydrographic data statewide. There are no current plans to formally assess additional needed local efforts.

V. DISSEMINATION:

Description: Since the Match Grants are limited to drainage authorities, the grant will be marketed through a RFP in 2017, and through a second RFP, if necessary, in 2018.

Status as of January 15, 2018: The 2017 RFP issuance garnered enough interest. A second RFP is not necessary.

Status as of July 15, 2018: The 2017 RFP issuance garnered enough interest. A second RFP is not necessary.

Status as of January 15, 2019: The 2017 RFP issuance garnered enough interest. A second RFP is not necessary.

Status as of July 15, 2019: The 2017 RFP issuance garnered enough interest. A second RFP is not necessary.

Status as of January 15, 2020: The 2017 RFP issuance garnered enough interest. A second RFP is not necessary.

Final Summary: August 20, 2020

VI. PROJECT BUDGET SUMMARY:

A. Preliminary ENRTF Budget Overview:

***This section represents an overview of the preliminary budget at the start of the project. It will be reconciled with actual expenditures at the time of the final report.**

Budget Category	\$ Amount Proposed	\$ Amount Spent	Overview Explanation
Personnel Grant Administration	\$ 12,000	\$11,496	Drainage, Grants and Board Conservationist Staff - BWSR: (70% salary, 30% benefits) Ave. 0.07 FTE/yr. for 3 yrs. (total 0.21 FTE) (\$24,000)
Professional/Technical/Service Contracts:	\$ 16,000	\$14,237	GIS Specialist, MnGeo: (70% salary, 30% benefits) Ave. 0.05 FTE/yr. for 3 yrs. (0.15 FTE) (\$16,000)
Match Grants	\$500,000	\$488,665	BWSR will provide competitive drainage records modernization Match Grants to 96 Chapter 103E county and watershed district drainage authorities to use the new drainage records GIS database template, updated Drainage Records Modernization Guidelines, and web access developed by the 2014 LCCMR 05c project, Phase 1. Minimum 1:1 match will be required. Past Match Grants averaged \$25,000. Twenty (20) new grants are anticipated.
TOTAL ENRTF BUDGET:	\$528,000	\$514,398	

Explanation of Use of Classified Staff: See above.

Total Number of Full-time Equivalent (FTE) Directly Funded with this ENRTF Appropriation: 0.21

Total Number of Full-time Equivalent (FTE) Estimated to Be Funded through Contracts with this ENRTF Appropriation: 0.15

B. Other Funds:

Source of Funds	\$ Amount Proposed	\$ Amount Spent	Use of Other Funds
Non-state – Drainage Authorities			
	\$ 500,000	\$833,909	Minimum 1:1 local match required for competitive drainage records modernization Match Grants.
State In-kind – BWSR			
	\$ 10,000	\$9673.91	BWSR staff time for project management, reporting and coordination: (Average 2% Tim Gillette/Mark Hiles, 0.5% Al Kean/yr. for 3 yrs.) (salary, benefits, and overhead)
TOTAL OTHER FUNDS:	\$ 510,000	\$816,724.91	

VII. PROJECT STRATEGY:

A. Project Partners:

Partners receiving ENRTF funding

- *BWSR Drainage Program Staff, Grants Staff and Board Conservationists:* Assist Match Grants program development, implementation, and oversight, as well as conduct a survey of drainage records modernization status and remaining needs near the end of the project.

- *Drainage Authority Project Managers:* Administer Match Grants on behalf of drainage authorities.
- *Drainage Authority Staff and Consultants:* Develop modern databases for Chapter 103E drainage records and annually provide hydrographic and other data to the statewide public drainage records GIS database.
- *MNIT MnGeo Staff:* Provide consultation to Match Grants grantees regarding use of the drainage records database template, guidelines, and hydrographic data transfer to the statewide GIS database.

Partners NOT receiving ENRTF funding

- *Tim Gillette, P.E., BWSR Conservation Drainage Engineer /Mark Hiles, BWSR Clean Water Specialist:* Project management, reporting and coordination.
- *Al Kean, P.E., BWSR Chief Engineer:* Administrative advice and consultation, based on prior drainage records modernization project experience.

B. Project Impact and Long-term Strategy:

This project builds on past efforts to modernize, preserve and better utilize public drainage system records, including improving availability of public drainage system hydrographic data statewide. The current estimated need for drainage records modernization Match Grants remaining after this project is approximately \$1.0 million. However, BWSR will survey public drainage authorities near the end of this project to better define the status of public drainage records modernization, associated hydrographic data access, and need for additional Match Grants. Use of the Phase 1 database template and guidelines is expected to substantially improve and streamline drainage records modernization. This estimate does not include costs associated with the long-term maintenance of the statewide drainage records database, guidelines and map viewer on the MnGeo website.

