RED LAKE WATERSHED DISTRICT
January 24, 2019
Agenda
9:00 a.m.

9:00 a.m.	Call to Order	Action
	Review and approve agenda	Action
	Requests to appear	Information
	January 10, 2019 Minutes	Action
	Financial Report dated January 23, 2019	Action
	Conflict of Interest Policy Review	Info./Action
	Thief River Falls West Side FDR Project, RLWD Project No. 178	Information
	Pine Lake Project Team	Information
	Challenger Ditch Re-Alignment & Modification, RLWD Proj. No. 122A	Information
9:30 a.m.	Ditch 17, RLWD Project No. 179- Preliminary Survey Report	Info./Action
10:00 a.m.	Ditch 16, RLWD Project No. 177	
	Detailed Engineers Report	Info/Action
	Viewers Report	Info./Action
	Red Lake River 1W1P, RLWD Project No. 149-Amendment	Information
	Thief River 1W1P, RLWD Proj. No. 149A-Memorandum of Agreement	Info./Action
	MnDNR-Well Interference Correspondence	Information
	Permits: No. 19001-19004	Action
	Board Room Technology Update	Information
	Office Technology Update	Info./Action
	Rob Sip, RRWMB	Information
	MAWD Leg. Reception & Day at the Capitol-February 20-21, 2019	Information
	RRWMB March Conference-March 20-21, 2019	Information

Administrators Update	Information
Legal Counsel Update	Information
Managers' updates	Information
Adjourn	Action

UPCOMING MEETINGS

February 14, 2019	RLWD Board Meeting, 9:00 a.m.
February 14, 2019	Drainage and Water Conference-Rinke Noonan
February 18, 2019	Office Closed-President's Day
February 19, 2019	RRWMB, RLWD Office, 9:30 a.m.
February 20-21, 2019	MAWD Legislative Reception & Day at the Capitol
February 28, 2019	RLWD Board Meeting, 9:00 a.m.
March 20-21, 2019	Joint Annual RRWMB & FDRWG Conference, Moorhead

DRAFT

RED LAKE WATERSHED DISTRICT
Board of Manager's Minutes
January 10, 2019

President Dale M. Nelson called the meeting to order at 9:00 a.m. at the Red Lake Watershed District Office, Thief River Falls, MN.

Present were: Managers Terry Sorenson, Gene Tiedemann, Brian Dwight, Dale M. Nelson, Allan Page, LeRoy Ose and Les Torgerson. Staff Present: Myron Jesme and Tammy Audette and Legal Counsel, Delray Sparby.

The Board reviewed the agenda. A motion was made by Ose, seconded by Tiedemann, and passed by unanimous vote that the Board approve the agenda. Motion carried.

The Board reviewed the December 31, 2018 minutes. Motion by Dwight, seconded by Torgerson, to approve the December 31, 2018 Board meeting minutes as presented. Motion carried.

The Board reviewed the Financial Report dated January 9, 2019. Administrator Jesme noted that the description on Check No. 37267, should also include ditch mowing for 2017 and 2018. Manager Nelson requested the payment of $500.00, be approved to Jason Bruggeman, for cleaning/detailing of the District's five vehicles. Motion by Sorenson, seconded by Torgerson, to approve the Financial Report dated January 9, 2019, with the addition of requested payment to Jason Bruggeman in the amount of $500.00. Motion carried.

The Board reviewed the Investment Summary as of January 9, 2019. Staff member Arlene Novak reviewed the quotes received from area banking institutions. Novak recommended that the District invest one 6-month Certificate of Deposit with Unity Bank (CDARS) and deposit the remaining two into the District's checking account. Motion by Ose, seconded by Page, to invest one 6-month Certificate of Deposit with Unity Bank (CDARS) and deposit the remaining two Certificate of Deposits in the District's checking account. Motion carried.

Polk County, Red Lake County and Pennington County confirmed the reappointment of Managers Sorenson, Page, and Nelson, respectively, for an additional 3-year term on the Board.

Election of officers was conducted with President Nelson turning the meeting over to Vice President, Gene Tiedemann.

Manager Tiedemann called for nominations for president. Manager Ose, nominated Dale M. Nelson. Upon calling for further nominations three times, no further nominations were made. Motion by Torgerson, seconded by Sorenson, for nominations to cease and that the secretary cast a unanimous ballot for Dale M. Nelson for president of the Board. Motion carried.

Vice President Tiedemann turned the meeting over to President Nelson to conduct elections for the remaining Board positions.

Nominations were opened for Vice-President. Manager Page nominated Gene Tiedemann. Upon calling for further nominations three times, no further nominations were made. Motion by Page, seconded by Dwight, for nominations to cease, and that the secretary cast a unanimous ballot for Gene Tiedemann for vice-president of the Board. Motion carried.

Nominations were opened for Secretary. Manager Torgerson nominated Terry Sorenson. Upon calling for further nominations three times, no further nominations were made. Motion by Tiedemann, seconded by Ose, for nominations to cease, and that the secretary cast a unanimous ballot for Terry Sorenson for secretary of the Board. Motion carried.

Nominations were opened for Treasurer. Manager Torgerson nominated LeRoy Ose. Upon calling for further nominations three times, no further nominations were made. Motion by Tiedemann, seconded by Dwight, for nominations to cease, and that the secretary cast a unanimous ballot for LeRoy Ose for treasurer of the Board. Motion carried.

President Nelson reviewed the Advisory Board members. It was the consensus of the Board to remove Keith Driscoll, as he has been unable to attend meetings. Discussion was held on extending an invitation to the local SWCD offices, requesting participation on the Advisory Committee. Motion by Ose, seconded by Tiedemann, to approve the Advisory Committee members, with the recommended changes, and extend an invitation to the local SWCD offices. Motion carried.

A motion was made by Ose, seconded by Dwight, and passed by unanimous vote that the regularly scheduled Board meetings be held at 9:00 A.M. at the Red Lake Watershed District Office on the second and fourth Thursdays of each month for 2019.

A motion was made by Sorenson, seconded by Page, that the following institutions be designated as depositories for the RLWD: Northern State Bank, Border State Bank, American Federal Bank, Unity Bank North-Certificate of Deposit Account Registry Service (CDARS) through Promontory Interfinancial Network, LLC, Ultima Bank, Riverwood Bank-Bemidji, Edward Jones, with the following signatures on the signature cards at the financial institutions: Dale M. Nelson, Gene Tiedemann, LeRoy Ose, Terry Sorenson, Myron Jesme and Arlene Novak. Motion carried.

The position of Delegate and Alternate to the Red River Watershed Management Board (RRWMB) was discussed. Manager Nelson stated that Manager Ose is currently the Delegate and will begin the second year of a 3-year term, with Manager Torgerson as Alternate.

Delegates and Alternate to the Minnesota Association of Watershed Districts were discussed. Motion by Torgerson, seconded by Sorenson, to appoint Managers Ose and Tiedemann as Delegates and Manager Page as an alternate. Motion carried.

The Budget/Salary Committee was discussed by the Board. A motion was made by Ose, seconded by Page, to appoint Managers Dwight, Sorenson and Tiedemann to serve on the Budget/Salary Committee. Motion carried.

The Board discussed representatives on the Grand Marais Creek Joint Powers Board. A motion was made by Torgerson, seconded by Ose, to appoint Managers Nelson, Tiedemann and Page to the Grand Marais Creek Joint Powers Board, with Manager Sorenson as an alternate. Motion carried. Administrator Jesme stated that the By-Laws of the Grand Marais Creek Joint Powers Board stated that a yearly meeting shall be called of the Joint Powers Board members. It was the consensus of the Board, to schedule a Joint Powers Board meeting.

The committees for the JD 2 and JD 72 Joint Ditch Boards were reviewed. Motion by Page, seconded by Ose, to appoint Managers Sorenson and Torgerson to the JD 2 and JD 72 Joint Ditch Boards. Motion carried.

Discussion was held on the appointment of representatives to the Pine Lake Area Project Work Team. Motion by Ose, seconded by Page, to appoint Managers Sorenson and Torgerson as Delegates and Manager Dwight as Alternate to the Pine Lake Area Project Work Team. Motion carried.

Discussion was held on the appointment of representatives to the Four-Legged Lake Project Work Team. Motion by Tiedemann, seconded by Page, to appoint Managers Sorenson and Torgerson as Delegates and Manager Dwight as Alternate to the Four-Legged Lake Project Work Team. Motion carried.

Discussion was held on the appointment of representatives to the Black River Impoundment Project Work Team. Motion by Sorenson, seconded by Dwight, to appoint Managers Nelson and Page as Delegates and Manager Tiedemann as Alternate to the Black River Impoundment Project Work Team. Motion carried.

Discussion was held on the appointment of representatives to the 20% Flood Reduction Committee. Motion by Tiedemann, seconded by Sorenson, to appoint Managers Nelson, Ose and Torgerson to the 20% Flood Reduction Committee. Motion carried.

Discussion was held on the appointment to the Policy Committee and Advisory Committee for the Red Lake River One Watershed One Plan (1W1P). Motion by Sorenson, seconded by Torgerson, to appoint Manager Tiedemann as Delegate and Manager Nelson as Alternate to the Policy Committee and Managers Nelson and Page to the Advisory Committee for the Red Lake River 1W1P. Motion carried.

Discussion was held on the appointment to the Policy Committee and Advisory Committee for the Thief River One Watershed One Plan (1W1P). Motion by Tiedemann, seconded by Page, to appoint Manager Ose as Delegate and Manager Nelson as Alternate to the Policy Committee and Managers Nelson and Dwight to the Advisory Committee for the Thief River 1W1P. Motion carried.

