



AGENDA

Dakota County Soil and Water Conservation District Board Meeting

June 10, 2021 - 9:00 a.m.

Teleconference using Zoom

<https://dakotacountymn.zoom.us/j/93025110195?pwd=OW15VzFvWW1NcE9JUFFaTzByOUdQZz09>

1. Call to Order and Roll Call
2. Audience
Anyone wishing to address the Board regarding an item that is not on the agenda may come forward at this time. Comments are limited to five minutes.
3. Approval of Agenda (Additions/Corrections/Deletions)

CONSENT AGENDA

To be adopted under one motion unless a request is made to move an item to Regular Agenda for discussion

4. Approval of May 13, 2021 Meeting Minutes
5. Approval of June 10, 2021 Accounts Payable
6. Acceptance of the April 2021 Finance Report
7. Acceptance of the May 2021 Finance Report

REGULAR AGENDA

8. Authorization to Provide Final Payment to Steve Meyers for Repair of Water and Sediment Control Basin Action
9. Authorization to Provide Final Payment to John (JB) Dudley for Installation of Grassed Waterway Action
10. Authorization to Provide Final Payment to Ron Beissel for Repair of Grade Stabilization Structure Action
11. Authorization to Amend Contract and Provide Final Payment to Dan Duncomb for Installation of Grade Stabilization Structure Action
12. Authorization to Execute Contract with Peine Cattle Company for Establishing Cover Crops (multi-year) Action
13. Authorization to Execute Contract with Pat Maher for Establishing Cover Crop (one-year) Action
14. Authorization to Execute Contract with Pat Maher for Establishing Cover Crops (multi-year) Action
15. Authorization to Execute Contract with Noah Blaha for Installation of Native Prairie with Pollinator Habitat Action
16. Authorization to Execute Contract with Nolie Freeman for Installation of Native Prairie with Pollinator Habitat Action
17. Authorization to Execute Contract with RESPEC for Development of Irrigation Management Assistant Online Scheduling Tool Action
18. Authorization to Execute Joint Powers Agreement with the Minnesota Department of Agriculture to Assist with Implementing the State of Minnesota's Nitrogen Fertilizer Management Plan within the Hastings Drinking Water Supply Management Area Action
19. Modify Priority Location Sites Identified within the Trout Brook Sub-Watershed Analysis. Action

20. Announcements and Reports

Natural Resources Conservation Service
Dakota County
Vermillion River Watershed Joint Powers Organization
Cannon River Watershed Joint Powers Board
Metropolitan Conservation Districts Joint Powers Board
Minnesota Association of Soil and Water Conservation Districts
District Managers Report
Board of Supervisor Announcements

21. Upcoming Events

Most events listed below are expected to be held through a call-in format. If information is needed to access the meetings, please contact staff.

June 9, 2021	Lower Mississippi River Watershed Management Organization Meeting – 3:00 p.m.
June 10, 2021	Dakota County Soil and Water Conservation District Regular Meeting – 9:00 a.m.
June 15, 2021	Eagan-Inver Grove Heights Watershed Management Organization Meeting -5:30 p.m.
June 16, 2021	Black Dog Watershed Management Organization Meeting – 5:00 p.m.
June 16, 2021	Lower Minnesota River Watershed District Board Meeting - 7:00 p.m.
June 18, 2021	MASWCD – Metro Area Meeting 9:00 a.m.
June 24, 2021	Vermillion River Watershed Joint Powers Board Meeting -1:00 p.m.
June 24, 2021	Pollinator Event at Kimber Contour Farms in Castle Rock Township - TBD
July 7, 2021	Cannon River Watershed Joint Powers Board meeting – 9:00 a.m. (in-person)
July 8, 2021	Dakota County Soil and Water Conservation District Regular Meeting – 9:00 a.m.

22. Adjourn

Please note the Board meeting will take place via teleconference by phone and/or the web-based application, Zoom. In response to COVID-19, no in-person meeting will be available. We are following provisions in Minnesota Open Meeting Law addressing meetings in the case of pandemic. For more information please call 651-480-7777.

Join Zoom Meeting

<https://dakotacountymn.zoom.us/j/93025110195?pwd=OW15VzFvWW1NcE9JUFFaTzByOUdQZz09>

Meeting ID: 930 2511 0195

Passcode: 796957

One tap mobile

+16513728299,,93025110195#,,, *796957# US (Minnesota)

Dial by your location

+1 651 372 8299 US (Minnesota)

Meeting ID: 930 2511 0195

Passcode: 796957

Find your local number: <https://dakotacountymn.zoom.us/u/adVDS2eOuf>



MEETING MINUTES

BOARD OF SUPERVISORS MEETING

DAKOTA COUNTY SOIL AND WATER CONSERVATION DISTRICT

Thursday, May 13, 2021

9:00 a.m.

4100 220th Street W, Suite 102
Farmington, Minnesota

Board Members

Laura Zanmiller, Chair
Kevin Chamberlain, Vice
Jayne Hager Dee,
Chelsea Skog, Secretary
Bruce Johnson, Public Information

SWCD Staff Present:

Brian Watson
Curt Coudron
Lana Rotty
Todd Matzke
Joe Barten

Others Present:

Michelle Wohlers, NRCS
Leslie Pilgrim, Resident

Due to the local state of emergency and social distancing, the Board of Supervisors participated in the meeting via telephone and the Board meeting was conducted under Minn. Stat. § 13D.021.

1. Call to Order and Roll Call

Chair Zanmiller called the meeting to order at 9:00 a.m. Chair Zanmiller requested a roll call. Supervisors Chamberlain, Zanmiller, Skog, Dee were present.

2. Audience

Chair Zanmiller asked if there was anyone in the audience that wished to address the Board on an item that is not on the agenda. Nobody came forward.

Supervisor Johnson joined the meeting.

3. Presentation – Hastings High School Field Biology Class no Macroinvertebrate Monitoring in the Vermillion River

Joe Beattie's field biology class from Hastings High School provided a presentation (virtual) on macroinvertebrate monitoring in the Vermillion River. The student presenters included: Brooke Erickson, Elizabeth Manly-Spain, Owen Matzke, and Cam Olsen. The data presented included type and count of species, as well as an analysis of the overall health of the river based on their sampling and assessment efforts. The Board of Supervisors thanked them for the presentation and for their efforts.

4. Approval of Agenda

21.032 Motion by Chamberlain, second by Skog to approve the agenda. Members voting in favor: Zanmiller, Skog, Johnson, Dee, Chamberlain. Motion carried

CONSENT AGENDA

5. Approval of April 8, 2021 Meeting Minutes

The April 8, 2021 Meeting Minutes were presented.

6. Approval of May 13, 2021 Accounts Payable

The May 13, 2021 Accounts Payable were presented.

7. Acceptance of April 2021 Financial Report

The April 2021 Financial Report was reviewed.

Chamberlain stated that the second page of the April Financial Report he received did not print correctly. Watson then stated that there must have been a formatting issue and that Acceptance of the April Financial Report will again be placed on the June meeting agenda.

8. Review Year to Date Budget Report

The Year to Date Budget Report was reviewed.

21.033 Motion by Chamberlain, second by Dee to approve the consent agenda items. Members voting in favor: Skog, Johnson, Dee, Chamberlain, Zanmiller. Motion carried.

REGULAR AGENDA

9. Authorization to Provide Final Payment to Molitor Land, LLC for Installation of Grassed Waterways

Molitor Land LLC has completed the installation of grassed waterways in Douglas Township, Trout Brook Watershed of the Cannon River. The project was approved for funding at the April 8, 2021 Board meeting at 75% cost share not to exceed \$12,975 and based on a cost estimate of \$17,300. Final project cost was \$13,245.

21.034 Motion by Dee, second by Skog to approve final payment to Molitor Land, LLC for installation of two grassed waterways in Section 18, Douglas Township, Trout Brook Watershed of the Cannon River at \$9,933.75 from FY18 Trout Brook Watershed Initiative Grant. Members voting in favor: Johnson, Dee, Chamberlain, Zanmiller, Skog. Motion carried.

10. Authorization to Execute Contract with City of Burnsville for Shoreline Restoration

The City of Burnsville is requesting assistance with erosion caused by wave action along the north shore of Crystal Lake. This section of shoreline includes public access in the northwest corner of the lake and a fishing pier on the east end of the project site. The project will include the installation of coir bio-logs along the shoreline, erosion control blanket in select areas, installation of native live stakes and plug plantings to provide stabilization of the shoreline with vegetation. The project will include native vegetation to create pollinator habitat and double coir logs where there is high foot traffic for fishing access. The plantings will be protected for two growing seasons from foot traffic by fencing the area to allow plants to establish. The City will also install fishing blocks as part of the project, and they are not eligible for cost share. The total cost of the project is estimated at \$56,900.

21.035 Motion by Johnson, second by Skog to execute contract 21-CIF-01 with City of Burnsville, for North Crystal Lake Shoreline Restoration at 75% cost share, not to exceed \$25,000 from CY Agreement with Dakota County. Members voting in favor: Dee, Chamberlain, Zanmiller, Skog, Johnson, Dee. Motion carried.

11. Authorization to Execute Six Contracts with Sorg Farms, LLC for Establishing Cove Crops (one-year)

Sorg Farms, LLC. is proposing to establish cover crops on 6 different fields. The fields are in Nininger and Ravenna Townships, Vermillion River Watershed. Each field will have a separate contract that will require cover crop establishment for one year. Several of the fields had one-year contracts in 2020. Previous and current contracts will count towards the maximum incentive eligibility of 3 years for each field. A seeding plan has been prepared and accepted for each field.

21.036 Motion by Dee, second by Johnson to execute contracts 21-IPP-14, 15, 16, 17, 18, 19 Sorg Farms, LLC for establishment of cover crop on a total of 369 acres on six fields, in Nininger and Ravenna Townships, Vermillion River Watershed, encumbering \$9,225 based on \$25 per acre on one-year contract from the CY Agreements with Dakota County and Vermillion River Watershed Joint Powers Organization. Members voting in favor: Chamberlain, Zanmiller, Skog, Johnson, Dee. Motion carried.

12. Authorization to Contract with Mike Serres for Installation of Grassed Waterways and Critical Area Planting

Mike Serres is proposing to construct grassed waterways and a critical area planting in Douglas Township, Vermillion River Watershed. The project includes reestablishing two grassed waterways that are beyond their lifespan and constructing new waterways. The project will convey runoff and reduce future erosion. The total cost of the project is estimated at \$15,300.

Coudron added that the application for this project is outside of Board established application rounds, however, the project is ready for construction and waiting until the next application round would delay construction until fall.

21.037 Motion by Johnson, second by Chamberlain to execute contract 21-IPP-20 with Mike Serres for installation of grassed waterways and critical area planting in Section 8, Douglas, Township, Vermillion River Watershed at 75% cost share, not to exceed \$11,475 from CY Agreements with Dakota County and Vermillion River Watershed Joint Powers Organization. Members voting in favor: Zanmiller, Skog, Johnson, Dee, Chamberlain. Motion carried.

13. Authorization to Execute Contract with Peter Schweich Installation of Grassed Waterway

Peter Schweich is proposing to construct grassed waterway and a critical area planting in Douglas Township, Vermillion River Watershed. The project will repair gully erosion, adequately convey runoff and reduce future erosion. This project will connect to the grass waterway on the Serres property under the previous agenda item. The total cost of the project is estimated at \$6,200.

Coudron added that the application for this project is outside of Board established application rounds, however, the project is ready for construction and waiting until the next application round would delay construction until fall.

21.038 Motion by Skog, second by Johnson to execute contract 21-IPP-21 with Peter Schweich for installation of grassed waterway and critical area planting in Section 8, Douglas, Township, Vermillion River Watershed at 75% cost share, not to exceed \$4,650 from CY Agreements with Dakota County and Vermillion River Watershed Joint Powers Organization. Members voting in favor: Zanmiller, Skog, Johnson, Dee, Chamberlain. Motion carried.

14. Authorization to Execute Contract with DST LLP for Establishing Cover Crops (multi-year)

DST LLP (Scott Weber) is proposing to establish cover crops on 40 acres over a three-year period. The field is in Douglas Township, Trout Brook Watershed of the Cannon River. A seeding plan for each year has been prepared and accepted.

21.039 Motion by Johnson, second by Chamberlain to execute contract 21-IPP-22 with DST LLC for establishment of cover crops on 40 acres at \$35 per acre annually, for three years, not to exceed \$4,200

from FY21 Metro Watershed Based Implementation Grant for the Cannon River. Members voting in favor: Johnson, Dee, Chamberlain, Zanmiller, Skog. Motion carried.

15. Authorization to Execute Contract with DST LLP for Establishing Cover Crops (one-year)

DST LLP (Scott Weber) is proposing to establish a cover crop on 63 acres. The field is in Douglas Township, Trout Brook Watershed of the Cannon River. A seeding plan has been prepared and accepted.

21.040 Motion by Chamberlain, second by Johnson to a execute contract 21-IPP-23 DST LLC establishment of cover crops on 63 acres at \$25 per acre on one-year contract, not to exceed \$1,575 from agreement with Dakota County. Members voting in favor: Dee, Chamberlain, Zanmiller, Skog, Johnson. Motion carried.