C. Funding History:

Funding Source and Use of Funds	Funding Timeframe	\$ Amount
2014 LCCMR 05c project. In FY 2015, BWSR received \$230,000 from ENRTF to develop a drainage records GIS database template, statewide GIS database, updated Drainage Records Modernization Guidelines, and web access. These Phase 1 products will be used by drainage authorities participating in this Phase 2, Match Grants project.	Project Completed December 31, 2016.	\$ 230,000

VIII. REPORTING REQUIREMENTS:

- **The project is for 3.0 years, will begin on 07/01/17, and end on 6/30/20.**
- **Periodic project status update reports will be submitted *January 15* and *July 15* of each year.**
- **A final report will be submitted *August 14, 2020*.**

FY 2019 Competitive Drainage Records Modernization Match Grants Summary

Funding

Grant ID	Applicant	State Grant Request Amount	Score	Award	50% Allocation	40% Allocation	10% Re-imbursement	Drainage Area Described in Application to Modernize Records	Grant Expenditures Reported	Minimum 1:1 Match Requirement Expenditure	Actual Results of Records Modernization Grant
C18-3938	Brown County	\$42,500.00		\$42,500.00	\$21,250.00	\$17,000.00	\$2,956	89 County/Judicial Systems (234.5 miles open ditch & 448.6 miles tiled ditches)	\$41,206.25	\$68,063.85	All 89 ditch systems in Brown County now exist in drainage DB and have been updated using the recommended format and gap analysis including ditch attributes from engineer and viewer reports.
C18-2414	Faribault County	\$65,000.00		\$65,000.00	\$32,500.00	\$26,000.00	\$6,500	20+ priority systems of 114 systems countywide	\$65,000.00	\$109,554.56	Document and map scanning of 246 systems converted and updated system summaries, created new system summaries, researched ROB dates and view reports, researching tile and open ditch data, historical system information. Developed naming convention and system electronic organization information.
C18-0592	Chippewa County	\$50,000.00		\$50,000.00	\$25,000.00	\$20,000.00	\$5,000.00	All 500 miles of open ditch and 1,000+ miles of county tile available via GIS	\$50,000.00	\$108,335.69	126 drainage systems were scanned, indexed and added to County GIS Drainage Layer. Drainage DB was setup and information loaded to database.
C18-6514	North Fork Crow River WD	\$17,500.00		\$17,500.00	\$8,750.00	\$7,000.00	\$1,750.00	13 public drainage systems which include: 135 miles of drainage systems with the majority being open ditches	\$17,500.00	\$19,445.47	A system was developed for systematically naming documents, identify any records gaps for key documents, indexing records by tagging the with a type, date, title and notes. WD used the system to take previously scanned historic documents and naming, file org. and upload to Drainage DB. GIS Ditch layers, drainage sheds and structures were updated from historic plans, profiles and surveys.
C18-3763	Sibley County	\$40,500.00		\$40,500.00	\$20,250.00	\$16,200.00	\$3,983.05	85 public drainage systems with approx. 547 miles of open ditch and 200 miles of tile	\$40,433.05	\$77,578.97	70 drainage systems historical information was scanned, indexed and uploaded to drainage database. County staff now have the ability to modernize ditch layer including centerlines, culvert and bridge locations and adding slopes and widths of ditches from Historical maps. This will be completed locally.
C18-1854	Blue Earth County	\$45,000.00		\$45,000.00	\$22,500.00	\$18,000.00	\$4,500.00	90 of 109 public drainage systems with a total 696 miles	\$45,000.00	\$73,680.65	Six drainage projects were started and completed during the project period and the new drainage records as built information was put into drainage records system. Historic drainage records were entered into the drainage records system.
C18-7852	Buffalo-Red River WD	\$50,000.00		\$50,000.00	\$25,000.00	\$20,000.00	\$5,000	81 public drainage systems with 530 miles of open ditch	\$50,000	\$61,972.29	Review and scanning of ditch records for all legal ditch systems was completed. The information was uploaded to Drainage DB.