Discussion was held on the appointment of representatives to the Blackduck Lake Structure Joint Powers Board. Motion by Ose, seconded by Tiedemann, to appoint Managers Dwight and Torgerson to the Blackduck Lake Structure Joint Powers Board. Motion carried.

Dillon Nelson, EIT, HDR Engineering Inc., updated the Board on the status of the Thief River Falls Westside FDR Project, RLWD Project No. 178. Nelson stated that the BWSR North Region Committee reviewed the proposed changes to the Red Lake River 1W1P, RLWD Project No. 149, for the potential inclusion of a Water Management District, which will now move on for review and approval to the BWSR State committee on January 23, 2019. Nelson stated that Administrator Jesme and staff from HDR Engineering, Inc., Pennington County, City of Thief River Falls, and MnDOT, have coordination meetings every two weeks to discuss design aspects and stay updated on progress of each of the projects. Recently a meeting was held with Sjoberg's Cable TV regarding a large fiber optic that will need to be shifted. Nelson stated that Phase I of the project, which would consist of repairs to the outlet and construction of the diversion channel will take place this summer/fall, and Phase 2 which would consist of finishing the diversion channel, tie into County Ditch 70 and the City of Thief River Falls storm sewers will be completed in 2020. Discussion was held on land acquisition for right-of-way requirements. It was the consensus of the Board, that Board representatives would be present for discussion on land acquisition.

Engineer Jeff Langan, Houston Engineering, Inc., discussed an agency permitting meeting that was held for the Black River Impoundment, RLWD Project No. 176. Members of the Wetland Conservation Act (WCA) committee requested an impact summary. Langan stated that WCA is currently working on wetland banking on the 100-year fringe of the pool. Administrator Jesme stated that discussion needs to be held with the Sorvig Family, to see if they wish to participate in wetland banking. It was noted that discussion should be held with the RRWMB, to update them on the ability to potentially acquire wetland banking on impoundment projects.

The Board reviewed a Petition from Pennington County for the Re-Alignment and Modification of a Portion of the Existing Drainageway and Outlet of Red Lake Watershed District Project No. 122, commonly referred to as the Challenger Ditch. Discussion was held on appointing Houston Engineering to be prepared to explain the hydraulic capacity with the petitioned changes for the hearing. This will have to be addressed at the hearing as the petition would change the alignment of the Challenger Ditch system. It is also the feeling of the Board and legal counsel that changes do not affect the benefitted area of the project. Motion by Tiedemann, seconded by Ose, to accept the Petition from Pennington County for the Re-Alignment and Modification of a Portion of the Existing Drainageway and Outlet of Red Lake Watershed District Project No. 122, and assign the Petition as Red Lake Watershed District Project No. 122A. Motion carried. Motion by Tiedemann, seconded by Torgerson, to appoint Houston Engineering to provide a preliminary plan for the hearing on the realignment of Red Lake Watershed District Ditch No. 122A. Motion carried. Motion by Sorenson, seconded by Ose, to set a hearing date for the realignment of Red Lake Watershed District No. 122A for February 28, 2019 at 10:00 a.m. at the District office. Motion carried. Pennington County Engineer Mike Flaagan is working on right-of-way with the landowners. It was noted that there will be no cost to the landowners in the benefited area of the project. Manager Nelson requested a meeting with Houston Engineering, Inc. prior to the hearing date to review the information.

Administrator Jesme stated that a meeting with the BWSR North Region Committee was held on January 2, 2019 to review the Amendment to the Red Lake River 1W1P, RLWD Project No. 149. The BWSR North Region Committee recommended that the BWSR Board approve the amendment at the BWSR Board meeting on January 23, 2019.

MAWD dues for 2019 were presented to the Board. Motion by Torgerson, seconded by Tiedemann, and passed unanimously to approve paying $7,500 for the 2019 MAWD dues. Motion carried.

Minnesota Viewers Association dues for 2019 were presented to the Board. Motion by Sorenson, seconded by Page, and passed unanimously to approve paying $200 for the 2019 Minnesota Viewers Association dues. Motion carried.

Legal Counsel Sparby discussed Minnesota State Statute 13D.02 as it pertains to the Minnesota Open Meeting Law requirements. Sparby indicated that appearance by telephone is only allowed if the chief officer of the Board determines an in-person meeting or a meeting conducted through interactive television is not practical or prudent because of a health pandemic or an emergency declared under chapter 12 of the Minnesota Statutes. Sparby indicated that if the statutory requirements were met for attendance by interactive television, that the District could allow attendance of the Board of Managers from a different location, other than the District office. The location would need to be accessible to the public and viewed through interactive television. Manager Dwight stated that he would like to see the District investigate the cost of interactive television should the need ever arise. Manager Torgerson stated that he would like to participate in a committee to look at various options. It was the consensus of the Board to authorize staff to research the cost of interactive television and the cost of a conference call phone pod. Sparby stated that he will do further research on the requirements of meetings using interactive television.

Administrators Update:

- Jesme and Manager Ose will attend the RRWMB meeting on January 15, 2019 at 9:30 a.m. at the EGF City Hall. Followed by the Red River Basin Commission Conference held in Grand Forks.
- A Thief River 1W1P Advisory and Policy Committee meeting was held on January 9, 2019 at the District office. The main objective of the meeting was to review Section 4 to develop a draft which can be submitted to the Policy Committee for approval. The Planning Committee will meet on January 22 to review the revisions, as well as develop estimated costs for the implementation of the plan.
- A Natural Resource Advisory Committee meeting for the Pine Lake Subwatershed project will be held on January 18th at the District office. The goal of the meeting is to cover the RRWMB Technical Paper 13 for alternative analysis for this planning region. TP 13 was a scientific document in part with the Mediation Agreement adopted by various governmental entities as part of the 1998 Mediation Agreement.

- Included in the packet was an August 2018 Water Quality Report.
- The District office will be closed on January 21, 2019 in observance of the Martin Luther King Holiday.

Manager Tiedemann asked the status of the JD 5, RLWD Project No. 102 (Four-Legged Lake) court hearing in March. Administrator Jesme stated that a reply needs to be submitted to the Clearwater County Environmental Services office.

Manager Torgerson suggested that the District invite a trout organization to view the area of the trout stream designation in reference to the Pine Lake subwatershed.

Manager Dwight discussed the need for local involvement regarding individuals leaving garbage on the ice while ice fishing.

Motion by Sorenson, seconded by Page, to adjourn the meeting. Motion carried.

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LeRoy Ose, Secretary

RED LAKE WATERSHED DISTRICT
Financial Report for January 23, 2019

Ck#	Check Issued to:	Description		Amount
online	EFTPS	Withholding for FICA, Medicare, and Federal taxes	$	3,032.69
online	MN Department of Revenue	Withholding taxes		538.02
online	Public Employees Retirement Assn.	PERA contributions		2,094.17
online	EFTPS	Withholding for FICA and Medicare		187.70
online	Minnesota Department of Revenue	Withholding taxes		50.00
37273	Jason Bruggeman	Detail 5 vehicles		500.00
37274	MCI	Long distance telephone expense		111.51
37275	Elroy Aune	Mileage for TR1W1P meeting		52.20
37276	CHS Credit Card	Gas for pickup		44.00
37277	Voided			-
37278	Delta Dental	Dental insurance premium		409.75
37279	Mike Drangstveit	Mileage for TR1W1P meeting		23.20
37280	Farmers Union Oil	Gas for vehicle		30.49
37281	Garden Valley Technologies	Monthly telephone expense and labor		169.25
37282	HDR	*Engineering fees		55,599.00
37283	Hugo's #7	Board meeting supplies		47.62
37284	Marshall County SWCD	Thief River 1W1P grant reimbursement		462.64
37285	Minnesota Energy Resources	Heating expense		149.94
37286	MN Association of Watershed District	2019 dues		7,500.00
37287	Minnesota Viewers Association	2019 dues		200.00
37288	Northwest Service Cooperative	2019 dues		96.00
37289	Pribula Engineering, PLLC	Engineering fees for Proposed RLWD Ditch No. 17		9,540.00
37290	Quill Corporation	3 desk calendars		37.96
37291	Rinke Noonan	Monthly legal services retainer fee		200.00
37292	RMB Environmental Laboratories,Inc.	Civic Engagement expense for Proj. 157E grant		600.00
37293	Pennington SWCD	Thief River 1W1P grant reimbursement		54.52
37294	Skalsky Electric, Inc.	Changed out to LED fixture and worked on CO2 sensor		746.60
37295	Thomson Reuters-West	Minnesota Statutes hardcopy updates		76.00
online	Aflac	Staff paid insurances		613.46
direct	Cardmember Services	Red Lake 1W1P meals		76.75
direct	Al Page	Mileage		60.32
direct	Les Torgerson	Mileage and meals		448.72
	Payroll			
	Check #11578-11586			10,607.24
	Total Checks		$	94,359.75

***HDR**

Pine Lake	3,516.08
Thief River Westside	52,082.92
	55,599.00

Financial Institutions:

Northern State Bank	
Balance as of January 9, 2019	$ 141,673.61
Total Checks Written	(94,359.75)
Receipt #414489 Unity Bank (CDARS) -Interest on matured CD	131.55
Receipt #414490 Transfer in from American Federal Bank	100,000.00
Balance as of January 23, 2019	$ 147,445.41
Border State Bank	
Balance as of November 30, 2018	$ 18,193.75
Receipt #414480 Border State Bank-Monthly interest	7.71
Balance as of December 31, 2018	$ 18,201.46
American Federal Bank-Fosston	
Balance as of January 9 2019	$ 1,924,682.21
Receipt #414486 Clearwater County-Delinquent tax settlement	4,007.99
Receipt #414487 Marshall County-2nd half of riparian aid	1,614.00
Receipt #414488 RRWMB-Reimburse for website hosting and maint.	1,455.92
Receipt #414490 Transfer to Northern State Bank	(100,000.00)
Balance as of January 23, 2019	$ 1,831,760.12

Conflict of Interest Policy

The Board of Managers hereby adopts for themselves and successor Managers the following guidelines in an effort to avoid real and perceived conflicts of interest and to enhance the credibility of the District's actions:

1. All Managers shall comply with MSA Sec. 471.87. No Manager shall have a personal financial interest in any sale, lease, or contract entered into by the Board as it applies to MSA Sec. 471.87.