16. Authorization to Execute Contract with Jack Siebenaler for Installation of Native Prairie with Pollinators

John (Jack) Siebenaler is proposing to install native prairie with pollinator habitat in Vermillion Township, Vermillion River Watershed. The native prairie will improve infiltration, reduce erosion and provide wildlife habitat, particularly for pollinators. The total cost of the project is estimated at \$3,000.

21.041 Motion by Johnson, second by Dee to a execute contract with John Siebenaler for the installation of native prairie with pollinator habitat on 1.0 acres in Vermillion Township, Vermillion River Watershed at 75% cost share, not to exceed \$2,250 from CY Agreements with Dakota County and Vermillion River Watershed Joint Powers Organization. Members voting in favor: Chamberlain, Zanmiller, Skog, Johnson, Dee. Motion carried.

17. Authorization to Execute Contract with Eric Johnson for Installation of Native Prairie with Pollinators

Brandy Wentzler is proposing to install a native prairie with pollinator habitat in Vermillion Township, Vermillion River Watershed. The native prairie will improve infiltration, reduce erosion and provide wildlife habitat, particularly for pollinators. This site is near the Siebenaler property under the previous agenda item. The total cost of the project is estimated at \$1,700.

21.042 Motion by Dee, second by Johnson to a execute contract with Brandy Wentzler for the installation of native prairie with pollinator habitat on 0.50 acres in Vermillion Township, Vermillion River Watershed at 75% cost share, not to exceed \$1,275 from CY Agreements with Dakota County and Vermillion River Watershed Joint Powers Organization. Members voting in favor: Zanmiller, Skog, Johnson, Dee, Chamberlain. Motion carried.

18. Annual Tree Sale

Watson sated that a Goal adopted under our 2020-2024 Strategic Plan was Land and Habitat Protection. Under this goal a strategy was identified to initiate forestry and woodlot improvements, and one example of doing this was to evaluate reinstating our Tree Sale Program that was discontinued in 2011 due to budget concerns and prioritizing staff workload. During this time period, the Landscaping for Clean Water (LCW) Program was initiated in collaboration with funding from watershed management organizations and SWCD staff began to provide workshops to assist landowners in designing native gardens and raingardens.

While evaluating the reinstatement of the Tree Sale Program, staff did not pursue in 2020 or 2021 due to the Covid-19 pandemic. Staff discussions started again recently about the possibility of an annual Tree Sale.

The program will provide bare root seedlings and different forestry products to assist with the early stages of tree growth. A Nursery Stock Certificate to sell the trees is required by the Minnesota Department of Agriculture and will be obtained. Bulk tree orders will need to be made and purchased from the supplier in October and order forms will be made available to the public in late November or December. The Tree handout will take place in mid to late April. We do not request information from those that purchase trees

on how the trees will be used or where they will be planted. Landowners will be provided technical assistance on establishing shelterbelts, windbreaks or habitat improvements if requested.

Leslie Pilgrim, resident of Mendota Heights, indicated her support to reinstate the tree sale program at the Dakota SWCD. She stated that a small group is pursuing the goal of 5,000 trees in 5 years within the City of Mendota Heights. She added that the City sponsors 60 tree per year at their sale, and that is not enough to reach their goal. She took it upon herself to seek out SWCDs with tree programs; and was surprised that Dakota did not have a tree sale program. She further stated that she is proud of the work accomplished at Dakota SWCD and would like to see the tree sale program once again. There is a demand with climate change and biodiversity concerns and we need roots in the ground. In addition, she feels it is important to offer this to the public.

There was continued discussion on the tree program, including offering bare root native species, costs for staff time to implement a tree sale program, potential conflict with private nurseries, using volunteers for assistance and where bulk trees are purchased.

Watson responded that staff would move forward to reinstate the tree sale program for the spring of 2022. Chair Zanmiller thanked Leslie for her research and persistence to offer a tree sale program to the residents of Dakota County.

19. Announcements and Reports

Natural Resources Conservation Service

Michelle Wohlers provided the NRCS report. She stated that regarding the Environmental Quality Incentives Program, 6 applications were funded. With COVID, their office is still closed and available by appointment only. Most staff are in the office and masking is required. They are finding it more efficient to work from the office with field work. Lucas has relocated to the Faribault office, but is still available to help in Dakota County when needed. Wohlers reminded everyone of the Local Work Group meeting is scheduled for 10:30 a.m. today.

Dakota County

There was no Dakota County report.

Vermillion River Watershed Joint Powers Organization

There was no Vermillion River Watershed Joint Powers Organization report.

Metropolitan Conservation Districts Joint Power Board

There was no Metropolitan Conservation District Joint Powers Board report.

Minnesota Association of Soil and Water Conservation Districts

Watson stated that the resolution process has started. If Supervisors have ideas for policy, resolutions will need to be presented and voted on at our June 10 Board meeting. Watson indicated that if Board members have ideas to forward them and he can assist with drafting the resolution in the format being requested. The Minnesota Association of Soil and Water Conservation Districts – Metro Area meeting is scheduled for Friday, June 18 and locally approved resolutions will be voted on at that meeting.

Cannon River Watershed Joint Powers Board

There was no Cannon River Watershed Joint Powers Board report.

Vermillion River Watershed Joint Powers Organization

There was no Vermillion River Watershed Joint Powers Organization (VRWJPO) report.

District Managers Report

Watson stated Kevin and Jayne will be participating in the Local Work Group meeting after the meeting today. Discussion continue on reopening Dakota County buildings. At this time, the June Board meeting will again be in virtual format, however, the building may be open for the July meeting.

Board of Supervisors Reports

There were no reports or updates.

20. Upcoming Events

The upcoming events were reviewed. Zanmiller questioned if a tour would be held with the Area Meeting in June. Watson clarified that there would not be tour in June, however, there is discussion on holding a tour sometime in the fall.

21. Adjourn

21.043 Motion by Dee, second by Johnson to adjourn the meeting. Members voting in favor: Skog, Johnson, Dee, Chamberlain, Zanmiller. Motion carried.

The meeting was adjourned at 10:14 a.m.

Respectfully submitted,

Chelsea Skog
Secretary

**Dakota County SWCD
Income and Expense Summary**

April 2021

	Current Month	Year to Date
Income		
County Revenues	\$99,774.00	\$182,599.50
State Revenues	\$77,568.88	\$89,183.88
Local Revenues	\$65,280.57	\$65,280.57
Miscellaneous Funds	\$837.69	\$858.06
Charges for Services	<u>\$1,990.00</u>	<u>\$4,115.00</u>
Total Income	\$245,451.14	\$342,037.01
Expense		
County Expenses	\$0.00	
State Expenses	\$0.00	\$11,615.00
Local Expenses	\$0.00	\$775.32
Operating Expenses	\$717.70	\$13,254.69
Payroll/Personnel Expenses	\$95,817.80	\$396,997.58
Project Expenses	<u>\$0.00</u>	<u>\$0.00</u>
Total Expense	\$96,535.50	\$422,642.59
Revenues Over/-Under Expenditures	<u>\$148,915.64</u>	<u>-\$80,605.58</u>

Dakota County SWCD

Balance Sheet

April 2021

ASSETS:

Cash in Checking - Castle Rock	\$30,015.65
Cash in Savings - Castle Rock	\$876,581.57
Cash in Checking - Vermillion Bank	\$27,553.62
Certificate of Deposit - Vermillion Bank	\$400,472.05
Petty Cash	<u>\$100.00</u>
Total Cash:	\$1,334,722.89

Accounts Receivable:

Black Dog WMO	Q1 2021 Invoice for Services	\$680.00	
BWSR	DC Drinking Water PP 10% of Grant	\$6,040.72	
Cannon River Watershed JPB	Q1 2021 Invoice for Services	\$5,531.72	
City of Burnsville	Q1 2021 Invoice for Services	\$2,560.00	
DC Environmental Resources	Q1 2021 Invoice for Services	\$48,120.00	
DC Parks, Facilities, Fleet	Q1 2021 Invoice for Services	\$2,440.00	
DC Parks, Facilities, Fleet	Q1 2021 Invoice for Services	\$4,911.33	
DC Transportation	Q1 2021 Invoice for Services	\$1,320.00	
Drill Customer	Q1 2021 Invoice for Services	\$265.00	
Eagan-Inver Grove Heights WMO	Q1 2021 Invoice for Services	\$2,810.00	
Eagan-Inver Grove Heights WMO WBF	Q1 2021 Invoice for Services	\$484.14	
Lower Mississippi River WMO	Q1 2021 Invoice for Services	\$22,650.00	
Lower Mississippi River WMO WBF	Q1 2021 Invoice for Services	\$1,364.22	
Lower MN River WD	Q1 2021 Invoice for Services	\$1,200.00	
Lower MN River WD WBF	Q4 2020 & Q1 2021 Invoice for Services	\$1,604.99	
MCD Cannon River Direct SWA	2020 Invoice for Services	\$9,597.93	
MCD Cannon River Direct SWA	Q1 2021 Invoice for Services	\$3,001.70	
MCD MAWQCP	Q1 2021 Invoice for Services	\$345.80	
MCD ETSA	Q1 2021 Invoice for Services	\$4,989.62	
MCD Hosting	Q1 2021 Invoice for Services	\$6,273.35	
MDA NFMP	Q1 2021 Invoice for Services	\$1,071.98	
NCR WMO	Q1 2021 Invoice for Services	\$3,225.00	
NCR WMO WBF	Q1 2021 Invoice for Services	\$3,074.14	
VRW JPO	Q1 2021 Invoice for Services	\$5,935.32	
			\$139,496.96

TOTAL ASSETS: **\$1,474,219.85**

LIABILITIES AND EQUITY:

Unearned Revenue:

Buffer Law Funds 2020	\$18,519.48	
Buffer Law Funds 2021	\$17,200.00	
Conservation Delivery 2020	\$7,961.92	
Conservation Delivery 2021	\$21,240.00	
CWF 2018 Trout Brook Watershed Projects	\$76,700.33	
CWF 2019 DC Drinking Water PP	-\$269.79	
Local Capacity Services 2020	\$24,060.79	
Local Capacity Services 2021	\$124,387.00	
Met Council WOMP Funds	\$5,145.57	
NRBG Wetland Conservation Act 2021	\$37,429.83	
State Cost Share 2020	\$22,054.00	
State Cost Share 2021	\$22,054.00	
WBF 2019 Dakota SWCD	\$8,474.29	
WBF 2019 LM WD	\$32,725.00	
WBF 2021 Cannon River	\$151,146.68	
WBF 2021 Miss River East	\$16,283.00	
WBF 2021 MN River South	\$25,000.00	
WBF 2021 Vermillion River	\$41,506.49	
DC Annual Operating Allocation	\$220,868.00	\$872,486.59

Total Liabilities: \$872,486.59

Fund Balance Beginning of Year	\$682,338.84
Current Net Increase/-Decrease	<u>-\$80,605.58</u>
Fund Balance End of Current Period	\$601,733.26

TOTAL LIABILITIES AND EQUITY: **\$1,474,219.85**

**Dakota County SWCD
Income and Expense Summary**

May 2021

	Current Month	Year to Date
Income		
County Revenues	\$0.00	\$182,599.50
State Revenues	\$250.00	\$89,433.88
Local Revenues	\$0.00	\$65,280.57
Miscellaneous Funds	\$381.45	\$1,239.51
Charges for Services	<u>\$2,466.50</u>	<u>\$6,581.50</u>
Total Income	\$3,097.95	\$345,134.96
Expense		
County Expenses	\$40.14	\$40.14
State Expenses	\$10,217.22	\$21,832.22
Local Expenses	\$105.93	\$881.25
Operating Expenses	\$2,449.18	\$15,703.87
Payroll/Personnel Expenses	\$95,435.36	\$492,432.94
Project Expenses	<u>\$834.84</u>	<u>\$834.84</u>
Total Expense	\$109,082.67	\$531,725.26
Revenues Over/-Under Expenditures	<u>-\$105,984.72</u>	<u>-\$186,590.30</u>

Dakota County SWCD

Balance Sheet

May 2021

ASSETS:

Cash in Checking - Castle Rock	\$4,912.97
Cash in Savings - Castle Rock	\$880,016.09
Cash in Checking - Vermillion Bank	\$27,935.07
Certificate of Deposit - Vermillion Bank	\$400,472.05
Petty Cash	<u>\$100.00</u>
Total Cash:	\$1,313,436.18

Accounts Receivable:

BWSR	DC Drinking Water PP 10% of Grant	\$6,310.51	
Cannon River Watershed JPB	Q1 2021 Invoice for Services	\$5,531.72	
DC Parks, Facilities, Fleet	Q1 2021 Invoice for Services	\$2,440.00	
DC Parks, Facilities, Fleet	Q1 2021 Invoice for Services	\$4,911.33	
DC Transportation	Q1 2021 Invoice for Services	\$1,320.00	
Drill Customer	Q1 2021 Invoice for Services	\$753.50	
Eagan-Inver Grove Heights WMO	Q1 2021 Invoice for Services	\$2,810.00	
Eagan-Inver Grove Heights WMO WBF	Q1 2021 Invoice for Services	\$484.14	
MCD Cannon River Direct SWA	2020 Invoice for Services	\$9,597.93	
MCD Cannon River Direct SWA	Q1 2021 Invoice for Services	\$3,001.70	
MCD MAWQCP	Q1 2021 Invoice for Services	\$345.80	
MCD ETSA	Q1 2021 Invoice for Services	\$4,989.62	
MCD Hosting	Q1 2021 Invoice for Services	\$6,273.35	
NCR WMO	Q1 2021 Invoice for Services	\$3,225.00	
NCR WMO WBF	Q1 2021 Invoice for Services	\$3,074.14	
			\$55,068.74