C18-4373	Le Sueur County						Update all public drainage systems approx. 250 miles. Detail focus on 10 problematic systems.	\$51,500.00	\$51,500.00	\$25,750.00	\$20,600.00	\$292.04	\$46,642.04	\$87,171.65	Historical Ditch records were organized to follow DRM guidelines and information was installed in Drainage DB for all systems. Centimeter survey equip. was purchased to build a sea level GIS model to convert survey points the DRM Template structure. Points were taken to verify culvert, tile and cross-sectional and ditch alignment. Two systems were completed.
C18-0358	Freeborn County						63 public drainage systems with 460 miles of open ditch and 510 miles of tile	\$48,500.00	\$48,500.00	\$24,250.00	\$19,400.00	\$3,267.01	\$46,917.01	\$85,942.33	All 62 drainage systems (100%) have been updated with the best available data. 45 have a mix of open channel and tile segments, 10 have all open channel and 7 have all tile segments. Historical documents of engineer drawings, maps and CAD drawings of repair and improvement projects, data from televising work, GPS points and aerial imagery/Lidar were used to review each segment and verify the information in the GIS layer match the best available source data. Centerline alignment was adjusted when needed and attributed with name, type, and size. The data was populated in accordance to DRM guidelines, populated, and attributed to ditch shed GIS Layer.
C18-9371	Wild Rice WD						All 300 miles of public drainage systems	\$25,000.00	\$25,000.00	\$12,500.00	\$10,000.00	\$2,500.00	\$25,000.00	\$59,104.11	41 ditch systems historic file data was sorted, scanned, saved and named accordingly. They were then linked, scanned and uploaded to Public Drainage System Excel Template. Utilized records to identify the location of systems, drew centerlines and exported to GIS. There are 10 remaining systems that are dams.
C18-1223	McLeod County						52 public drainage systems with 201.5 miles of tile and open ditch	\$22,500.00	\$22,500.00	\$11,250.00	\$9,000.00	\$2,250.00	\$22,500.00	\$36,045.00	Now have established records for all 52 public ditch systems digitized. 5 Systems were completed entirely and uploaded to Drainage DB. Grantee will continue to scan and upload images with 100% completion within 5 yrs.
C18-2618	Lac qui Parle-Yellow Bank WD						111 public drainage systems with approx. 830 miles of tile and open ditch	\$45,000.00	\$42,000.00	\$21,000.00	\$16,800.00	\$666.59	\$38,466.59	\$47,014.39	All ditch records, maps, and profiles were scanned and added for 111 systems. Centerlines were updated and a Ditch shed layer was delineated for 109 systems. The remaining two are the two Watershed ditches in Lincoln County. Grantee intend to do the centerlines for those two when the have the chance, their records were scanned. All 109 of the County, Judicial, and Watershed systems that are in LqP were edited. As the centerline layer sits, there are 463 miles of open ditch and 481 miles of tile.

Total Grant Requested	\$503,000.00	Total Recom mende	\$500,000.00	\$250,000.00	\$200,000.00	\$38,664.94
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\$488,664.94	\$833,908.96
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Environment and Natural Resources Trust Fund

M.L. 2017 Project Budget

Project Title: Drainage Records Modernization Cost Share – Phase II

Legal Citation: M.L. 2017, Chp. 96, Sec. 2, Subd. 03g

Project Manager: Mark Hiles

Organization: BWSR

M.L. 2017 ENRTF Appropriation: \$540,000

Project Length and Completion Date: 3.0 years, June 30, 2020

Date of Report: August 20, 2020



ENVIRONMENT AND NATURAL RESOURCES TRUST FUND BUDGET	Activity 1			Activity 2			TOTAL BUDGET	TOTAL BALANCE
	Develop and Allocate Grants for Match Grant Program			Drainage Authorities Implement Match Grant Agreements				
BUDGET ITEM	Budget	Amount Spent	Balance	Budget	Amount Spent	Balance		
Personnel (Wages and Benefits) <i>Drainage, Grants and Board Conservationist Staff - BWSR</i> <i>70% salary, 30% benefits; Average 0.07 FTE/year for 3 years (total 0.21 FTE)</i> <i>(\$24,000)</i>	\$12,000	\$12,000	\$0	\$12,000	\$11,496	\$504	\$24,000	\$504
Professional / Technical / Service Contracts <i>Service Contract with MNGEO - GIS Specialist</i> <i>70% salary, 30% benefits; Average 0.05 FTE/year for 3 years (0.15 FTE)</i> <i>(\$16,000)</i>	\$0	\$0	\$0	\$16,000	\$14,237	\$1,763	\$16,000	\$1,763
Grant Products <i>Match Grants to Drainage Authorities for Drainage Records Modernization</i> <i>Past Match Grants averaged \$25,000.</i> <i>Twenty (20) new grants are anticipated.</i>	\$0	\$0	\$0	\$500,000	\$488,665	\$11,335	\$500,000	\$11,335
COLUMN TOTAL	\$12,000	\$12,000	\$0	\$528,000	\$514,398	\$13,602	\$540,000	\$13,602