2. Disclosure. At the beginning of the discussion on any subject, all Managers shall disclose any potential conflict of interest and/or direct pecuniary interest they may have. Examples of matters which should be disclosed by the Managers include:

    a. They own land which may be assessed.
    b. They own land which may benefit or be damaged other than by a direct tax.
    c. They have close relatives who have lands as described in (a) and (b) above, and that said relationship is such that it may affect their judgment.
    d. They have close friends or business associates who have lands as described in (a) and (b) above, and that said relationship is such that it may affect their judgment.
    e. They are a public officer, such as a township officer, which has potential interest or that may be affected by said project.

3. All Managers shall abstain from Board discussion and voting on any resolution that involves a direct pecuniary interest.

4. Each Manager shall use his own judgment in other situations and when in doubt should probably abstain from discussion and voting.

5. To avoid the appearance of wrongdoing, it is suggested that a Manager should remove himself from the Manager's chair and sit in the audience when he wishes to participate in a public discussion, particularly a public meeting on subjects where he may have a direct conflict of interest.

6. To the extent applicable, the Watershed staff is instructed to follow the above guidelines.

Adopted March 11, 1992
Amended April 8, 2010

I have reviewed this policy and agree to abide by these rules.

Signed _____ Dated _____

Viewers Report
Red Lake Watershed District
Drain No. 16

Prepared by:

Roger Beiswenger
Robert Wagner
Jerry A. Bennett

1/23/2019

Definitions:

- Water Management Authority. Means a county or municipality, watershed district formed according to law for the purpose of managing storm, surface, and floodwaters, or with the authority to manage storm, surface and floodwaters.

- Appraisers. Means the persons appointed by the managers to determine and report the benefits and damages arising from the proposed project.

- Benefits. Means improvement of properties in terms of increased value, increased production capacity, and / or increased utility resulting from the construction of the public and private drainage system.

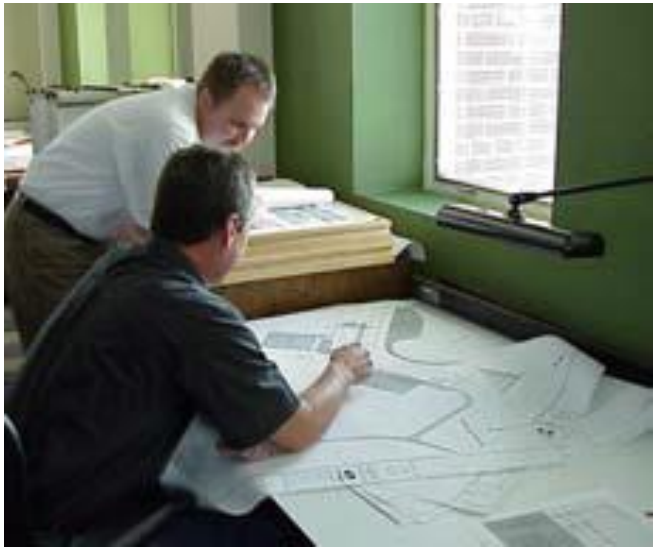
- Damages. Means fair market value of the property required for the channel of an open ditch and the permanent strip of perennial vegetation under section 103.021.

Petition

The petition for the establishment of Red Lake Watershed District Drain16 states:

"The area to be drained by this system has existing drainage, but the existing systems are not functioning well and thus causes a lack of drainage. The petition states that a new drainage ditch is necessary to adequately drain the land and make it reach its full potential for crop production."

Engineers Report



An “Engineers Report” was prepared and filed with the Red Lake Watershed District by Pribula Engineering dated March 9th 2018

Viewers Report

Benefit Damage Statement

APPRAISERS REPORT
RED LAKE WATERSHED DISTRICT DITCH #16

The undersigned appraisers, appointed to appraise the benefits and damages to property affected by the establishment of Red Lake Watershed District Ditch #16, including all property likely to be affected by the drainage system or that may be used or taken for grass buffer strips necessary to control erosion, sedimentation, improve water quality, or maintain the efficiency of the drainage system, as order by the Red Lake Watershed District Board of Managers. The establishment of benefits for Red Lake Watershed District Ditch #16 is being performed in accordance with Minnesota Statute 103E.315.

The establishment of Red Lake Watershed District Ditch #16 consists of approximately 9.2 miles of open channel that will outlet into the Grand Marais Coulee in the Northeast Quarter of Section 36, Esther Township Polk County, Minnesota. A complete description of the proposed alignment can be found on Appendix B of the engineer's report dated March 9, 2018.

The undersigned appraisers, pursuant to the order of the Red Lake Watershed District Board of Managers, did meet preparatory to commencing duties on the 18th day of June 2018 at the Red Lake Watershed District located at 1000 Pennington Avenue South, Thief River Falls, Minnesota. Having taken the oath as required by MSA 103E.305 to faithfully and impartially perform the appraiser duties, and having received charts, maps, and diagrams, did view, all lands and properties affected by said proposed drainage system and further, we did determine the damages to lands and properties affected by establishment of a grass strip necessary to control erosion, sedimentation, improve water quality, or maintain the efficiency of the drainage system as a result of the establishment of Red Lake Watershed District Ditch #16.

The land use within the benefiting area of the proposed project consists of agricultural or agriculturally related purposes. The principal crops grown are row crops, wheat, barley, hay, sunflowers, beets, corn and soybeans.

We were able to determine the boundaries of the benefiting area by viewing Lidar data provided by Red Lake Watershed District along with visually viewing the project area. Meetings were held with the project engineer that provided maps of the watershed boundary that identified drainage practices and patterns. We viewed the County Assessor's records and aerial photo maps to determine the number of acres of tillable, non-tillable land and building sites in each forty, government lot, and all other tracts of land. The Viewers also held meetings with property owners obtaining their input on drainage patterns, rental rates and property values.

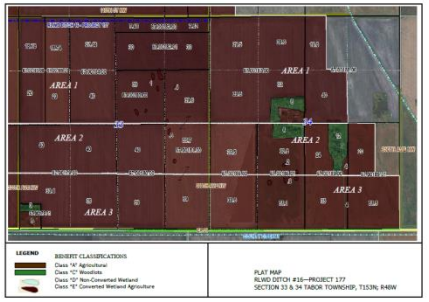
We have determined the extent and basis of benefits as prescribed under MSA 103E.315.

Tabular Report

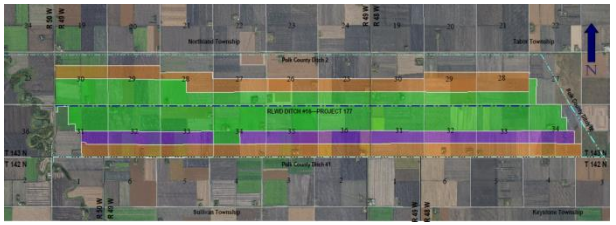
EXHIBIT 1
POLK COUNTY DITCH #40
EXHIBIT 1 OF VIEWERS REPORT IN DITCH PROCEEDINGS
Showing Names and Owners of Land, Total Number of Acres Benefited or Damaged and
Amounts of Benefits and Damages to each Tract of Land Affected by June 1, 2013 Redetermination

Parcel Data						Benefits			Damages			Totals	
NAMES OF OWNERS	Parcel Number	Township Range Section	DESCRIPTION	Acres in Tract	Acreage of Parcel	Benefited Acres Class A,B,C (Crop,Converted Wetlands, Residential)	Benefited Acres Class D - Woodlots	Benefit Rating ($)	Existing Ditch R/W With Road	Grass Strip Acres	Grass Strip Damages Per/Ac ($)	Total Damages Grass Strip R/W	Benefits Per Parcel
Irene Larson Etal	R43.00018.00	152-48-03	NE¼ SW¼	160	40	40		$225.00					$9,000.00
35371 80th St NW			NW¼ SW¼		40	39		$225.00					$8,775.00
Angus MN 56762-8950			SW¼ SW¼		40	38		$450.00					$17,100.00
			SE¼ SW¼		40	39		$450.00					$17,550.00
Irene Larson Etal	R43.00019.00	152-48-03	SW¼ SE¼	156.24	40	31		$425.00					$13,175.00
Angus MN 56762-8950													$0.00
Jason Johnston	R43.00022.00	152-48-04	NE¼ SW¼	160	40	40		$225.00					$9,000.00
283 Pioneer Ct NW			NW¼ SW¼		40	39		$225.00					$8,775.00
East Grand Forks MN 56721			SW¼ SW¼		40	38		$450.00					$17,100.00
			SE¼ SW¼		40	39		$450.00					$17,550.00

Plat Maps



Benefit Map



The "Viewers Report" was prepared and filed with the Red Lake Watershed District by Roger Beiswenger, Robert Wagner and Jerry Bennett on January 24th 2019

Benefit Damage Statement

Direct Benefits Red Lake Watershed District Ditch #16 – Cropland Areas 1-3

Using the direct market value approach an existing market value of $4,000.00 per acre was used for property in its existing condition, compared with a proposed 10-year channel capacity to determine the improved condition value of $4,600 per acre for lands having a direct drainage benefits acre which includes any private improvement costs.