TOTAL ASSETS: **\$1,368,504.92**

LIABILITIES AND EQUITY:

Unearned Revenue:

Buffer Law Funds 2020	\$18,519.48	
Buffer Law Funds 2021	\$17,200.00	
Conservation Delivery 2020	\$7,961.92	
Conservation Delivery 2021	\$21,240.00	
CWF 2018 Trout Brook Watershed Projects	\$76,700.33	
CWF 2019 DC Drinking Water PP	\$0.00	
Local Capacity Services 2020	\$24,060.79	
Local Capacity Services 2021	\$124,387.00	
Met Council WOMP Funds	\$5,145.57	
NRBG Wetland Conservation Act 2021	\$37,429.83	
State Cost Share 2020	\$22,054.00	
State Cost Share 2021	\$22,054.00	
WBF 2019 Dakota SWCD	\$8,474.29	
WBF 2019 LM WD	\$32,725.00	
WBF 2021 Cannon River	\$151,146.68	
WBF 2021 Miss River East	\$16,283.00	
WBF 2021 MN River South	\$25,000.00	
WBF 2021 Vermillion River	\$41,506.49	
DC Annual Operating Allocation	\$220,868.00	\$872,756.38

Total Liabilities: \$872,756.38

Fund Balance Beginning of Year	\$682,338.84
Current Net Increase/-Decrease	<u>-\$186,590.30</u>
Fund Balance End of Current Period	\$495,748.54

TOTAL LIABILITIES AND EQUITY: **\$1,368,504.92**

DAKOTA COUNTY SOIL AND WATER CONSERVATION DISTRICT

Regular Agenda

Request for Board Action

Roll Call Vote

Meeting Date: 6/10/2021

Prepared by: Curt Coudron

PURPOSE/ACTION REQUESTED:

Authorization to provide final payment of \$930 to Steve Meyers for the repair of a water and sediment control basin.

SUMMARY:

Steve Meyers has completed the repair of a water and sediment control basin in Douglas Township, Trout Brook watershed of the Cannon River.

The project was approved for funding at the October 8, 2020 Board meeting at 75% cost share not to exceed \$1,275 and based on a cost estimate of \$1,700.

Final project cost was \$1,240. Project installation has been certified by SWCD staff.

EXPLANATION OF FISCAL/FTE IMPACT:

Project funds to install the project are available through our agreement with the Vermillion River Watershed and Dakota County.

Supporting Documents:

19-IPP-15r Meyers, Steve WASCB Repair Final Factsheet

Previous Board Action:

Motion 19.046 on 5/2/2019
Authorization to Execute Contract

Motion 19.152 on 11/7/2019
Authorization to Amend Contract

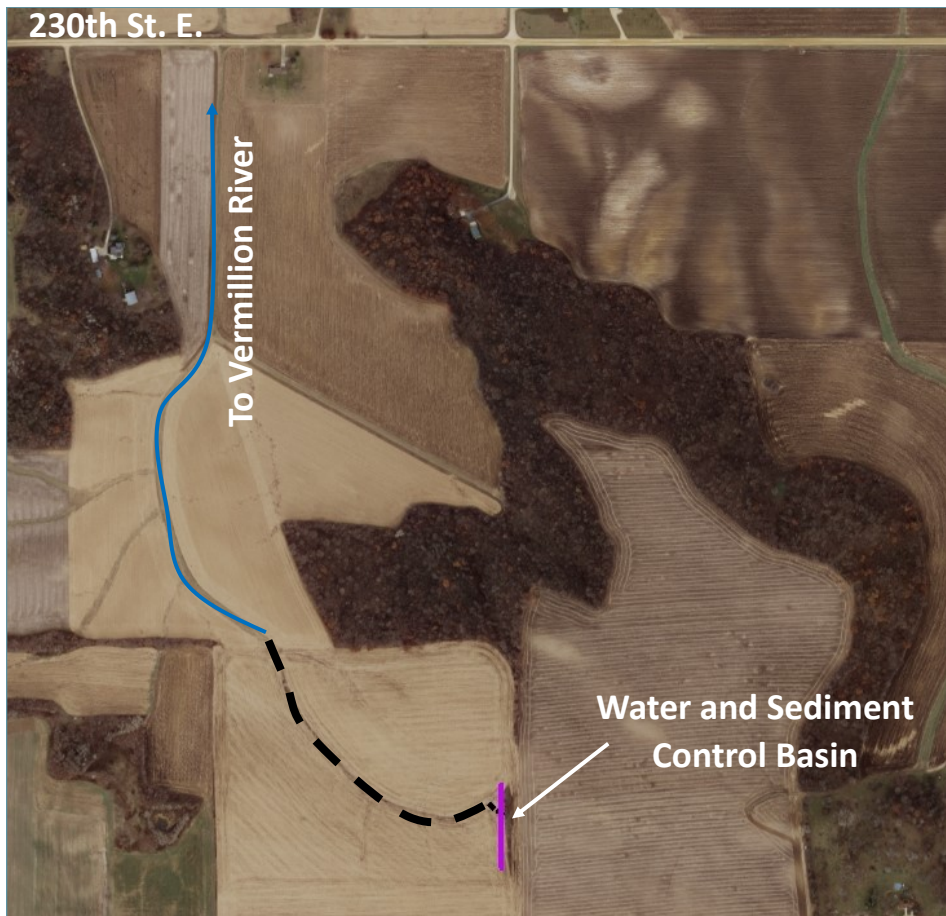
Motion 20.046 on 6/11/20
Authorization of Final Payment

Motion 20.060 on 10/8/20
Authorization to Execute Contract
for Repair



STEVE MEYERS

WATER AND SEDIMENT CONTROL BASIN REPAIR



PRACTICE:

- Water and Sediment Control Basin Repair

BENEFITS:

- 57 tons of soil per year prevented from traveling downstream
- 19 lbs. of phosphorous per year prevented from traveling downstream

PARTNERS :

- Vermillion River Watershed Joint Powers Organization
- Dakota County

WATERSHED:

- Vermillion River

RECEIVING WATERS:

- Lower Main Stem of Vermillion River

INSTALLATION:

- Spring 2020

PROJECT: In June 2020 a large storm damaged the water and sediment control basin that had been completed in the spring of 2020. The project repaired the basin to match the original design.

FUNDING:	Previous Project Cost:	\$4,229
	SWCD Repair Amount:	\$930
	Landowner Repair Amount:	\$310
	Total Project Cost:	\$5,469



LOCATION:

Douglas Township
Section 8

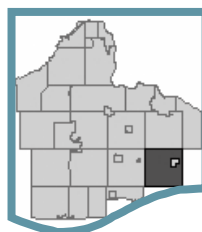




Photo of original water and sediment control basin shortly after it was constructed



Storms in June 2020 damaged the recently constructed project.



Embankment was repaired by compacting soil and grading to match the original design.



Photo of the repaired project

DAKOTA COUNTY SOIL AND WATER CONSERVATION DISTRICT

Regular Agenda

Request for Board Action

Roll Call Vote

Meeting Date: 6/10/2021

Prepared by: Curt Coudron

PURPOSE/ACTION REQUESTED:

Authorization to provide final payment of \$17,475 to John (JB) Dudley for the installation of a grassed waterway.

SUMMARY:

JB Dudley has completed the installation of a 1,393-foot grassed waterway in Waterford Township, Cannon River Watershed.

The project was approved for funding at the September 10, 2020 Board meeting at 75% cost share not to exceed \$17,475 and based on a cost estimate of \$23,300.

Final project cost was \$24,062.81. Project installation has been certified by NRCS field office staff.

EXPLANATION OF FISCAL/FTE IMPACT:

Project funds to install the project are available through our agreement with Dakota County and our FY20 State Cost Share.

Supporting Documents:

20-IPP-17 Dudley, JB WW Final Factsheet

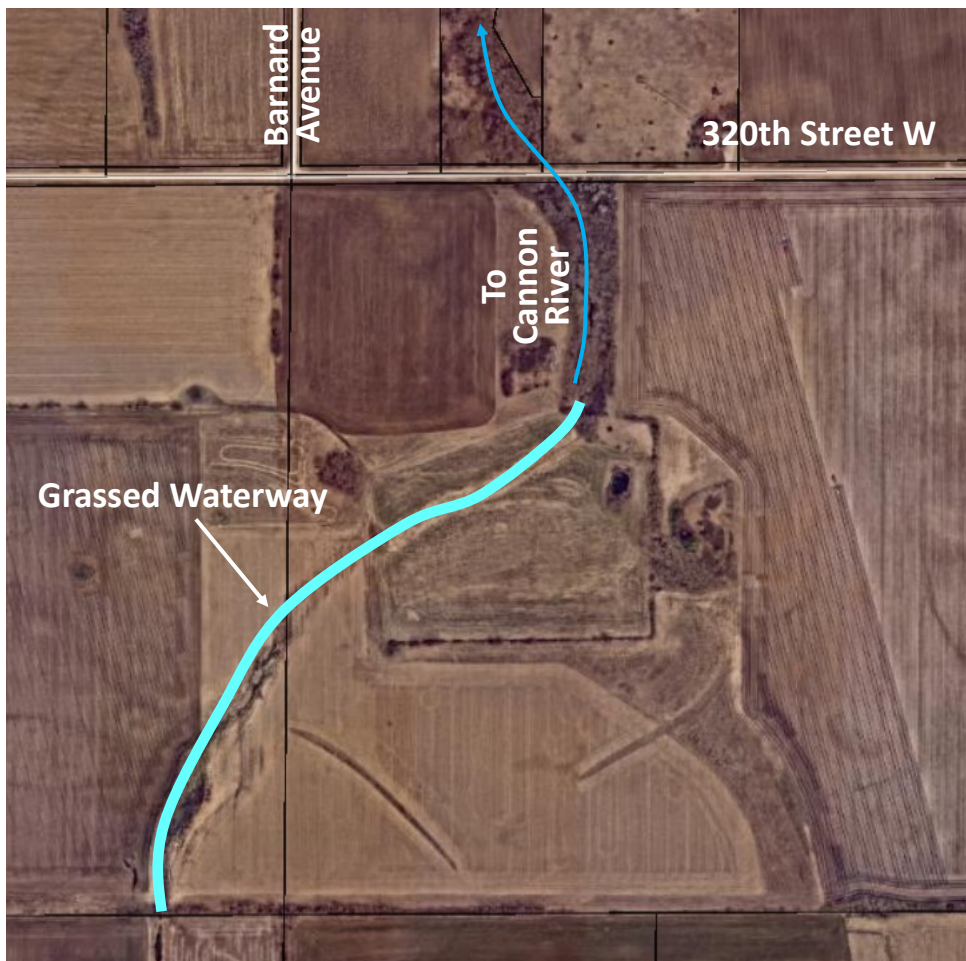
Previous Board Action:

Motion 20.057 on 9/10/20

Authorization to Execute Contract



JB DUDLEY GRASSED WATERWAY



PRACTICE:

- Grassed Waterway

BENEFITS:

- 1.6 tons of sediment per year prevented from traveling downstream
- 1.6 lbs. of phosphorous per year prevented from traveling downstream

PARTNERS:

- Dakota County
- Minnesota Board of Water and Soil Resources
- USDA - Natural Resources Conservation Service

WATERSHED:

- Cannon River

RECEIVING WATERS:

- Cannon River

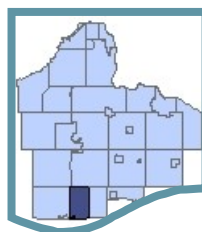
INSTALLATION:

- Fall 2020/Spring 2021

PROJECT: Surface water runoff was causing erosion in the field and sediment build up within the existing waterway. A grassed waterway and underground outlet were installed to convey runoff and reduce future erosion.

FUNDING:	Final Project Cost:	\$24,063
	Cost Share Amount:	\$17,475
	Landowner Amount	\$6,588

LOCATION:
Waterford TWP.





Prior to the project, runoff through the field was causing erosion and transporting sediment downstream.



A support tile was installed, offset from the center of the waterway.



The support tile outlet was stabilized with rock rip-rap.



The waterway was graded to convey surface water runoff.



The waterway was seeded with a perennial grass mixture.



Vegetation was establishing 2 months after seeding. The perennial vegetation will reduce future erosion.

DAKOTA COUNTY SOIL AND WATER CONSERVATION DISTRICT

Regular Agenda

Request for Board Action

Roll Call Vote

Meeting Date: 6/10/2021

Prepared by: Curt Coudron

PURPOSE/ACTION REQUESTED:

Authorization to provide final payment of \$3,616.82 to Ron Beissel for the repair of grade stabilization structure.

SUMMARY:

Ron Beissel has completed the repair of an aluminum wall drop structure in Hampton Township, Vermillion River Watershed. The project was originally installed in 2018 using NRCS funds but was damaged during an intense runoff event in summer of 2020.

Along with funding from the SWCD, cost share funds from the Minnesota Department of Agriculture's Water Quality Certification Program in the amount of \$2,191.06 are available for the repair.

The project was approved for SWCD funding at the October 8, 2020 Board meeting at 75% cost share from state and local sources, not to exceed \$4,300 in SWCD funds based on a cost estimate of \$8,764.25.

Final project cost was \$7,743.84 and 75% cost share is equal to \$5,807.88. After \$2,191.06 in funds from the Minnesota Department of Agriculture's Water Quality Certification Program are applied to the cost share, the remaining amount is \$3,616.82.

EXPLANATION OF FISCAL/FTE IMPACT:

Project funds to install the project are available through our agreements with Dakota County and the Vermillion River Watershed Joint Powers Organization.

Supporting Documents:

21-IPP-18 Beissel, Ron Structure Repair Final Factsheet

Previous Board Action:

Motion 20.060 on 10/8/20

Authorization to Execute Contract



RON BEISSEL

DROP STRUCTURE REPAIR



PRACTICE:

- Drop Structure Repair

BENEFITS:

- Stabilization of eroding soils
- Reduction of sediment traveling downstream

PARTNERS:

- Dakota County
- Vermillion River Watershed Joint Powers Organization
- Minnesota Department of Agriculture
- USDA– Natural Resources Conservation Service

WATERSHED:

- Vermillion River

RECEIVING WATERS:

- Vermillion River

INSTALLATION:

- Fall 2020

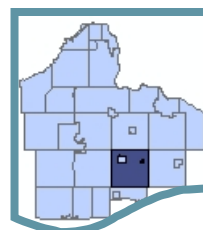
PROJECT: An aluminum drop structure, which was installed in 2018, had been damaged during intense runoff events. The structure was repaired and the surrounding slopes were stabilized.

FUNDING:	Total Project Cost:	\$7,744
	SWCD Cost Share Amount:	\$3,617
	Other Cost Share Amount:	\$2,191
	Landowner Amount:	\$1,936



LOCATION:

Hampton
Township



DROP STRUCTURE REPAIR



High flows had eroded around the end of the existing wing wall and scoured alongside the existing concrete slab.



Eroded areas around the wing wall were repaired.



Concrete pads were installed on both sides of the existing concrete slab



Rock riprap was installed over geotextile fabric to prevent scour at the end of the concrete slab.



Riprap was placed to prevent future erosion at the end of the wing wall.



View of completed project

DAKOTA COUNTY SOIL AND WATER CONSERVATION DISTRICT

Regular Agenda

Request for Board Action

Roll Call Vote

Meeting Date: 6/10/2021

Prepared by: Curt Coudron

PURPOSE/ACTION REQUESTED:

Authorization to amend contract and provide final payment of \$16,127.54 to Dan Duncomb for the installation of a grade stabilization structure.

SUMMARY:

Dan Duncomb has completed the installation of a grade stabilization structure in Douglas Township, Trout Brook watershed of the Cannon River.

The project was approved for funding at the April 8, 2021 Board meeting at 75% cost share not to exceed \$15,300 and based on a cost estimate of \$20,400.

Due to dry site conditions, additional soil preparation and an alternative stabilization method was needed, which increased project costs. Dan has requested to amend the contract to include cost share for the increased project costs. Final project cost was \$21,503.39. Project installation has been certified by staff.

EXPLANATION OF FISCAL/FTE IMPACT:

Project funds to install the project are available through the FY18 Trout Brook Watershed Initiative Grant.

Supporting Documents:

21-IPP-09 Duncomb, Dan Structure Final Factsheet

Previous Board Action:

Motion 21.026 on 4/8/21

Authorization to Execute Contract



DAN DUNCOMB

GRADE STABILIZATION STRUCTURE



PRACTICE:

- Grade Stabilization Structure

BENEFITS:

- 20.4 tons of sediment per year prevented from traveling downstream
- 10.2 lbs. of phosphorous per year prevented from traveling downstream

PARTNERS:

- Minnesota Board of Water and Soil Resources
- USDA - Natural Resources Conservation Service

WATERSHED:

- Cannon River

RECEIVING WATERS:

- Trout Brook

INSTALLATION:

- Spring 2021

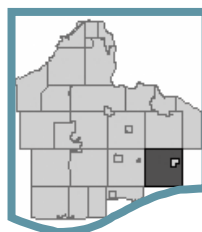
PROJECT: An existing grade stabilization structure was reconstructed to meet current design standards. The original structure was constructed in 1958.

FUNDING:	Project Cost:	\$21,503
	Cost Share Amount:	\$16,128
	Landowner Amount	\$5,375



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Protecting and restoring
Minnesota's waters for
generations to come.*

LOCATION:
Douglas Township





The existing pipe, originally installed in 1958, was no longer functioning and erosion had occurred alongside the pipe.



The pipe had rusted through and needed to be removed.



A new HDPE pipe was installed.



The embankment beside and above the pipe was reconstructed.



Rock inlet protection and an anti-vortex hood were installed at the upstream end of the pipe.



The finished embankment was seeded with perennial vegetation and hydro-mulched.

DAKOTA COUNTY SOIL AND WATER CONSERVATION DISTRICT

Regular Agenda

Request for Board Action

Roll Call Vote

Meeting Date: 6/10/2021

Prepared by: Curt Coudron

PURPOSE/ACTION REQUESTED:

Authorize execution of contract with Peine Cattle Company not to exceed \$10,500 for the establishment of cover crops.

SUMMARY:

Peine Cattle Company (Mike Peine) is proposing to establish cover crops on 100 acres over a three-year period. The field is located in Douglas Township, Trout Brook watershed of the Cannon River.

A seeding plan for each year has been prepared and accepted. Based on our adopted cost share policy, a landowner is eligible for up to \$35 per acre per year on a three-year contract.

Under District cost share policy, payment for the first year will be made upon certification of the installation and District Board approval. Payments for additional years will be made annually when cover crop seeding has been completed for that year and has been certified by District staff.

EXPLANATION OF FISCAL/FTE IMPACT:

Project funds are available through our agreements with Dakota County and through the FY18 Trout Brook Watershed Initiative Grant.

Supporting Documents:
21-IPP-24 Peine Cattle Company CC Factsheet

Previous Board Action:
None



PEINE CATTLE COMPANY COVER CROPS



PRACTICE:

- Cover Crops

BENEFITS:

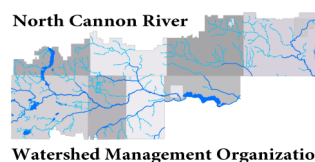
- 74 tons of sediment per year prevented from traveling downstream
- 94 lbs. of phosphorus per year prevented from traveling downstream
- Reduced leaching of nitrate into groundwater on highly vulnerable and sensitive soils
- Retained nutrients and improved soil health.

PARTNERS:

- Dakota County
- North Cannon River Watershed Management Organization
- Minnesota Board of Water and Soil Resources

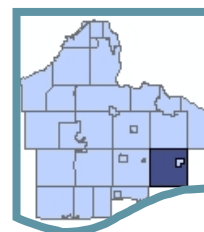
PROJECT: A winter cereal rye cover crop will be planted on 100 acres following either canning crop harvest or corn silage for three years. The cover crop will provide erosion control, reduce weed pressure, and prevent nutrient leaching.

FUNDING: Incentive Amount: **\$10,500**
(100 acres X \$35 per acre X 3 years)



Clean Water Fund:
Protecting and restoring
Minnesota's waters for
generations to come.

LOCATION:
Douglas
Township



WATERSHED:

- Cannon River

RECEIVING WATERS:

- Trout Brook

INSTALLATION:

- Fall 2021, 2022 and 2023

DAKOTA COUNTY SOIL AND WATER CONSERVATION DISTRICT

Regular Agenda

Request for Board Action

Roll Call Vote

Meeting Date: 6/10/2021

Prepared by: Curt Coudron

PURPOSE/ACTION REQUESTED:

Authorize execution of contract with Pat Maher not to exceed \$675 for the establishment of a cover crop.

SUMMARY:

Pat Maher is proposing to establish a cover crop on 27 acres. The field is located in Marshan Township, Vermillion River Watershed.

A seeding plan has been prepared and accepted. Based on the Districts adopted cost share policy, a landowner is eligible for up to \$25 per acre on a one-year contract. SWCD staff will certify cover crop establishment after installation.

EXPLANATION OF FISCAL/FTE IMPACT:

Project funds are available through our agreements with Dakota County and the Vermillion River Watershed Joint Powers Organization.

Supporting Documents:

21-IPP-27 Maher, Pat CC Factsheet

Previous Board Action:

None



PAT MAHER

COVER CROPS



PRACTICE:

- Cover Crops

BENEFITS:

- 1 ton of sediment per year prevented from traveling downstream
- 1 lb. of phosphorous per year prevented from traveling downstream
- Reduced leaching of nitrate into groundwater on highly vulnerable and sensitive soils
- Retained nutrients and improved soil health.

PARTNERS:

- Dakota County
- Vermillion River Watershed Joint Powers Organization

WATERSHED:

- Vermillion River

RECEIVING WATERS:

- Vermillion River

INSTALLATION:

- Fall 2021

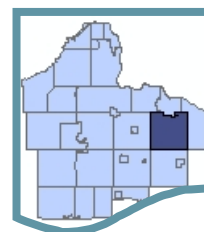
PROJECT: A winter cereal rye cover crop will be planted on 27 acres following soybean harvest. The cover crop will provide erosion control, reduce weed pressure, and prevent nutrient leaching.

FUNDING: Incentive Amount: \$675
(27 acres X \$25 per acre X 1 year)



LOCATION:

Marshan
Township



DAKOTA COUNTY SOIL AND WATER CONSERVATION DISTRICT

Regular Agenda

Request for Board Action

Roll Call Vote

Meeting Date: 6/10/2021

Prepared by: Curt Coudron

PURPOSE/ACTION REQUESTED:

Authorize execution of contract with Pat Maher not to exceed \$7,875 for the establishment of cover crops.

SUMMARY:

Pat Maher is proposing to establish cover crops on 75 acres over a three-year period. The field is located in Marshan Township, Vermillion River Watershed.

A seeding plan for each year has been prepared and accepted. Based on the Districts adopted cost share policy, a landowner is eligible for up to \$35 per acre per year on a three-year contract.

Under District cost share policy, payment for the first year will be made upon certification of the installation and District Board approval. Payments for additional years will be made annually when cover crop seeding has been completed for that year and has been certified by District staff.

EXPLANATION OF FISCAL/FTE IMPACT:

Project funds are available through our agreements with Dakota County and our FY21 Vermillion River Watershed Based Implementation Grant.

Supporting Documents:

21-IPP-28 Maher, Pat CC Factsheet

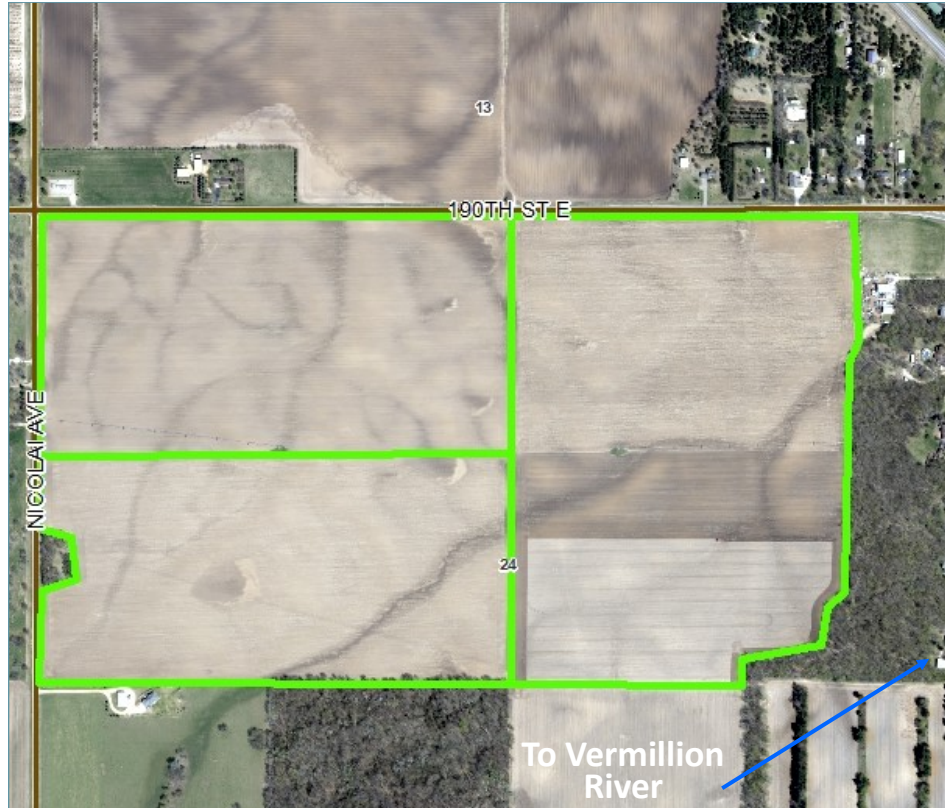
Previous Board Action:

None



PAT MAHER

COVER CROPS



PROJECT: A winter cereal rye cover crop will be planted on 75 acres rotating through the field following soybean harvest. The cover crop will provide erosion control, reduce weed pressure, and prevent nutrient leaching.