Outlet Benefits Class C – Woodlots

The Viewers have determined based on this analysis that the outlet benefit for woodlots is $65.00/acre for Class C - Woodlots.

Change in land use Class E – Converted Wetlands

The Viewers considered the change in land use from wetlands to cropland with the value in the improved condition. We determined the value of converted wetlands to farmland to be $1,150/acre.

Road Benefits

The Viewers have determined Benefits for all State, County and Township roads at the same rate as cropland based on their location within the boundary of Red Lake Watershed Ditch #16. Total benefit to all roads is $40,885.00

Benefit Damage Statement (cont.)

Permanent Right-of-Way for the Construction

The Viewers determined at a rate of 4,000.00/acre for permanent ditch right of way and grass strips on agricultural cropland. There is a total of 87.96 acres of permanent ditch right of way easement and grass strip right of way, and hereby report, that the total damages for permanent right of way are $351,840.00.

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Temporary Construction Right-of-Way

Damages were also determined at a rate of $300.00/acre for temporary construction right of way. There is a total of 113.47 acres for temporary construction right of way, and we hereby report, that the total damages for temporary construction right of way is $34,041.00.

Tabular Report

Parcel Data				Benefits					Damages					Totals
NAMES OF OWNERS	Township Range Section	DESCRIPTION	Acres in Tract	Benefited Acres in Tract	Area 1 Benefited (AG 1 Cropland)	Benefit Value ($) $450.00 Per Acre	Perm Ag R/W Acres	Perm Ag R/W $ per Acres	Total Perm Ag R/W $	Total Ag Damages R/W	Temp R/W Acres	Temp R/W $ per Acres	Total Damages Temp R/W $	Total Benefits Per Parcel ($)
Polk County														
Tabor Township														
Donald John & Agnes M Kobetsky Etal, Life Estat	27-153-048	NW1/4 SW1/4	40.00	19.80	19.80	$ 450.00	0	4,000.00	0.00	0.00	0.00	300.00	0.00	8,910.00
429 5th Ave SE		SW1/4 SW1/4	40.00	19.40	19.40	$ 450.00	0	4,000.00	0.00	0.00	0.00	300.00	0.00	8,730.00
East Grand Forks, MN 56721														

(1) Description of lot or tract on current tax records and their address

(2) Value of any acres added to tract by proposed drainage of public waters

(3) Damage to any riparian rights

(4) Damages paid for the permanent 1 rod grass strip

(5) Acres added to tract by proposed drainage of public waters, wetlands, and other areas currently not in cultivation along with the number of acres being assessed for drainage that would be considered conversion of a wetland

(6) The amount of right-of-way acreage required

(7) Amount each tract or lot will be benefited or damaged

Plat Map

(1) Identifies Parcel Identification Number

(2) Benefit Acres are listed by 40 acre tracts

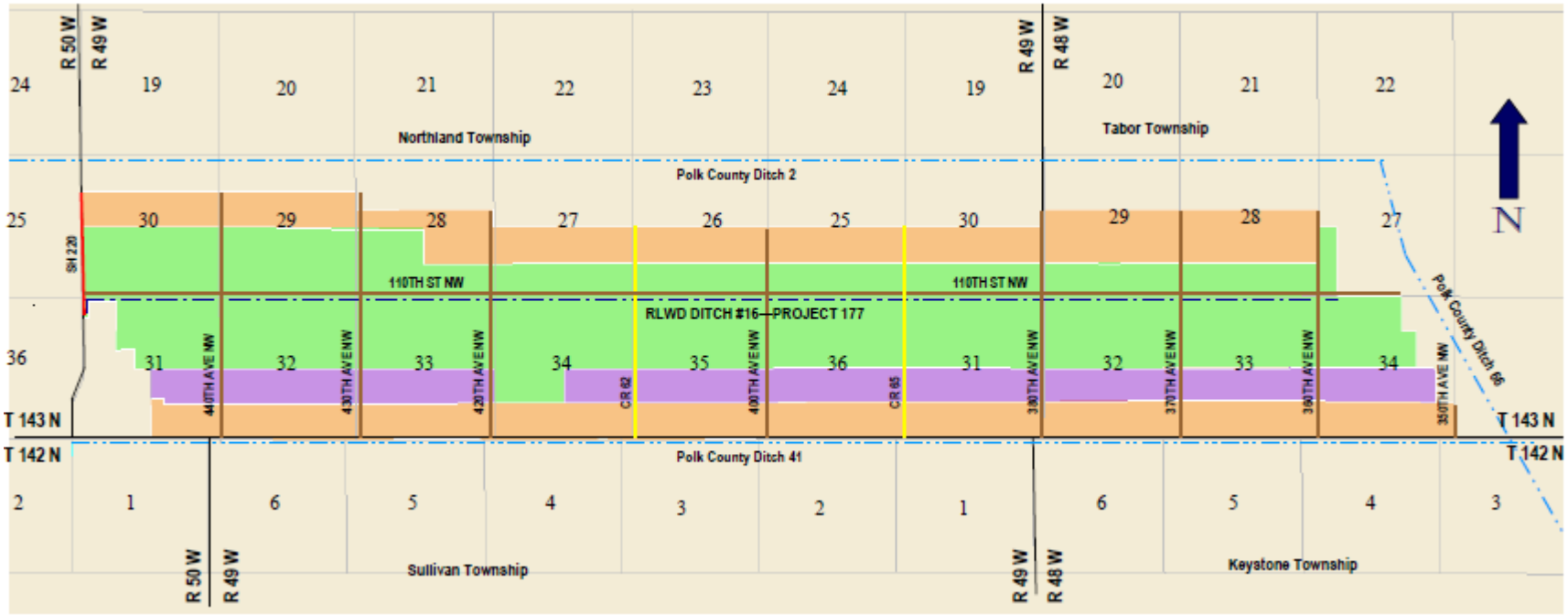
(3) Identifies different land use

(4) Identifies converted and non converted wetlands

(5) Identifies roads

(6) Identifies areas with different benefit rates

Road Benefits

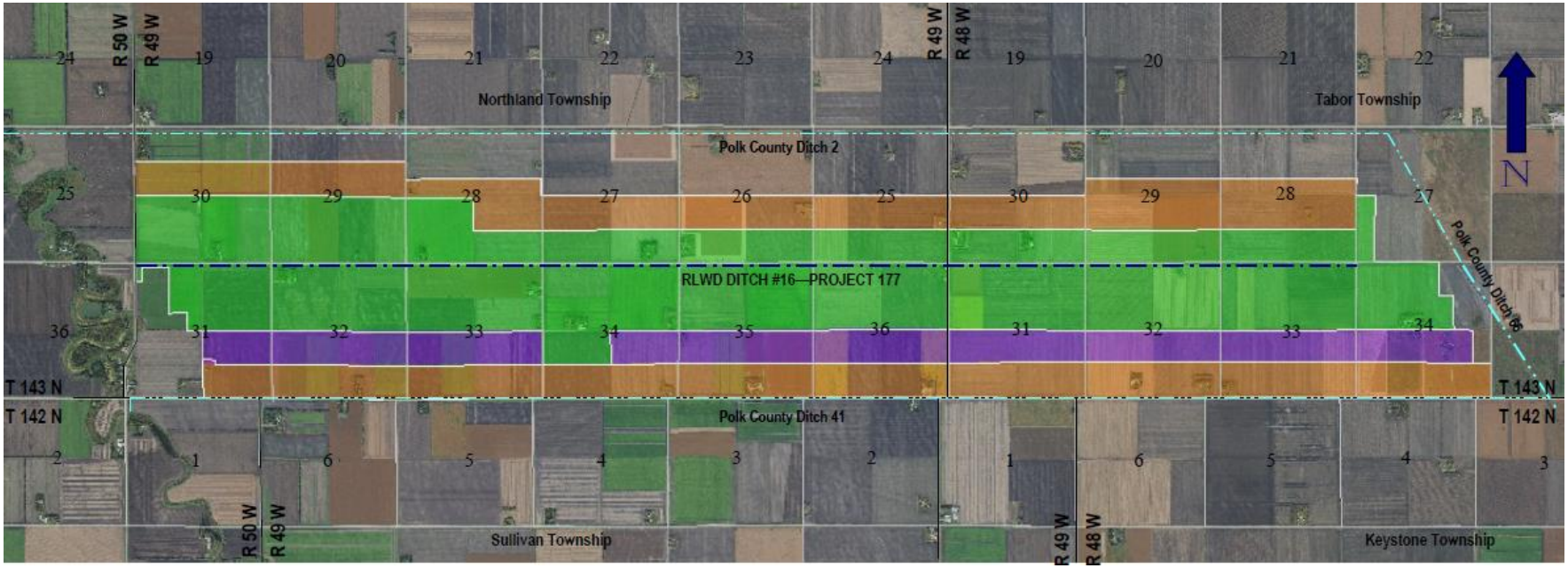


Benefits to Roads & Corporations

- MN Dept of Transportation 3.0 AC = $ 975.00
- Polk County Highway 24.0 AC = $ 7,800.00
- Northland Township 53.0 AC = $20,225.00
- Tabor Township 30.8 AC = $11,885.00

Total Roads & Corporations = $ 40,885.00

Benefit Map



Benefits to Land = $3,017,804.00

Benefits to Roads & Corporations

- MN Dept of Transportation 3.0 AC = $ 975.00
- Polk County Highway 24.0 AC = $ 7,800.00
- Northland Township 53.0 AC = $20,225.00
- Tabor Township 30.8 AC = $11,885.00

Total Roads & Corporations = $ 40,885.00

Grand Total Benefits = $3,058,689.00

LEGEND

AREA 1	$ 450.00/AC - CLASS A (AG1-CROPPED)
AREA 2	$ 350.00/AC - CLASS A (AG2-CROPPED)
AREA 3	$ 125.00/AC - CLASS A (AG3-CROPPED)
	$ 65.00/AC - CLASS "C" (WOODLOTS / CONSERVATION)
	$1,150.00/AC - CLASS "E" (CONVERTED WETLANDS)

Damages

Permanent Right-of-Way for the Construction

4,000.00/acre x 87.96 acres of permanent ditch right = $351,840.00.

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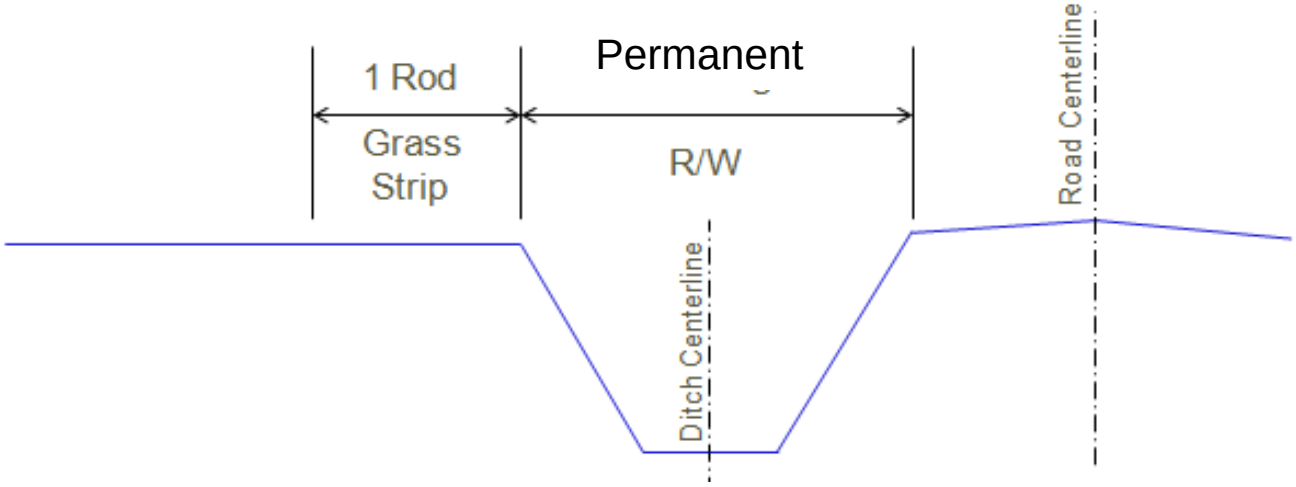
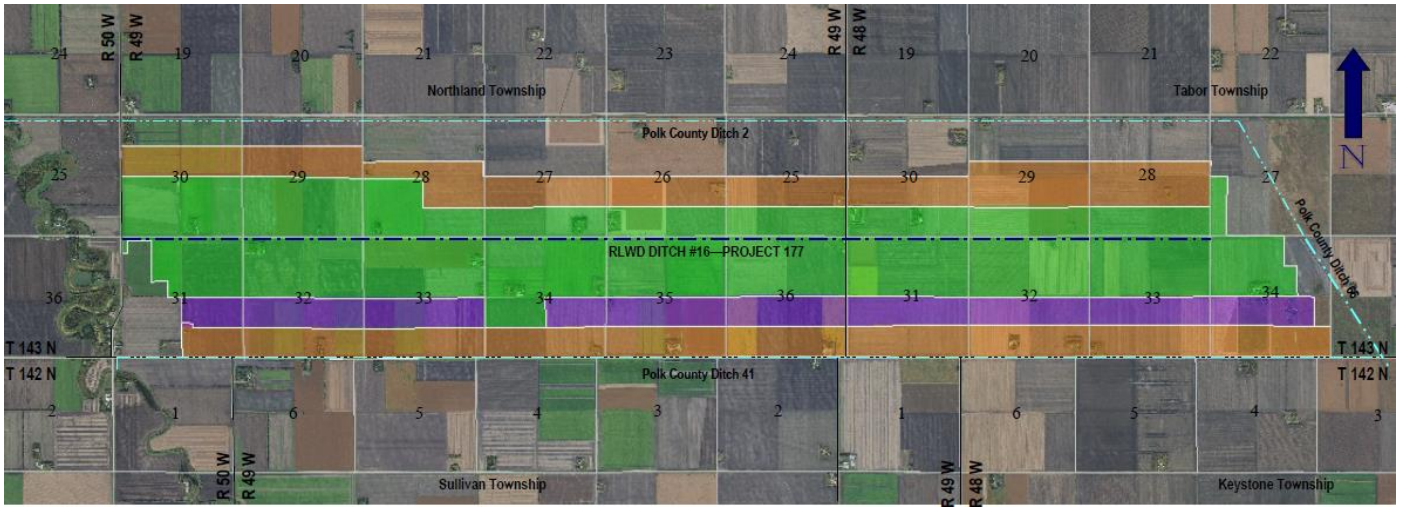
Temporary Construction Right-of-Way

$300.00/acre for temporary construction right of way x 113.47 acres = $34,041.00.



Total Benefits

Benefits to Land =	**$3,017,804.00**
Benefits to Roads & Corporations	
• MN Dept of Transportation	3.0 AC = $ 975.00
• Polk County Highway	24.0 AC = $ 7,800.00
• Northland Township	53.0 AC = $20,225.00
• Tabor Township	30.8 AC = $11,885.00
Total Roads & Corporations =	$ 40,885.00
Grand Total Benefits =	**$3,058,689.00**



Potential Assessment

RLWD Ditch 16 - Sample Assessment

	Benefits			Levy		
Classification	Acres	Rate	Benefits	Levy based on Project cost estimate of $2,085,873	Levy rate per acre	Levy Amount by Classification
Class A - Agriculture (tillable)	4,759.25	$450.00	$2,141,662.50	0.6815	$306.68	$1,459,542.99
Class B - Agriculture (tillable)	1,386.90	$350.00	$485,415.00	0.6815	$238.53	$330,810.32
Class C - Agriculture (tillable)	3,004.56	$125.00	$375,570.00	0.6815	$85.19	$255,950.96
Class C - Woodlots / Conservation Indirect (outlet beneifit)	136.82	$65.00	$8,893.30	0.6815	$44.30	$6,060.78
Class E - Converted Wetland Cropland/Tillable	7.20	$1,150.00	$8,280.00	0.6815	$783.73	$5,642.82
Roads	110.80	Varies	$40,885.00	0.6815		$27,863.15
						$2,085,871.03
Total Acres	9,405.53					
Total Benefits =			$3,060,705.80			
Total Levy =				2,085,873		

Note: Does not include accrued interest

?


KTIV

MEMORANDUM OF COOPERATIVE AGREEMENT
THIEF RIVER PLANNING GROUP

This cooperative agreement (Agreement) is made and entered into by and between:

The Counties of Marshall, Beltrami, and Pennington (Counties) by and through their respective County Board of Commissioners, and

The Marshall, Beltrami County, and Pennington Soil and Water Conservation Districts (SWCDs), by and through their respective Soil and Water Conservation District Board of Supervisors, and

The Red Lake Watershed District (RLWD), by and through its Board of Managers,

Collectively referred to as the "parties."

WHEREAS, the Counties of this Agreement are political subdivisions of the State of Minnesota, with authority to carry out environmental programs and land use controls, pursuant to Minnesota Statutes Chapter 375 and as otherwise provided by law; and

WHEREAS, the Soil and Water Conservation Districts of this Agreement are political subdivisions of the State of Minnesota, with statutory authority to carry out erosion control and other soil and water conservation programs, pursuant to Minnesota Statutes Chapter 103C and as otherwise provided by law; and

WHEREAS, the Watershed District of this Agreement is a political subdivision of the State of Minnesota, with statutory authority to conserve the natural resources of the state by land use planning, flood control, and other conservation projects by using sound scientific principles for the protection of the public health and welfare and the provident use of the natural resources, pursuant to Minnesota Statutes Chapter 103B, 103D, 103E and as otherwise provided by law; and

WHEREAS, the parties to this Agreement have a common interest and statutory authority to prepare, adopt, and assure implementation of a comprehensive watershed management plan in the Thief River Watershed to conserve soil and water resources through the implementation of practices, programs, and regulatory controls that effectively control or prevent erosion, sedimentation, siltation and related pollution in order to preserve natural resources, ensure continued soil productivity, protect water quality, reduce damages caused by floods, preserve wildlife, protect the tax base, and protect public lands and waters; and

WHEREAS, with matters that relate to coordination of water management authorities pursuant to Minnesota Statutes Chapters 103B, 103C, and 103D and with public drainage systems pursuant to Minnesota Statutes Chapter 103E, this Agreement does not change the rights or obligations of the public drainage system authorities; and

WHEREAS, pursuant to Minnesota Statutes Section 103B.101 Subd. 14, the Board of Water and Soil Resources (BWSR) "may adopt resolutions, policies, or orders that allow a comprehensive plan, local water management plan, or watershed management plan, developed or amended, approved and adopted, according to chapter 103B, 103C, or 103D to serve as substitutes for one another or be replaced with a comprehensive watershed management plan," also known as the "One Watershed, One Plan"; and

WHEREAS, the parties previously entered into a Memorandum of Agreement for the purpose of planning the One Watershed, One Plan for the Thief River Watershed, and the parties have now formed this Agreement for the specific goal of implementing the One Watershed, One Plan for the Thief River Watershed.