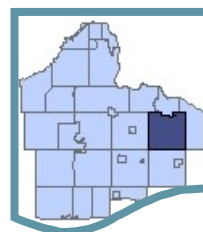
FUNDING: Incentive Amount: \$7,875
(75 acres X \$35 per acre X 3 years)



*Clean Water Fund:
Protecting and restoring
Minnesota's waters for
generations to come.*

LOCATION:

Marshan
Township



PRACTICE:

- Cover Crops

BENEFITS:

- 1 ton of sediment per year prevented from traveling downstream
- 3 lbs. of phosphorous per year prevented from traveling downstream
- Reduced leaching of nitrate into groundwater on highly vulnerable and sensitive soils
- Retained nutrients and improved soil health.

PARTNERS:

- Dakota County
- Minnesota Board of Soil and Water Resources

WATERSHED:

- Vermillion River

RECEIVING WATERS:

- Vermillion River

INSTALLATION:

- Fall 2021, 2022 and 2023

DAKOTA COUNTY SOIL AND WATER CONSERVATION DISTRICT

Regular Agenda

Request for Board Action

Roll Call Vote

Meeting Date: 6/10/2021

Prepared by: Curt Coudron

PURPOSE/ACTION REQUESTED:

Authorize execution of a contract with Noah Blaha not to exceed \$2,475 for the installation of native prairie with pollinator habitat.

SUMMARY:

Noah Blaha is proposing to install a native prairie with pollinator habitat in Vermillion Township, Vermillion River Watershed. The native prairie will improve infiltration, reduce erosion, and provide wildlife habitat, particularly for pollinators.

Total costs of the project are estimated at \$3,300. Staff is recommending approval at 75% cost share not to exceed \$2,475.

EXPLANATION OF FISCAL/FTE IMPACT:

Project funds to install the project are available through our agreements with Dakota County and the Vermillion River Watershed Joint Powers Organization.

Supporting Documents:
21-IPP-29 Blaha, Noah NPR Factsheet

Previous Board Action:
None



NOAH BLAHA

NATIVE PRAIRIE RESTORATION

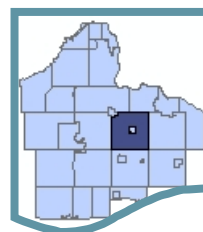


PROJECT: 1.0 acres will be restored to native prairie vegetation. The native prairie will improve infiltration, reduce erosion and provide wildlife habitat, particularly for pollinators.

FUNDING:	Estimated Project Cost:	\$3,300
	Cost Share Amount:	\$2,475
	Landowner Amount	\$825



LOCATION:
Vermillion Township



PRACTICE:

- Restoration of Rare and Declining Communities

BENEFITS:

- 0.26 tons of sediment per year prevented from traveling downstream
- Improved wildlife habitat, in particular for pollinators

PARTNERS:

- Vermillion River Watershed Joint Powers Organization
- Dakota County

WATERSHED:

- Vermillion River

RECEIVING WATERS:

- Vermillion River

INSTALLATION:

- 2021

DAKOTA COUNTY SOIL AND WATER CONSERVATION DISTRICT

Regular Agenda

Request for Board Action

Roll Call Vote

Meeting Date: 6/10/2021

Prepared by: Curt Coudron

PURPOSE/ACTION REQUESTED:

Authorize execution of a contract with Nolie Freeman not to exceed \$8,850 for the installation of native prairie with pollinator habitat.

SUMMARY:

Nolie Freeman is proposing to install a 4.5-acre native prairie with pollinator habitat in Douglas Township, Trout Brook Watershed of the Cannon River. The native prairie will improve infiltration, reduce erosion, and provide wildlife habitat, particularly for pollinators.

Total costs of the project are estimated at \$11,800. Staff is recommending approval at 75% cost share not to exceed \$8,850.

EXPLANATION OF FISCAL/FTE IMPACT:

Project funds to install the project are available through our agreements with Dakota County and the FY18 Trout Brook Watershed Initiative Grant.

Supporting Documents:
21-IPP-30 Freeman, Nolie NPR Factsheet

Previous Board Action:
None



NOLIE FREEMAN NATIVE PRAIRIE RESTORATION



PRACTICE:

- Restoration of Rare and Declining Communities
- Conservation Cover

BENEFITS:

- 4.03 tons of sediment per year prevented from traveling downstream
- Improved wildlife habitat, in particular for pollinators

PARTNERS:

- Dakota County
- Minnesota Board of Water and Soil Resources

WATERSHED:

- Cannon River

RECEIVING WATERS:

- Trout Brook

INSTALLATION:

- 2021

PROJECT: 4.5 acres will be restored to native prairie vegetation. The native prairie will improve infiltration, reduce erosion and provide

FUNDING:	Estimated Project Cost:	\$11,800
	Cost Share Amount:	\$8,850
	Landowner Amount	\$2,950

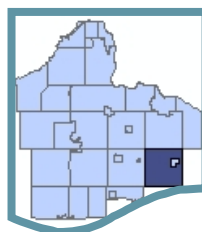


Clean Water Fund:
Protecting and restoring
Minnesota's waters for
generations to come.



LOCATION:

Douglas Township



DAKOTA COUNTY SOIL AND WATER CONSERVATION DISTRICT**Regular Agenda**

Request for Board Action

Roll Call Vote

Meeting Date: 6/10/2021

Prepared by: Ashley Gallagher

PURPOSE/ACTION REQUESTED:

Authorize execution of contract with RESPEC for development of the Irrigation Management Assistant (IMA) online scheduling tool.

SUMMARY:

In 2019 the SWCD used Watershed Based Funding to gather input from irrigators in Dakota County. There was overwhelming support to develop a publicly available, online irrigation scheduling tool, specifically the Irrigation Management Assistant (IMA) tool, that was demonstrated at an irrigators focus group meeting. This tool has been developed for parts of Benton and East Otter Tail Counties. There is also an effort to expand the IMA tool statewide through LCCMR funding. However, statewide funding has not yet been approved and development may not occur for a few years. The SWCD and Dakota County want to move forward and make the IMA tool available for the 2022 growing season. Funds are available through the Cannon River and Vermillion River Watershed Based Implementation grant and Dakota County under Groundwater Plan implementation.

Environmental benefits of irrigation scheduling tools are related to both water quantity and quality. Research from the University of Minnesota shows that the IMA tool can help reduce nitrate leaching events. New components in the IMA tool will allow the SWCD to generate a summary report of environmental benefits based on use. All user data remains private and only reported in an aggregated form.

Upon contract execution, RESPEC would begin to develop the IMA tool with a November 2021 completion goal. Research could be conducted with the IMA tool this growing season, however full roll out of the IMA tool would occur over the winter months in preparation for the 2022 growing season.

EXPLANATION OF FISCAL/FTE IMPACT:

Funds for project development are available through the Watershed Based Implementation grants for both the Vermillion River and Cannon River Watersheds, with match provided by Dakota County.

Supporting Documents:

IMA Tool Proposal by RESPEC

Previous Board Action:

None



May 20, 2021

Ashley Gallagher
Resource Conservationist
Dakota Soil and Water Conservation District (SWCD)
4100 220th Street West
Farmington, MN 55024

Dear Ms. Gallagher:

RE: Irrigation Management Assistant Tool Proposal - REVISED

I have revised RESPEC's original proposal based on your email feedback May 19, 2021 to:

1. Separate maintenance from the base setup and feature development
2. Remove the reference to potential components not being considered at this time.

To reflect these changes, in the proposal I have moved maintenance to its own section after all system development activities and removed the section of potential components. As noted on the budget, development tasks are designated for the 2021 calendar year through December 31, 2021 and maintenance is designated for the 2022 growing season from March 1, 2022 – October 31, 2022. The maintenance date range is based on the usable time-period for irrigation scheduling and weather station data availability due to limited online status of weather stations during the winter months.

In regard to contracting, RESPEC can work with a single contract reflecting the two periods of performance or contract separately for each as desired.

Again, thank you for reaching out with your request for services regarding the Irrigation Management Assistant for the Dakota SWCD.

Sincerely,

Paul Senne
Project Analyst II

1935 COUNTY ROAD B2 W PS:
SUITE 230
ROSEVILLE, MN 55113
651.305.2280



BACKGROUND

The Irrigation Management Assistant (IMA) was developed beginning in 2016 for the Benton County Soil and Water Conservation District (SWCD) to provide voluntary irrigation scheduling through an online platform that automates aspects of daily soil moisture management calculations based on a field's soil and current conditions including weather, crop, and crop growth stage.

For each user's agricultural field, the system recommends irrigation timing and volumes on a daily basis while providing the status of the watershed resources throughout the growing season. The goal is to show that making calculated decisions on when and how much to irrigate based on individualized field factors; producers can reduce the environmental impacts of irrigation while obtaining multiple benefits such as increased yield and reduced irrigation input costs using proven conservation practices.

The IMA application was built on an open-source software stack to allow for fewer barriers to adoption and position the application to be adaptable for future expansion and adoption within Minnesota and beyond. The application stack is illustrated in appendix A.

APPROACH

This proposal is written based on the requirements requested with the addition of minimum features, the Base Instance Setup & Maintenance required to set up the system for the Vermillion River and Cannon River Watersheds in addition to the Dakota County SWCD. Because IMA has been an open-source effort, the application has had various changes and improvements over the years, and it is expected to continue as additional opportunities to expand features and geographies arise. RESPEC intends to continue to work with our partners to push expansion and adoption of irrigation scheduling in Minnesota. As such, if additional funding directed to support the system overlaps with the scope and schedule outlined below, we will work to modify scope to extend Dakota SWCD funds to maximize features for all users.

BASE INSTANCE SETUP

BASE INSTANCE CONFIGURATION

To set up IMA for Dakota SWCD and the Vermillion and Cannon River watersheds requires a geographic expansion of the base data used to drive the irrigation application. To start we must acquire the spatial SSURGO areas and process them for the map units' available water capacity in 12-inch depth increments. The soil processing includes filling any missing data gaps and then loads the processed data into the database instance where it is utilized dynamically to calculate soil water holding capacity for fields entered into the system. Each depth zone is used by the IMA to determine water needs based on the crop type and its current maturity. As crops mature, they access moisture in deeper zones and the system is able to use this awareness to inform watering recommendations.

Additionally, as part of the base configuration, the Minnesota Department of Agriculture's (MDA) Hastings weather station will be added to the system and to our automated Loggernet process to pull daily evaporation data in and trigger irrigation recommendations.

Finally, the web application and database will be configured to serve the new Dakota SWCD instance of IMA using our current hosting solution.



NEW COMPONENTS

LINK TO RESOURCES

The Dakota IMA will be configured to schedule irrigation for fields entered anywhere within the county or within the watershed boundaries of the Vermillion River Watershed JPO and the North Cannon River WMO. If a field is drawn within one of the management areas, the system will track the field to the associated management area and use this to group the fields by management area for each user and allow for summary of usage by management area.

Currently the IMA application is configured in Benton county for automated pulling of Minnesota Department of Natural Resources (DNR) Cooperative Stream Gaging and Cooperative Groundwater Monitoring data from the department's data download site for display in the scheduler. This data is pulled every six hours and aggregated to display by day. RESPEC will work with the department to identify several key monitoring sites to display.

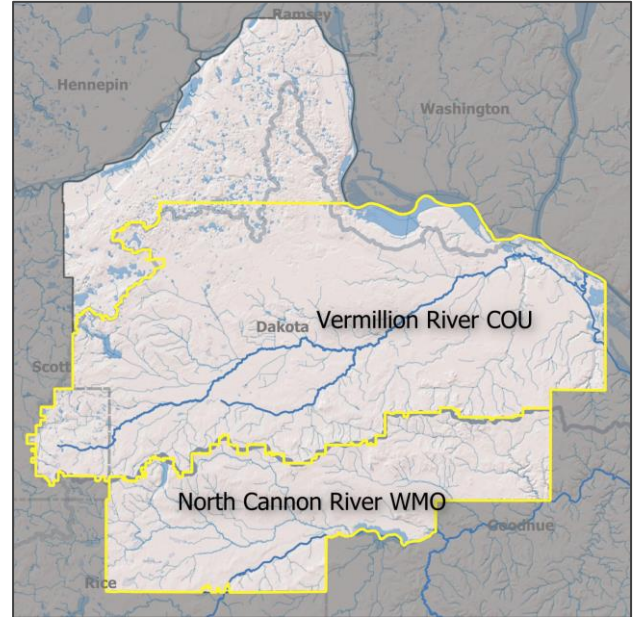


Figure 1: Map of proposed instance and management areas

The screenshot shows a web interface titled 'My Fields' with a blue header and a white background. There is a button 'Add New Planting' in the top right. Below the header, the text 'Current Plantings' is displayed. A green bar highlights the management area 'Little Rock Creek', with 'Status' and 'History' buttons to its right. Below this, a table lists plantings with columns for Field, Crop, Planting Date, and Maturity. The first row shows 'SW 40 Beans' (Edible Beans) planted on 3/15/21, which is 35% mature. The second row shows 'NE 40' (Corn) planted on 4/1/21, which is 13% mature. Each row has a gear icon and a document icon to its right.