Approved _____, 2019

NOW, THEREFORE, the parties hereto agree as follows:

1. **Purpose:** The parties to this Agreement recognize that a guiding principle of One Watershed, One Plan is that "One Watershed, One Plan implementation will be accomplished through formal agreements among participating local governments on how to manage and operate the watershed." The parties to this Agreement acknowledge "that the purpose of this principle is to provide assurances that decision-making spanning political boundaries is supported by an in-writing commitment from participants." [The quoted sections are from *One Watershed One Plan Operating Procedures for Pilot Watersheds*, Page 13 BWSR June 25, 2014 document.]

   The parties working together for the purpose of planning the One Watershed, One Plan for the Thief River Watershed (Attachment A), known collectively as the "Thief River Planning Group" under the Memorandum of Agreement, now establish, through this Agreement, the process for governance of the implementation of the plan as they continue to recognize the importance of partnerships to plan and implement, protection and restoration efforts for the Thief River Watershed. Parties signing this Agreement will continue to be collectively referred to as the "Thief River Planning Group" and are partnering together in the form of this Agreement pursuant of the cooperative authority contained in Minnesota Statutes Section 471.59.

   This Agreement does not establish a joint powers entity but set outs the terms and provisions by which the parties "may jointly or cooperatively exercise any power common to the contracting parties or any similar powers, including those which are the same except for the territorial limits within which they may be exercised." Minnesota Statutes Section 471.59. As is permitted under the joint exercise of powers statute, Minnesota Statutes Section 471.59, the parties agree that under this Agreement, and as agreed upon and directed by the Policy Committee, one or more of the parties may exercise any power common to them on behalf of the other participating units, such as they have done under the Memorandum of Agreement where the Red Lake Watershed District is the fiscal agent and provide the day-to-day administrative duties of the Thief River Planning Group

2. **Term:** This Agreement is effective upon signature of all parties in consideration of the BWSR Participation Requirements for One Watershed, One Plan; and will remain in effect until canceled according to the provisions of this Agreement, unless earlier terminated by law.

3. **Adding Additional Parties:** A qualifying party within the Thief River Watershed that is responsible for water planning and resource management according to Minnesota State Statutes desiring to become a member of this Agreement shall indicate its intent by adoption of a governing board resolution that includes a request to the Policy Committee to join the Thief River Planning Workgroup, a representative appointed to the Policy Committee, and a statement that the qualifying party agrees to abide by the terms and conditions of this Agreement; including but not limited to the bylaws, policies, and procedures adopted by the Policy Committee.

4. **Procedure for Parties to Leave Membership of the Agreement:** A party desiring to leave the membership of this Agreement shall indicate its intent in writing to the Policy Committee in the form of an official board resolution. Notice must be made 180 days in advance of leaving the Red Lake River Planning Group. A party that leaves the membership of the Agreement remains obligated to complying with the terms of any grants the Thief River Planning Workgroup has at the time of the party's notice to leave membership and is obligated until the grant has ended.

5. General Provisions:

a. **Compliance with Laws/Standards:** The parties agree to abide by all Federal, State or local laws; statutes, ordinances, rules and regulations now in effect or hereafter adopted pertaining to this Agreement.

b. **Indemnification:** Each party to this Agreement shall be liable for the acts of its officers, employees or agents and the results thereof to the extent authorized or limited by law and shall not be responsible for the acts of any other party, its officers, employees or agents. The provisions of the Municipal Tort Claims Act, Minnesota Statutes Chapter 466 and other applicable laws govern liability of the parties. To the full extent permitted by law, actions by the parties, their respective officers, employees and agents, pursuant to this Agreement are intended to be and shall be construed as a "cooperative activity" and it is the intent of each party that this Agreement does not create any liability or exposure of one party for the acts or omissions of any other party pursuant to Minnesota Statutes Section 471.59, Subd. 1a. (a). If a party is found responsible for any liability associated with the actions of the Group, said party agrees to indemnify and hold harmless any of the other non-liable parties of the Group for any defense costs and expenses associated with any such claim.

c. **Employee Status:** The parties agree that the respective employees or agents of each party shall remain the employees or agents of each individual respective party.

d. **Data Practices and Records Retention:** The parties agree that each respective party will be responsible for complying with the Minnesota Government Data Practices Act (Minnesota Statutes Chapter 13), and the Official Records Act (Minnesota Statutes Section 15.17) for the data collected, created, received, maintained, disseminated or stored by each respective party pursuant to the terms of this Agreement. The Group will designate a responsible data official to collect and comply with all data requests associated with grants awarded or projects undertaken by the Group.

e. **Timeliness:** The parties agree to perform obligations under this Agreement in a timely manner and keep each other informed about any delays that may occur.

f. **Termination:** The parties anticipate that this Agreement will remain in full force and effect until canceled by all parties, unless otherwise terminated in accordance with law or other provisions of this Agreement. The parties acknowledge their respective and applicable obligations, if any, under Minnesota Statutes Section 471.59, Subd. 5 after the purpose of the Agreement has been completed.

g. **Distribution of Property:** At the time of termination, any property acquired as the result of such cooperative exercise of powers and any surplus monies remaining shall be divided pro-rata in proportion to the contributions of the several contracting parties. If no contributions have been made, the assets and surplus monies shall be divided equally among the parties.

6. **Structure:** To carry out the planning, development, implementation and governance of the Thief River One Watershed, One Plan, the parties agree to continue the structure established under the Memorandum of Agreement, which includes the Policy Committee, the Advisory Committee, and the Planning Group.

    a. **Policy Committee.** The parties agree that the Policy Committee established under the Memorandum of Agreement for the purpose of developing the One Watershed, One Plan shall continue to operate cooperatively, but not as a single entity, for the purpose of implementation of the Thief River Watershed plan. Membership on the Policy Committee shall remain as each party's designated representative. That individual who serves as their respective party's designated representative must be an elected or appointed member of that party's governing board. The governing boards may choose alternates to serve on the Policy Committee from their boards as needed. The Policy Committee will meet quarterly or as needed.

        i. Authority of Policy Committee Members: Each representative on the Policy Committee shall have one vote, and shall have the authority to act on behalf of the party they represent in the following matters: grant applications for grants the Policy Committee has voted to apply for/request on behalf of the Thief River Planning Group; report review and approval, payments under Thief River Planning Group grant(s), the implementation of the plan, plan amendments, and the governance of the plan. The Policy Committee will follow the bylaws adopted by the Policy Committee and will have the power to modify the bylaws.

        ii. Policy Committee Member Duties: Each Policy Committee member will serve as a liaison to their respective governing boards and has the responsibility to inform their governing board on actions taken by the Policy Committee.

    b. **The Advisory Committee**. The parties agree that the Advisory Committee shall continue to provide technical support on the plan implementation to the Planning Workgroup and Policy Committee, including identification of priorities. The Advisory Committee will remain as consisting of the local Planning Workgroup, the state's main water agencies, citizens, and other identified stakeholders. The Advisory Committee will meet quarterly or as needed.

    c. **The Planning Workgroup**. The parties agree that the Planning Workgroup shall continue and shall consist of the One Watershed One Plan Coordinator, fiscal agent, local water planners, and the WD Administrator for the purposes of logistical and day-to-day decision-making in the implementation process. The Planning Workgroup will meet quarterly or as needed.

7. **Implementation of the Plan.** The parties agree to adopt and begin implementation of the plan within 120 days of state approval and provide notice of plan adoption pursuant to Minnesota Statutes Chapter 103B and 103D.

8. **Fiscal Agent.** The Policy Committee shall appoint annually one of the parties to the Agreement to be the Fiscal Agent for the Thief River One Watershed One Plan. The Fiscal Agent agrees to:

    a. Accept all fiscal responsibilities associated with grant agreements applied for and received by the Thief River Planning Group.

    b. Perform financial transactions as part of contract implementation.

    c. Pursuant to Minnesota Statutes Section 471.59, Subd. 3, provide for strict accountability of all funds and report of all receipts and disbursements and annually provide a full and complete audit report.

    d. Provide the Policy Committee and the Planning Workgroup with such records as are necessary to describe the financial condition of the grant agreements the Policy Committee oversees.

    e. Responsible for fiscal records retention consistent with the Fiscal Agent's records retention schedule until termination of this Agreement. At that time, the fiscal records will be turned over to the One Watershed One Plan Coordinator.

9. **One Watershed One Plan Coordinator**. The Policy Committee shall appoint annually a "One Watershed One Plan Coordinator" to handle the administrative work of the Thief River One Watershed One Plan. "In the circumstance that the One Watershed One Plan Coordinator position is vacated, the Policy Committee shall appoint one of the parties to the Agreement to fill this role until the position is re-filled." The party that is the One Watershed One Plan Coordinator handling the administration agrees to provide the following to the Thief River Planning Group for the purposes of this Agreement:
    a. Handle administrative responsibilities associated with the implementation of the Thief River One Watershed One Plan and any subsequent grant(s), if any, the Thief River Planning Group applies for and receives to implement the watershed-based plan.

    b. Be the contact for the Thief River One Watershed One Plan and grant agreements, if any, the Thief River Planning Group applies for/requests and receives.

    c. Be responsible for the BWSR and other grant reporting requirements.

    d. Assist the Policy Committee and the Planning Workgroup with the administrative details to oversee implementation of the watershed-based plan.

    e. Maintain the Thief River One Watershed One Plan webpage

    f. Perform other duties to keep the Policy Committee, the Advisory Committee, and the Planning Workgroup informed about the implementation of the watershed-based plan.

10. **Authorized Representatives:** The following persons will be the primary contacts for all matters concerning this Agreement:

Marshall County
County Auditor
208 E. Colvin Avenue
Warren, MN 56762
Telephone: (218) 745-4851

Marshall SWCD
District Manager
105 S. Division St. #6
Warren, MN 56762
Telephone: (218) 745-5010

Pennington County
County Auditor
101 Main Ave. North
Thief River Falls, MN 56701
Telephone: (218) 683-7000

Pennington SWCD
District Manager
201 Sherwood Ave. S
Thief River Falls, MN 55965
Telephone: (218) 683-7075

Beltrami County
County Administrator
701 Minnesota Ave. NW, Ste. 200
Bemidji, MN 56601
Telephone: (218) 745-5010

Beltrami SWCD
District Manager
701 Minnesota Ave NW, Ste. 113
Bemidji, MN 56601
Telephone: (218) 333-4158

Red Lake Watershed District
District Administrator
1000 Pennington Ave. South
Thief River Falls, MN 56701
Telephone: (218) 333-8478

11. **Counterparts.** This Agreement may be executed in any number of counterparts, each of which shall constitute one and the same instrument.

[Remainder of page intentionally left blank]

IN TESTIMONY WHEREOF the parties have duly executed this Agreement by their duly authorized officers.

Partner: Marshall County

APPROVED:

BY: _____

Board Chair Date

BY: _____

Auditor Date

APPROVED AS TO EXECUTION

BY: _____

County Attorney Date

IN TESTIMONY WHEREOF the parties have duly executed this Agreement by their duly authorized officers.

Partner: Beltrami County

APPROVED:

BY: _____

Board Chair Date

BY: _____

Auditor Date

APPROVED AS TO EXECUTION

BY: _____

County Attorney Date

IN TESTIMONY WHEREOF the parties have duly executed this Agreement by their duly authorized officers.

Partner: Pennington County

APPROVED:

BY: _____

Board Chair Date

BY: _____

Auditor Date

APPROVED AS TO EXECUTION

BY: _____

County Attorney Date

IN TESTIMONY WHEREOF the parties have duly executed this Agreement by their duly authorized officers.

Partner: Pennington SWCD

APPROVED:

BY: _____

Board Chair Date

BY: _____

District Manager Date

APPROVED AS TO EXECUTION

BY: _____

County Attorney Date

IN TESTIMONY WHEREOF the parties have duly executed this Agreement by their duly authorized officers.

Partner: Marshall SWCD

APPROVED:

BY: _____

Board Chair Date

BY: _____

District Manager Date

APPROVED AS TO EXECUTION

BY: _____

County Attorney Date

IN TESTIMONY WHEREOF the parties have duly executed this Agreement by their duly authorized officers.

Partner: Beltrami SWCD

APPROVED:

BY: _____

Board Chair Date

BY: _____

District Manager Date

APPROVED AS TO EXECUTION

BY: _____

County Attorney Date

IN TESTIMONY WHEREOF the parties have duly executed this Agreement by their duly authorized officers.

Partner: Red Lake Watershed District

APPROVED:

BY: _____

Board Chair Date

BY: _____

District Administrator Date

APPROVED AS TO EXECUTION

BY: _____

County Attorney Date

Attachment A (MAP)

DEPARTMENT OF NATURAL RESOURCES

Ecological and Water Resources
500 Lafayette Road
St. Paul, MN 55155

January 15, 2019

Larry Hanson
21362 280th St. SE
Erskine, MN 56535

Re: Domestic Well Interference Complaint, Red Lake County – Complaint found Not Valid

Dear Mr. Hanson,

The Department of Natural Resources (DNR) has completed its investigation regarding your domestic well interference complaint. Your complaint, signed February 20, 2018, indicated that you were experiencing loss of water pressure from the submersible pump in your flowing house well.

The DNR investigation has concluded that the cause of your water supply problems was a faulty submersible pump. The nearby permitted appropriators did not drop water levels beyond the reach of your submersible pump.

If you continue to have water quality problems, we recommend you contact a plumber to investigate the issue. We also recommend that you contact the Minnesota Department of Health in regards to the water flowing from around your well casing.

Enclosed is the DNR Technical Review of the investigation. No further action will be taken by DNR.

Closure of this well interference does not mean a future interference will not happen. If a future interference were to take place, then it would be addressed through the same process.

If you have any questions, please call me at 651-259-5034 or contact me at Carmelita.nelson@state.mn.us.

Sincerely,

Carmelita Nelson
Well Interference Coordinator
651-259-5034
Carmelita.nelson@state.mn.us

Ec: Nicole Bernd – West Polk SWCD
Rachel Klein – East Polk SWCD

DEPARTMENT OF NATURAL RESOURCES

Ecological and Water Resources - Groundwater Technical Analysis Workgroup

Groundwater Technical Review

Date: 1/15/2019

To: Carmelita Nelson, Well Interference Coordinator, DNR

From: Jennifer L. Rose, PG, Groundwater Specialist, DNR

Subject: Larry Hanson Well Interference Complaint Investigation, Red Lake County

Reviewed by: Michele Walker, PG#30096, Groundwater Specialist, DNR

John Seaberg, PG, Acting Hydrologist Supervisor, DNR

Cc: Chris Prokosch, District Hydrologist, Well Management Section, Minnesota Department of Health

PROFESSIONAL GEOLOGIST

I hereby certify that this plan, document, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Geologist under the laws of the state of Minnesota.

Signature: 

Typed or Printed Name: Jennifer L. Rose

Date: 1/15/2019 License Number: 56562

Larry Hanson Well Interference Complaint Investigation

Executive Summary

The well interference complaint by Mr. Larry Hanson has been determined to be not valid. Analysis of the available data indicate:

- Mr. Hanson was out of water due to a faulty submersible pump.
- Groundwater levels did not reduce beyond the reach of his submersible pump from nearby high volume water appropriation (irrigators).
- Water quality problems (sandy gray water) that Mr. Hanson continues to experience in the house does not appear to be from the well itself but occurs after the water leaves the well. It is recommended that a plumber be hired to investigate this issue.

A new submersible pump installed in Mr. Hanson's well at the same depth as the original pump has resolved the water supply issue.

Introduction

The Minnesota Department of Natural Resources (DNR) was contacted by Mr. Larry Hanson in October 2017 after experiencing domestic well issues. The Hanson residence is located approximately 3.7 miles south of the town of Brooks in Poplar River Township (Section 34) of Red Lake County (Figure 1). Mr. Hanson has two wells on his property (Figure 2); a domestic well that provides water for his household (Hanson House Well) and a barn well (Hanson Barn Well) that is currently used for pet watering (one dog and two cats). The available specifications of the wells are shown in Table 1. Well logs are not available for either well, therefore depth and age are estimated based on DNR and well driller observations. The Hanson Barn Well is not part of this well interference complaint. However, the Barn Well was monitored during this investigation.

Water Well Information and Complaint Questionnaire forms were submitted to DNR on February 23, 2018 (Appendix A). A new submersible pump was installed on March 20, 2018 in the Hanson House Well (see receipt in Appendix A) which was the only repair for the well to date. A timeline of Mr. Hanson's well issues, DNR field visits, and photographs are included in Appendix B.

This report summarizes the well interference complaint and the DNR investigation of potential impacts of the high capacity pumping wells on water level declines in the Hanson House Well.

Complaint Summary

Mr. Hanson initially contacted the DNR in October 2017 after noticing the reduction in flow discharge from his two flowing wells over the last three to four years. However, he was not out of water at that time and did not submit well interference forms. Mr. Hanson reported that he started pumping sandy gray water in the house intermittently during the summer of 2017. DNR visited the property in November 2017 and observed the Hanson House Well had water upwelling alongside of the well casing indicating the well is not grouted or the grout washed out (Appendix B; Photo B1). There was also sediment build up on the top of the well casing (Appendix B; Photo B2) Mr. Hanson estimated the well to be 170 feet deep. On subsequent visits, DNR also observed water flowing out of the top of the Hanson House Well (Appendix B; Photo B6 and B10). Water pools around the well casing and flows into a drain hole that leads to a buried line that discharges towards the Poplar River (Appendix B; Photo B1 and B7).

Mr. Hanson's submersible pump in the House Well stopped working some time in December 2017 or January 2018. Mr. Hanson temporarily hooked his Barn Well, which has no pump, to his house for water supply. The Hanson Barn Well is a flowing well that discharges water into a cement trough in the barn (Appendix B; Photo B3). There is a line from that trough that discharges towards the Poplar River (Appendix B; Photo B7). The flow from the Barn Well did not allow for normal household uses but could be used to slowly fill a bucket to flush the toilet.

On March 20, 2018, Anderson Well Drilling was contracted to replace the submersible pump (set at 40 feet deep) in the Hanson House Well. The original pump broke into two pieces as the driller was removing it. It also had sediment buildup (Appendix B; Photo B8). The new pump was set at 40 feet below land surface; the same depth as the original pump and appears to have resolved the out of water problem as Mr. Hanson did not run out of water in 2018 irrigation season.

The driller estimated the age of the well to be from the 1980's as it had PVC casing and thought the pump was from the same time period. Mr. Hanson estimated the age of well to be from the 1970's. However, he did not own the property at that time or originally install the well. Mr. Hanson relayed to DNR that the well driller estimated the well was 90 feet deep.