Field	Crop	Planting Date	Maturity		
SW 40 Beans	Edible Beans	3/15/21	35%	⚙️	📄
NE 40	Corn	4/1/21	13%	⚙️	📄

Figure 2: Example grouping of fields by management area.



Figure 3: Stream monitoring data in IMA

SUPPORT PEAS AND SWEET CORN CROP OPTIONS

The IMA application currently supports *Corn*, *Soybeans*, *Potatoes*, *Edible Beans* and *Alfalfa* crop types. RESPEC will perform necessary changes to incorporate *Sweet Corn* and *Peas* into the application.

Our staff scientist who assisted in development of the original crop inputs for IMA will work to research and gather parameters (coefficients and minimum soil moisture by maturity) and develop a calculation prototype to validate expected results. With this, the IMA application will have these parameters added to the system and the crops will be set up for use in the web application. QA/QC will be run on sample fields to validate system results prior to release. The QA/QC can be done in conjunction with Dakota SWCD staff and using test data as desired.

SUMMARY DASHBOARD

Per the request for services, a tracking summary dashboard will be developed to summarize the following:

- Number of Users
- Number of Mapped Fields
- Water Savings (*estimation process to be developed by SWCD and partners*)
- Nitrate Leaching Events Prevented (*estimation process to be developed by SWCD and partners*)

RESPEC will work with the SWCD to prototype a summary layout and how it would be incorporated into the IMA. With an agreement on this, RESPEC will code changes into IMA and develop the database calculations to summarize annual Dakota SWCD IMA use. Optionally, RESPEC staff has used Tableau software to build public facing dashboards and could explore using this as part of the prototyping of the summary layout.



RESPEC

MAINTENANCE

Based on the limited number of instances supporting the system, the annual maintenance is set to cover hosting, bug fixes and system monitoring and upkeep. If future use increases, this amount could be decreased proportionally. In addition, with the potential push to fund a statewide instance of IMA, annual maintenance could in the future be covered by other sources. RESPEC will adapt to future changes and update maintenance fees as appropriate.

This proposal has one year of maintenance priced to support the Dakota SWCD instance of the IMA for the 2022 growing season from March 1, 2022 – October 31, 2022 and includes the continuity of operations and supporting the SWCD designated staff M-F 8AM-5PM.

BUDGET³

Feature	Description	Feature Cost
2021 One-Time Base Instance Setup - \$7,458		
Geographic Expansion: Dakota County, Vermillion River Watershed & Cannon River Watershed Soils and Weather Station Onboarding	<ul style="list-style-type: none"> Download and process necessary data for the application including SSURGO soils. Update data model to support additional weather station, add to daily weather processing (using RESPEC's LoggerNet to access Minnesota Department of Agriculture Hastings, Minnesota weather station) Application and database updates for new instance including Dakota SWCD logo and adding the instance to the IMA site (<a href="http://ima.respec.com/<instance_name>">http://ima.respec.com/<instance_name>) 	\$6,298
Staff Training	<ul style="list-style-type: none"> Prepare for and conduct a 4-hour training session in person or virtual as desired. 	\$1,160
2021 One-Time Required New Components - \$20,768		
¹ Link to Resources: Management Area Additions	<ul style="list-style-type: none"> Set up a Vermillion River and Cannon River Watershed management areas (<i>similar to Little Rock Creek in Benton County</i>). Fields drawn into the application would be automatically associated with the appropriate management area within the instance. 	\$2,552
Add Crops: Peas and Sweet Corn	<ul style="list-style-type: none"> Update the application to support Peas and Sweet Corn. This task accounts for researching the best available coefficients and rooting depth by crop maturity for each new crop, developing external prototypes of irrigation schedules, updating the application, and performing quality control checks between the application and prototyped calculations 	\$7,612
Tracking: Create Summary Dashboard for user counts, mapped fields, aggregated benefits ²	<ul style="list-style-type: none"> Prototype and develop the user interface dashboard to display summary data. Develop summaries for dashboard display. Optionally build out a Tableau dashboard (~5K more plus licensing) 	\$10,604
2022 Growing Season Maintenance - \$6,000		
Maintenance	<ul style="list-style-type: none"> Annual maintenance to include server hosting, continuity of operations and provide support to the SWCD for technical issues and resolve programming bugs via standard helpdesk hours of M-F 8AM-5PM. With a scheduled rollout for the 2022 growing season, this covers maintenance from March 1 through October 31 2022. 	\$6,000

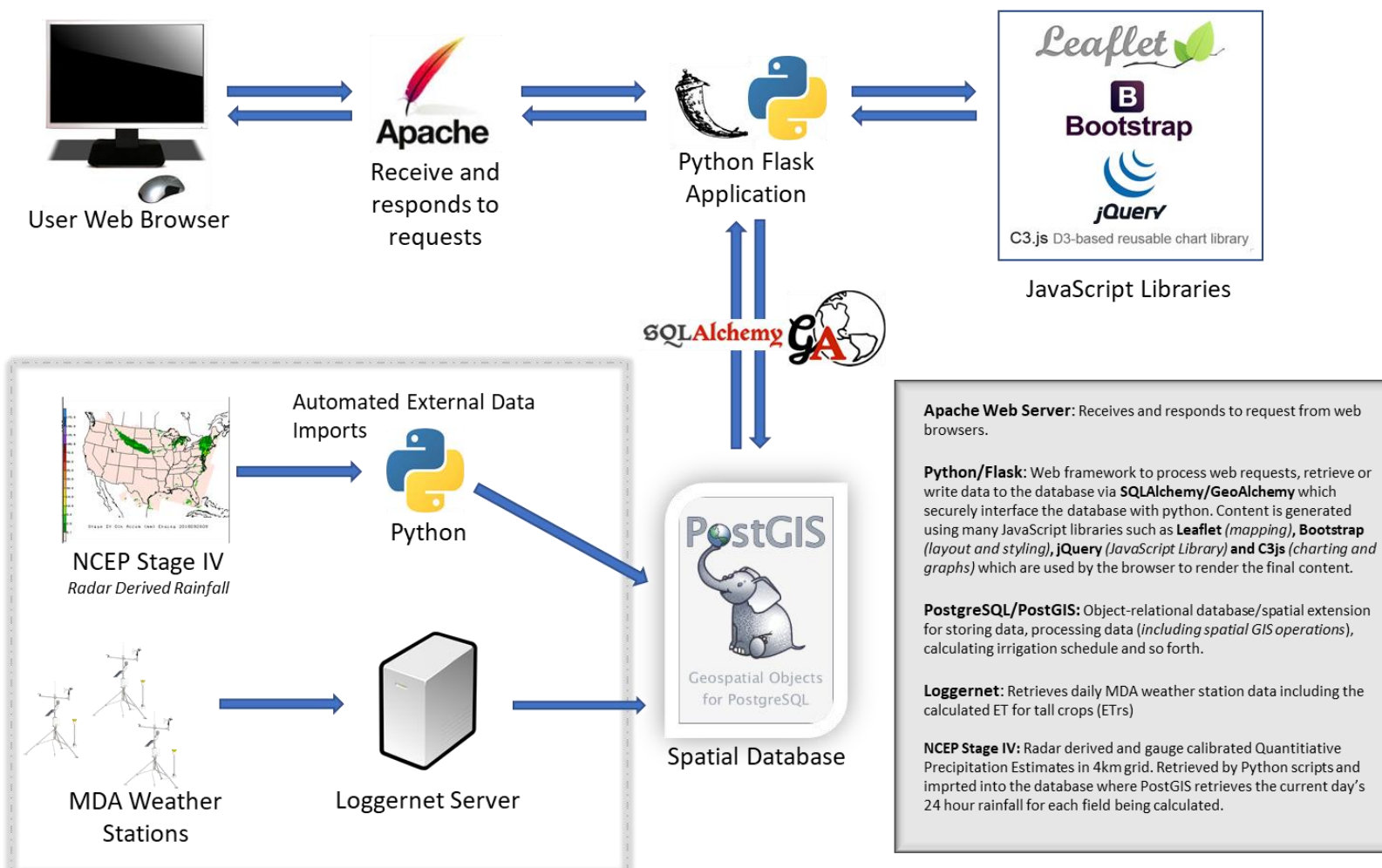
¹ See figure 1 in proposal for a map of management areas to be developed.

² Aggregated benefit for reduced nitrogen leaching and water savings to be based on an equation/calculation provided by Dakota SWCD and/or its partners.

³ This budget reflects a period of performance to be from contracting in June 2021 – December 31, 2021 for base instance setup and new components. The period of performance for maintenance is the 2022 growing season from March 1, 2022 – October 31, 2022 (based on irrigation season and Minnesota Department of Agriculture weather station availability). As desired, these tasks can be contracted together with clear period of performance or separately.

APPENDIX A

Irrigation Scheduler Technology Stack



Apache Web Server: Receives and responds to request from web browsers.

Python/Flask: Web framework to process web requests, retrieve or write data to the database via **SQLAlchemy/GeoAlchemy** which securely interface the database with python. Content is generated using many JavaScript libraries such as **Leaflet** (mapping), **Bootstrap** (layout and styling), **jQuery** (JavaScript Library) and **C3js** (charting and graphs) which are used by the browser to render the final content.

PostgreSQL/PostGIS: Object-relational database/spatial extension for storing data, processing data (including spatial GIS operations), calculating irrigation schedule and so forth.

Loggernet: Retrieves daily MDA weather station data including the calculated ET for tall crops (ETrs)

NCEP Stage IV: Radar derived and gauge calibrated Quantitative Precipitation Estimates in 4km grid. Retrieved by Python scripts and imported into the database where PostGIS retrieves the current day's 24 hour rainfall for each field being calculated.

DAKOTA COUNTY SOIL AND WATER CONSERVATION DISTRICT

Regular Agenda

Request for Board Action

Roll Call Vote

Meeting Date: 6/10/2021

Prepared by: Ashley Gallagher

PURPOSE/ACTION REQUESTED:

Authorize execution of joint powers agreement with the Minnesota Department of Agriculture (MDA) to assist with implementing the Nitrogen Fertilizer Management Plan within Hastings Drinking Water Supply Management Area.

SUMMARY:

The SWCD has had an agreement with MDA since 2017 for work related to the State of Minnesota Nitrogen Fertilizer Management Plan and the Groundwater Protection Rule which includes coordination of the Local Advisory Team (LAT). The current agreement with the MDA expires June 30, 2021.

The new agreement would start July 1, 2021 and expire June 30, 2023 with a not-to-exceed amount of \$7,936.00. This would allow for the SWCD to continue providing assistance to the MDA and charge for staff time.

EXPLANATION OF FISCAL/FTE IMPACT:

Revenues from the agreement would be added to the 2021, 2022 and 2023 staff work plans.

Supporting Documents:

MDA Joint Powers Agreement

Previous Board Action:

None



State of Minnesota Joint Powers Agreement

SWIFT Contract Number: 194118
PO Number: _____

This Agreement is between the State of **Minnesota, acting through its Commissioner of Agriculture (“State”)** and **Dakota County Soil and Water Conservation District (“Governmental Unit”)**.

Recitals

Under Minnesota Statutes § 471.59, subd. 10, the State is empowered to engage such assistance as deemed necessary. The State is in need of **a partner to support the implementation of the Nitrogen Fertilizer Management Plan (NFMP) and Groundwater Protection Rule (GPR) within the Hastings Drinking Water Supply Management Area (DWSMA).**

Agreement

1. Term of Agreement

- 1.1 Effective Date: **July 1, 2021**, or the date the State obtains all required signatures under Minn. Stat. § 16C.05, subd. 2, whichever is later.
- 1.2 Expiration Date: **June 30, 2023**, or until all obligations have been satisfactorily fulfilled, whichever occurs first.

2. Agreement between the Parties

Governmental Unit will administer a project to provide nitrogen fertilizer outreach and education activities that are aimed at affirming crop producers in the Hastings Drinking Water Supply Management Area (DWSMA) using the nitrogen Best Management Practices (BMPs) created by the University of Minnesota and adopted by the Minnesota Department of Agriculture (MDA). The Governmental Unit will perform these duties in accordance with the duties described and specified in Exhibit A Work Plan, which is attached and incorporated into this agreement.

3. Payment

Governmental Unit will be paid by the State of Minnesota after the Governmental Unit’s presentation of itemize invoices for services performed and the supporting documentation for the invoices and written acceptance of such services by the State’s Authorized Representative or the State’s Authorize Project Manager pursuant to paragraph 4. Invoices shall be submitted timely and in accordance with **Exhibit B Budget which is attached and incorporated into this agreement.**

Invoices for payment will be sent by the due dates listed in Exhibit B.

Electronic format to: MDA.Accounts-Payable@state.mn.us

OR

Hardcopy to: Minnesota Department of Agriculture
Finance and Budget Division, Accounts Payable
625 Robert St N
Saint Paul, MN 55155

Reports should be submitted by the due dates listed in Exhibit B.

Electronic format to: MDA.PFMD.Contracts@state.mn.us

OR

Hardcopy to: Minnesota Department of Agriculture
PFMD, Contracts Coordinator
625 Robert St N
Saint Paul, MN 55155

The total obligation of the State under this agreement will not exceed **Seven Thousand Nine Hundred Thirty-six Dollars and 00/100 (\$ 7,936.00)**.

4. Authorized Representatives

The State's Authorized Representative responsible for administration and supervision of this agreement is **Larry Gunderson, Fertilizer Management Unit 1 Supervisor, Minnesota Department of Agriculture, Pesticide and Fertilizer Management Division, 625 Robert St N, St. Paul, MN 55155; Phone: 651-201-6168; Email: larry.gunderson@state.mn.us**, or his/her successor, who is authorized to accept the services provided under this agreement.

The State's Authorized Project Manager responsible for communications and daily management is **Travis Hirman, Soil Scientist 2, Fertilizer Management Unit 1, Minnesota Department of Agriculture, Pesticide and Fertilizer Management Division, 625 Robert St N, St. Paul, MN 55155; Phone: 651-201-6566; Email: travis.hirman@state.mn.us**, or his/her successor, who is authorized to accept the services provided under this agreement.

The Governmental Unit's Authorized Representative is **Brian Watson, District Manager, Dakota County Soil and Water Conservation District, 4100 220th St W, Suite 102, Farmington, MN 55024; Phone: 651-480-7777**, or his/her successor. If the Authorized Representative changes at any time during this agreement, the Governmental Unit must immediately notify the State.

5. Assignment, Amendments, Waiver, and Contract Complete

5.1 Assignment. The Governmental Unit may neither assign nor transfer any rights or obligations under this Agreement without the prior consent of the State and a fully executed assignment agreement, executed and approved by the authorized parties or their successors.

5.2 Amendments. Any amendment to this Agreement must be in writing and will not be effective until it has been executed and approved by the authorized parties or their successors.

5.3 Waiver. If the State fails to enforce any provision of this Agreement, that failure does not waive the provision or its right to enforce it.

5.4 Contract Complete. This Agreement contains all negotiations and agreements between the State and the Governmental Unit. No other understanding regarding this Agreement, whether written or oral, may be used to bind either party.

6. Indemnification

6.1 In the performance of this Agreement, the Indemnifying Party must indemnify, save, and hold harmless the State, its agents, and employees, from any claims or causes of action, including attorney's fees incurred by the State, to the extent caused by Indemnifying Party's:

- Intentional, willful, or negligent acts or omissions; or
- Actions that give rise to strict liability; or
- Breach of contract or warranty.

The Indemnifying Party is defined to include the Governmental Unit, the Governmental Unit's reseller, any third party that has a business relationship with the Governmental Unit, or Governmental Unit's agents or employees, and to the fullest extent permitted by law. The indemnification obligations of this section do not apply in the event the claim or cause of action is the result of the State's sole negligence. This clause will not be construed to bar any legal remedies the Indemnifying Party may have for the State's failure to fulfill its obligation under this Agreement.

6.2 Nothing within this Agreement, whether express or implied, shall be deemed to create an obligation on the part of the State to indemnify, defend, hold harmless or release the Indemnifying Party. This shall extend to all agreements related to the subject matter of this Contract, and to all terms subsequently added, without regard to order of precedence.

7. State Audits

Under Minn. Stat. § 16C.05, subd. 5, the Governmental Unit's books, records, documents, and accounting procedures and practices relevant to this Agreement are subject to examination by the State, the State Auditor, or Legislative Auditor, as appropriate, for a minimum of six years from the expiration or termination of this Agreement.

8. Government Data Practices

The Governmental Unit and State must comply with the Minnesota Government Data Practices Act, Minn. Stat. Ch. 13, (or, if the State contracting party is part of the Judicial Branch, with the Rules of Public Access to Records of the Judicial Branch promulgated by the Minnesota Supreme Court as the same may be amended from time to time) as it applies to all data provided by the State under this Agreement, and as it applies to all data created, collected, received, stored, used, maintained, or disseminated by the Governmental Unit under this Contract. The civil remedies of Minn. Stat. § 13.08 apply to the release of the data governed by the Minnesota Government Practices Act, Minn. Stat. Ch. 13, by either the Governmental Unit or the State.

If the Governmental Unit receives a request to release the data referred to in this clause, the Governmental Unit must immediately notify and consult with the State's Authorized Representative as to how the Governmental Unit should respond to the request. The Governmental Unit's response to the request shall comply with applicable law.

9. Venue

Venue for all legal proceedings out of this Agreement, or its breach, must be in the appropriate state or federal court with competent jurisdiction in Ramsey County, Minnesota.

10. Termination

- 10.1 Termination. The State or the Governmental Unit may terminate this agreement at any time, with or without cause, upon 30 days' written notice to the other party.
- 10.2 Termination for Insufficient Funding. The State may immediately terminate this Agreement if it does not obtain funding from the Minnesota Legislature, or other funding source; or if funding cannot be continued at a level sufficient to allow for the payment of the services covered here. Termination must be by written or fax notice to the Governmental Unit. The State is not obligated to pay for any services that are provided after notice and effective date of termination. However, the Governmental Unit will be entitled to payment, determined on a pro rata basis, for services satisfactorily performed to the extent that funds are available. The State will not be assessed any penalty if the agreement is terminated because of the decision of the Minnesota Legislature, or other funding source, not to appropriate funds. The State must provide the Governmental Unit notice of the lack of funding within a reasonable time of the State's receiving that notice.

11. E-Verify Certification (in accordance with Minn. Stat. § 16C.075)

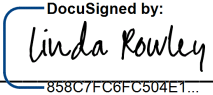
For services valued in excess of \$50,000, the Governmental Unit certifies that as of the date of services performed on behalf of the State, Governmental Unit and all its subcontractors will have implemented or be in the process of implementing the federal E-Verify Program for all newly hired employees in the United States who will perform work on behalf of the State. The Governmental Unit is responsible for collecting all subcontractor certifications and may do so utilizing the E-Verify Subcontractor Certification Form available at <http://www.mmd.admin.state.mn.us/doc/EVerifySubCertForm.doc>. All subcontractor certifications must be kept on file with Governmental Unit and made available to the State upon request.

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1. State Encumbrance Verification

Individual certifies that funds have been encumbered as required by Minn. Stat. §§ 16A.15 and 16C.05

Print Name: Linda Rowley

Signature:  858C7FC6FC504E1...

Title: Department Buyer

Date: 5/19/2021

SWIFT Contract No. 194118

This is being signed under Admin Policy 21-01 exception
PO No. for the end of a biennium. The encumbrance will be
made after budgets are loaded but no later than 07/31
in accordance with the policy.

2. Governmental Unit

Print Name: Brian Watson

Signature: _____

Title: District Manager

Date: _____

3. State Agency

With delegated authority

Print Name: _____

Signature: _____

Title: _____

Date: _____

4. Commissioner of Administration

As delegated to The Office of State Procurement

Print Name: _____

Signature: _____

Title: _____

Date: _____

Admin ID: _____

**Dakota County Soil and Water Conservation District Exhibit A Work Plan
Implementing the Nitrogen Fertilizer Management Plan (NFMP) in
The Hastings Drinking Water Supply Management Area**

Dakota County Soil and Water Conservation District (SWCD)

Brian Watson, District Manager
4100 220th St West, Suite 102
Farmington, MN 55024
651-480-7777

Minnesota Department of Agriculture (MDA)

Travis Hirman, Project Manager
625 Robert Street North
St. Paul, MN 55155-2538
651-201-6566

Dates:

Beginning: **July 1, 2021** (or the date the State obtains all required signatures)
End: **June 30, 2023** (or until all obligations have been satisfactorily fulfilled, whichever occurs first).

Quarterly reports and invoices are due in accordance with the schedule listed below:

Report 1: FY22 Quarter 1: October 30,2021
Report 2: FY22 Quarter 2: January 30, 2022
Report 3: FY22 Quarter 3: April 30, 2022
Report 4: FY22 Quarter 4: July 30, 2022
Report 5: FY23 Quarter 1: October 30,2022
Report 6: FY23 Quarter 2: January 30, 2023
Report 7: FY23 Quarter 3: April 30, 2023
Report 8: FY23 Quarter 4: July 30, 2023

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Objective:

There is one main objective of this Joint Powers Agreement (JPA) between the Minnesota Department of Agriculture (MDA) and the Dakota Soil and Water Conservation District (SWCD). This objective is to support the implementation of the Nitrogen Fertilizer Management Plan (NFMP) and Groundwater Protection Rule (GPR) within the project area defined. The goal of the NFMP and GPR is to protect and improve the quality of groundwater. To accomplish this the MDA needs assistance identifying nitrogen fertilizer best management practices (BMPs) and alternative management tools (AMTs) that can protect groundwater in this area as well as promoting the implementation of these BMPs and AMTs in targeted vulnerable cropland acres to protect groundwater.

Background:

While the MDA is the state's lead agency in responding to groundwater concerns related to commercial nitrogen fertilizer use, we recognize that close partnership with county-level agencies is critical in this effort. The Nitrogen Fertilizer Management Plan (NFMP) and associated Ground Water Protection Rule (GPR) are the state's blueprint for preventing or minimizing impacts of nitrogen fertilizer on groundwater. These documents outline a process to respond in areas with elevated nitrate levels in groundwater. County-based agencies, such as soil and water conservation districts, have established relationships and trust with area crop producers through their everyday activities and the programs they administer. Those established relationships will be key to implementing the NFMP and GPR and engaging farmers, agronomists, crop advisors, local government and other local stakeholders who make commercial fertilizer use decisions across the vulnerable acres identified.

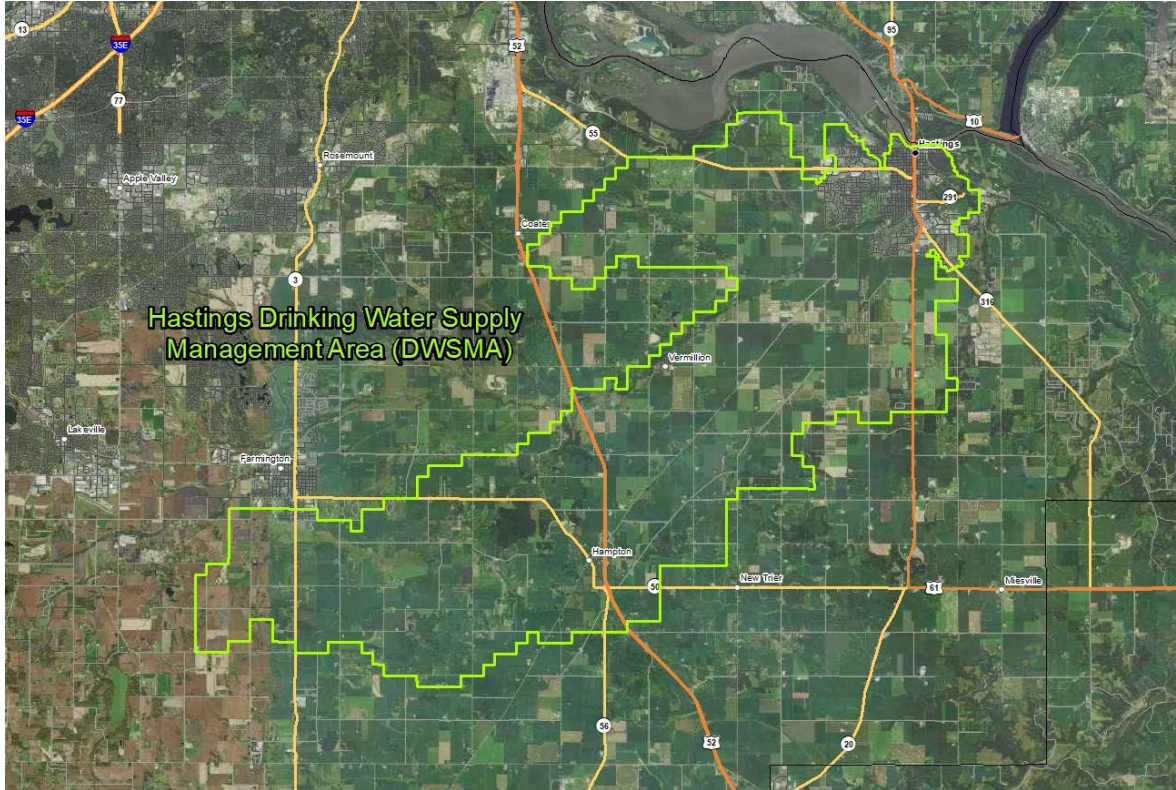
Elevated levels of nitrate in drinking water can cause serious health concerns for infants drinking formula made with this water. The Minnesota Department of Health's Health Risk Limit (HRL) for nitrate in drinking water is 10 mg/L. Although nitrate is a common contaminant across Minnesota, it is more common in areas of the state with vulnerable aquifers (shallow aquifers below sandy soils, karst or limestone deposits below row-crop agriculture).

The Groundwater Protection Act of 1989 (Minnesota Statutes, section 103H) directed MDA to develop groundwater protection goals, enhanced regulatory authority for fertilizer practices within the MDA, and called for the creation of the NFMP. The original NFMP was written in 1990 and revised in 2015. The revised NFMP provides guidance on how to address concerns related to commercial nitrogen fertilizer use in areas with groundwater vulnerable to contamination. Based on the NFMP, the GPR was developed and approved in June 2019.

The GPR contains two parts. Part 1 restricts the use of commercial nitrogen fertilizer in the fall and on frozen soils in areas with vulnerable groundwater. Part 2 responds to public water supply wells with elevated nitrate levels. Under part 2 vulnerable areas in drinking water supply management areas (DWSMA) where groundwater recharges the public water supply are designated at mitigation levels depending on the nitrate concentrations found in the public wells. A level 1 DWSMA is designated when the nitrate-nitrogen concentrations in the public well(s) has been greater than or equal to 5.4 mg/L, but less than 8.0 mg/L at any point in the previous ten years. A level 2 DWSMA is designated when nitrate-nitrogen concentrations in the public well(s) has been greater than or equal to 8.0 mg/L at any point in the previous ten years OR is projected to exceed the health risk limit in the next ten years. In level 2 DWSMAs a local advisory team (LAT) will be formed to review and advise the MDA on appropriate practices or requirements to reduce nitrate in the public water supply.

Project Area:

The project area for this JPA is the Hastings Drinking Water Supply Management Area (DWSMA), which was designated at level 2 on January 15, 2020.



The primary focus for this contract will be NFMP and GPR implementation support within the Hastings DWSMA, where a LAT has been formed, and implementation of identified BMPs and AMTs are especially critical to protect these public water supplies. In these areas, nitrogen fertilizer management outreach and education activities will be focused to ensure crop producers in these DWSMAs are aware of the practices that are needed to protect groundwater. In addition to this DWSMA, supplemental outreach and education may extend to surrounding areas in Dakota County, particularly where fall nitrogen use restrictions are in place under part 1 of the GPR.

Project Partners:

Organization name	Role	Contact
<i>Dakota County Soil and Water Conservation District</i>	<i>Administrator</i>	<i>Brian Watson District Manager Brian.Watson@co.dakota.mn.us 651-480-7777</i>
<i>University of Minnesota Extension</i>	<i>Project Support</i>	<i>Greg Klinger U of M Extension Educator gklinger@umn.edu 507-536-6300</i>

Project Activities:

Activities planned to meet the objectives include:

In coordination with local MDA staff, form LATs in the level 2 mitigation DWSMAs consisting of people who are from the area including farmers and their crop advisors/consultants, local fertilizer dealer staff, representatives for the public water supply system, government or university staff who can provide technical or financial support, and the MDA. The majority of these members must be local farmers and their crop advisors/consultants.

- 1) Provide administrative support to hold LAT meetings.
 - a. LAT members including farmers, agronomists, crop advisors, and owners of row crop production land that make fertilizer use decisions within the DWSMA will be participating at LAT meetings. These members play a critical role in helping develop and implement appropriate activities to address elevated nitrate in their groundwater because they control the land use. They will provide guidance to the MDA on current nitrogen management practices in place, nitrogen BMPs and AMTs that can further protect groundwater in the DWSMA, and the most appropriate methods to share this information with all ag stakeholders within the DWSMA.
- 2) Present to the LAT on local grants, projects, or programs supporting the study or implementation of nitrogen BMPs and/or AMTs whenever appropriate.
- 3) In coordination with local MDA staff, work with LAT members to determine the most appropriate list of nitrogen BMPs to protect groundwater within the DWSMA. Where possible, work with LAT members and DWSMA producers to consider AMTs that offer additional protection from nitrogen fertilizer loss to groundwater.
- 4) In coordination with local MDA staff and consultation from the LAT, develop a list of nitrogen fertilizer BMPs that the MDA Commissioner can consider for the protection of groundwater within the DWSMA.
- 5) Promote nitrogen fertilizer BMPs and any possible AMTs approved by the MDA Commissioner within the DWSMAs throughout the duration of this contract.
- 6) Whenever possible, consider the MDA endorsed nitrogen fertilizer BMPs and AMTs in other activities, programs, or funding proposals you are a part of during your normal course of work.
- 7) Share progress of the LAT activities with all landowners, operators and their crop advisor/consultants within the DWSMA at least once/year.
 - a. Possible avenues to share progress could include direct mailings, newsletter, magazine, or newspaper articles, web-based materials, social media, presentation to area volunteer organizations, lake associations, local farm organizations, producer field days, local fertilizer dealer meetings or county and township board meetings.

Project Staff Supported: Staff to administer and implement this project will be located in the Dakota County SWCD office. 0.1 FTE (full time equivalent) will be supported by this agreement.

Performance Measures:

The Dakota County local advisory team was formed as a pilot project in December 2017 as a township-based LAT. LAT membership has been changed based on the Hastings DWSMA to coincide with the level 2 DWSMA determination on January 15, 2020. The Hastings DWSMA LAT has met seven times as of February 2021.

- 1) At least 1 LAT meeting should take place in in the Hastings level 2 DWSMA in 2021. Before the end of this two-year agreement at least 3 LAT meetings are held for the DWSMA.
- 2) A list of recommended nitrogen fertilizer BMPs and possible AMTs specific to the DWSMA is provided to the MDA for the DWSMA.
- 3) The final nitrogen BMPs selected by the Commissioner of Agriculture are promoted in the DWSMA via best methods suggested by LAT members.
 - a. Progress of LAT activities is shared with all landowners, operators, and their crop advisor/consultants within the DWSMA at least once/year.
- 4) Presentation on NFMP/GPR implementation underway made at least once per year to the county SWCD board, DWSMA public water supplier, and county commissioner board.

Deliverables:

Roles/tasks for SWCD		Estimated Hours (total)	Timeline Target Dates
#1 Identify potential advisory team members Note: Page 76 of the NFMP manual lists the types of persons who should comprise the LAT.	<ul style="list-style-type: none"> • The SWCD will help maintain the roster of farmers on the local advisory team (LAT). • The MDA will follow-up with those individuals and share more information regarding the LAT and NFMP. MDA will poll individuals for time-of-day meeting preferences and relay to SWCD. • The SWCD and MDA will keep a few spots open on the LAT for late coming interested individuals. 	5	
#2 Assist in meeting organization	<ul style="list-style-type: none"> • The SWCD will schedule LAT meetings and arrange for the meeting space, mail invitation letters, and procure provisions for meeting attendants • One meeting may be a public meeting. • The SWCD will have one staff (sometimes 2) at each LAT meeting. For planning purposes allowing time for meeting prep and clean-up, meeting time may be closer to 3 hours for MDA and SWCD staff. • The SWCD will take minutes (notes) at the LAT meetings. 	24	3 meetings before the end of contract

#3 Assist with BMP list development	<ul style="list-style-type: none"> The SWCD will facilitate the development of an appropriate list of BMPs for the DWSMA guided by the LAT for MDA consideration. 	15	
#4 Assist with NFMP/GPR education and outreach activities	<ul style="list-style-type: none"> The SWCD will maintain a mailing list of all owners and operators operating in identified DWSMA(s). The SWCD will assist with the distribution of NFMP/GPR education materials to landowners in the DWSMA via associated mailings, newsletters, publications, and other media. The SWCD will assist with distribution of NFMP/GPR mailings. Potential mailings would be meeting-related materials to landowners and operators, as well as mailings to all residents within the DWSMA. The SWCD will likely receive inquiries about the NFMP and GPR Implementation underway. Phone calls and in-person conversations are expected to take staff time away from their usual tasks. An estimate of 1-3 hours/week could be budgeted for this task. The SWCD will distribute NFMP/GPR information to local fertilizers dealerships, co-ops, agronomists, and ag advisors. Promotion including radio announcements when available, newspaper articles, and educational meetings to explain the NFMP, GPR, nitrogen BMPs, and AMTs recommended. 	90	Duration of JPA Periodically unless interval is listed
#6 Provide local data and expertise	<ul style="list-style-type: none"> The SWCD will share local data on current or past project work relevant to the NFMP and GPR goals. This can take place both informally with local MDA field staff and more formally during LAT meetings. The U of M will provide expertise on nitrogen BMPs and AMTs appropriate in identified DWSMAs. The SWCD may enlist the NRCS, BWSR, or other funding sources to promote perennial and annual crops within the DWSMAs targeted in this contract. 	Included	Duration of JPA
TOTAL HOURS		134	

Budget: A detailed project budget summary is attached as Exhibit B.

Dakota SWCD
Deliverable Schedule and Budget

Exhibit B

**Implementing the Nitrogen Fertilizer Management Plan (NFMP) in
The Hastings Drinking Water Supply Management Area**

Objectives - See Exhibit A

Please Note: The Governmental Unit has the discretion to transfer up to 10% of the funds between categories without approval the State's Authorized Representative or the State's Authorized Project Manager. However the Governmental Unit shall notify the State's Authorized Project Manager as soon as practicable of the transfer. The State's Authorized Representative or the State's Authorized Project Manager must approve transfers greater than 10%.

Billing Cycle State Fiscal Year	Calendar Year	General Description of Deliverables	Total	Salary and Fringe	Meeting Planning and Assistance; Provision	Public Outreach/Printing/ Postage/Mailings
Projected Project Start Date is July 1, 2021						
Quarter 1, 2022	July-Sept 2021	>Coordinate NFMP meeting arrangements, attend meeting, take notes >NFMP/GPR Implementation promotion and outreach >Assist with development of BMP list *Quarterly Report and Invoice Due October 30, 2021	1,102	927	125	50
Quarter 2, 2022	Oct-Dec 2021	>NFMP/GPR Implementation promotion and outreach >Distribute BMP list through various media outlets *Quarterly Report and Invoice Due January 30,2022	927	927		
Quarter 3, 2022	Jan-Mar 2021	>Coordinate NFMP meeting arrangements, attend meeting, take notes >NFMP/GPR Implementation promotion and outreach *Quarterly Report and Invoice Due January 30,2022	1,102	927	125	50
Quarter 4, 2022	Apr-Jun 2021	>NFMP/GPR Implementation promotion and outreach *Quarterly Report and Invoice Due July 30, 2022	927	927		
FY22 Total			4,058	3,708	250	100

Dakota SWCD
Deliverable Schedule and Budget

Exhibit B

**Implementing the Nitrogen Fertilizer Management Plan (NFMP) in
The Hastings Drinking Water Supply Management Area**

Objectives - See Exhibit A

Please Note: The Governmental Unit has the discretion to transfer up to 10% of the funds between categories without approval the State's Authorized Representative or the State's Authorized Project Manager. However the Governmental Unit shall notify the State's Authorized Project Manager as soon as practicable of the transfer. The State's Authorized Representative or the State's Authorized Project Manager must approve transfers greater than 10%.

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Quarter 3, 2023	Jan-Mar 2023	>NFMP/GPR Implementation promotion and outreach *Quarterly Report and Invoice Due January 30,2023	927	927		
Quarter 4, 2023	Apr-Jun 2023	>NFMP/GPR Implementation promotion and outreach *Quarterly Report and Invoice Due July 30, 2023	922	922		
FY23 Total			3,878	3,703	125	50
All Years Total Project			Total Project	7,936	7,411	375
					375	150

DAKOTA COUNTY SOIL AND WATER CONSERVATION DISTRICT**Regular Agenda**

Request for Board Action

Roll Call Vote

Meeting Date: 6/10/2021

Prepared by: Curt Coudron

PURPOSE/ACTION REQUESTED:

Modify Priority Location sites identified in the Trout Brook sub-watershed Analysis (SWA).

SUMMARY:

In 2016, a sub-watershed analysis (SWA) was completed to identify locations for implementing conservation practices within the Trout Brook watershed. The goal of the SWA was to determine the most cost-effective projects within the watershed and prioritize projects for implementation. The SWA considered project feasibility, estimated construction costs, and pollutant reduction potential for each identified project. For each location that a conservation practice was identified, a cost-benefit ratio was calculated, and projects were ranked with the most cost-effective sites receiving the highest priority.

Since the completion of the SWA, two Clean Water Fund grants have been received to implement the projects that were most cost effective within the Trout Brook Watershed of the Cannon River. The first grant (Phase 1), which has been completed and closed, specifically targeted practices with an annualized sediment reduction cost of less than \$10 per ton.

Dakota County SWCD Cost Share Policy allows the District Board to designate "Priority Locations" that would provide up to 90% cost share for projects. This increased cost share allocation creates better incentives for the most beneficial projects. In 2017, the District Board designated projects with an annualized sediment reduction cost of less than \$10 per ton be identified as Priority Locations to align with the first grant.

The Phase II grant, which is currently being implemented, specifically targets practices with an annualized sediment reduction cost of less than \$30 per ton. Staff recommends modifying the Priority Locations to include projects with an annualized sediment reduction cost of less than \$30 per ton to align with the Phase 2 grant.

Projects that exceed \$30/ton/year of sediment reduction would still be eligible for cost share allocations of up to 75% of the project cost.

EXPLANATION OF FISCAL/FTE IMPACT:

Cost share funds for projects are available through existing grants and agreements.

Supporting Documents:

None

Previous Board Action:

Motion 17.030 on 3/2/17

Designate Priority Locations within Trout Brook Watershed