Because the Hanson House Well was not accessible, DNR staff installed a pressure transducer data logger (Appendix B) into the Hanson Barn Well which was accessible. The Barn Well is considered to be representative of water levels in the

House Well as they are of similar depth. DNR measured the Barn Well to be 77.43 feet deep. Groundwater levels were measured from May 4 to October 4, 2018 to understand possible pumping impacts from nearby irrigation.

Mr. Hanson had a normal water supply to his house again after the installation of the new pump but continued to report issues with water quality (sandy gray water). DNR investigated the water quality issues in September 2018 and observed:

- Clear water was seen discharging from and pooling around the House Well (Appendix B; Photo B10).
- Clear water was observed from the barn spigot which is connected to the House Well (not the Barn Well) according to Mr. Hanson (Appendix B; Photo B11).
- Sandy gray water was collected from the outside spigot of the house which is connected to the House Well (Appendix B; Photo B12).

Based on the samples collected, it appears the cause of the water quality problems occurs after the water leaves the well and is not a result of the well itself. It is unknown what is causing the water quality problems in the house (sandy gray water). It is recommended that if the water does not clear up with time and more use, Mr. Hanson should hire a plumber to investigate the cause of the sandy gray water.

Setting

The Hanson residence is in located the Clearwater River watershed. The Poplar River is located approximately 95 feet to the east of the Hanson House Well. The topography for the area is characterized as predominantly level or flat terrain with some gently rolling terrain.

The physiographic setting is characterized as glacial lake-washed till plain with beach deposits (Lindgren, 1996). Lindgren (1996) noted that Quaternary glacial deposits cover the entire area and range in thickness from 100 to 350 feet. However, a high capacity well (unique well number 824397) recently drilled approximately 1.5 miles to the southwest of the Hanson residence demonstrated that glacial deposits are at least 401 feet thick. Glacial materials consist of unconsolidated sand, gravel, silt, and clay.

Glacial lake beach ridge and drift deposits comprise the significant aquifers for the area (Lindgren, 1996). The deeper unconsolidated sand and gravel deposits encompass a buried aquifer system which is typically confined by clay till. Lindgren (1996) classified these confined aquifer based on the depth to the top of the aquifer as Shallow, Intermediate, Deep, and Basal Confined (Appendix C). Aquifer tests and well interference investigations (Rose, 2018; Rose and Nelson, 2018; Walker, 2018a; Walker, 2018b; Walker, 2018c) completed in this area confirmed:

1) The area's multiple unconsolidated buried aquifers are leaky confined and when pumped exhibit strong interconnection. Pumping the Basal, Deep, and Intermediate Confined aquifers can reduce water levels in the shallower aquifers.
2) There is an upward vertical gradient from the Deep to the Shallow Confined aquifer.
3) Shallow confined aquifers are not always horizontally extensive and vary in thickness.

Both the Hanson House and Barn Wells are completed within the Shallow confined aquifer based on the well depths, land surface elevation, and recently updated cross sections from Rose (2018a) and Rose and Nelson (2018b) shown in Appendix C. Wells near the Hanson residence are also typically flowing or the water level is near the land surface.

Analysis of Pumping Impacts

Available Data

All of groundwater appropriation permits in this area (Figure 1) have been issued within the past six years for agricultural irrigation. There are ten permits within three miles of the Hanson residence (Table 2). Permit holders are required to report the volume and rate appropriated each month on an annual basis. DNR requested pumping operation records towards the end of the 2018 growing season from the permit holders within three miles (Figure 1) of the Hanson residence as part of this investigation. Some permit holders within three miles (Yaggie 2017-1676; Tersteeg 2014-1861; Tersteeg 2017-2109; Tersteeg 2017-2088; Tersteeg 2016-0745; Tersteeg 2014-1863; and Tersteeg 2014-1862) are required, as a condition of their permit, to submit pumping on and off times, rate, and volume of each pumping cycle. Other permit holders (Yaggie 2012-1282; Strand 2015-2249; and Yaggie 2014-0797) are not required by a permit condition but voluntarily keep detailed pumping records. Permit holders finished submitting records on November 28, 2018. Pumping records were found to be incomplete for permits Yaggie 2012-1282, Yaggie 2014-0797, Yaggie 2017-1676, and Strand 2015-2249. The submitted records were sometimes different than what was reported on MPARS and missing all or some pumping rate, volume, or pump on and off time information. DNR attempted to clarify the information the permit holders as best as possible and in some cases had to try to back calculate volumes and rates.

DNR and permit holders have also been monitoring groundwater levels in multiple aquifers in this area (Figure 3 and Table 3) to further understand the aquifers' sustainability and in response to multiple domestic well interferences. Groundwater level data presented include wells that have, at a minimum, monitoring data for the entire 2018 growing season. Groundwater levels were measured both automatically (pressure transducer data logger) and manually to field verify logger measurements. Logger data collected by DNR was corrected for instrument drift to manual water level measurements as per DNR protocol based on the guidelines of the U.S. Geological Survey (Freeman et al. 2004). Permit holder (Tersteeg 2014-1861 and Tersteeg 2017-2109) supplied logger data for aquifer tests and permit monitoring conditions were also corrected using this method by DNR where possible.

Results

A timeline of Hanson well events or observations were compared with the reported water use from nearby appropriation permits (Figure 4). This was done to determine if high capacity well pumping caused water levels to drop below the pump intake in the Hanson House well or intermittently lowered water levels and caused the pump to cycle frequently and burn out. This analysis shows that:

- The pump in the Hanson House Well stopped working sometime in December 2017 or January 2018 which does not correspond to any documented groundwater pumping. However, it does correspond to the time when irrigation wells in the area were reported to be flowing at an unknown rate (Kristina Anderson, NWATS, written commun., April 9, 2018).
- Two aquifer tests (permits 2016-1609 and 2017-2109) were conducted in October and November 2017 and the 2017 irrigation season ended in September 2017 prior to the pump failing in the Hanson House well.
- The Hanson Barn Well stopped flowing out of the discharge pipe in the summer of 2017 (observed by Mr. Hanson) and during August 2018 (measured by DNR) which corresponds to documented irrigation well pumping in the area.

Rose and Nelson (2018) evaluated the 2016-1609 aquifer test data and found the drawdown in the aquifer did not extend more than 2.5 miles away. The Hanson wells are greater than 2.5 miles away from 2016-1609 irrigation well, therefore pumping during the 2016-1609 aquifer test did not impact water levels in the Hanson House or Barn Wells.

The evaluation of the 2017-2109 aquifer test has not been completed to date. However, preliminary data analysis shows approximately 1.5 feet of drawdown in the Shallow/Intermediate confined aquifer approximately 1.25 miles from the 2017-2109 irrigation well (Table 4). This may be the same aquifer as the Hanson House Well. However, it is likely that the amount of drawdown at the Hanson wells was less than 1.5 feet as they are further from the 2017-2109 irrigation well (approximately 2.5 miles away). This amount of drawdown (less than 1.5 feet) is not enough to cause the water level to drop below the 40 feet deep pump in the Hanson House well.

Groundwater appropriation records and available monitored groundwater levels during 2017 and 2018 were evaluated to determine if the flowing wells during winter or water used during the irrigation season could have impacted water levels in the Hanson House Well. A summary of the observed water level responses to different pumping events is shown in Table 4. Hydrographs of the collected water level information from the area monitoring wells and the Hanson Barn well is shown in Figures 5 and 6, respectively. Analysis of the data indicate the following:

- During December 2017 and January 2018, groundwater levels were increasing in all monitored wells at that time except for the Yaggie 2014-1676 Test Well (Shallow Confined aquifer; Figure 5). Groundwater levels in that well declined 4.3 feet from October 2017 to March 2018. This is not enough of a drop in water levels in the Shallow Confined aquifer to have caused the water level to drop below the 40 feet deep pump in the Hanson House well.
- All monitored wells exhibit declining groundwater levels during the summer months of 2017 and 2018 when irrigation wells are in operation (Figure 5). There are obvious pumping signatures (rapid water level declines followed by slower rising water levels) within monitored wells that are in close proximity to irrigation wells. These water level declines correlate to and are at least partially in response to high capacity pumping in the area. This indicates that the high capacity pumping in the area is reducing water levels in all of the monitored aquifers, particularly during summer months.
- Monitoring during 2017 and 2018 shows that water levels in Shallow Confined aquifer(s), the aquifer which the Hanson House Well is believed to be screened within, have not dropped more than approximately 18 feet during any pumping event. This is greater than 20 feet above Mr. Hanson's pump intake.
- In August 2018, the Hanson Barn Well water level decreased enough that water stopped flowing from the outlet pipe and began to flow again after irrigation in the area ended for the season (Figure 6). The lowest recorded water level was approximately 0.4 feet above land surface. This water level decline was not enough to reduce water levels below the pump setting of 40 feet in the Hanson House Well. Also, the Hanson House Well did not go out of water during the 2018 irrigation season and the new pump is set at the same depth of 40 feet.

Groundwater appropriation for irrigation in this area did not lower water levels enough to cause Mr. Hanson's House Well submersible pump set at 40 feet to go out of water or to burn out from frequent cycling.

Conclusions and Technical Recommendations

The well interference complaint by Mr. Larry Hanson (House Well) has been determined to be not valid. The following conclusions and recommendations were drawn:

- Mr. Hanson was out of water due to a faulty submersible pump.
- Groundwater level monitoring during the 2018 irrigation season in the Hanson Barn Well, screened within same aquifer as House Well, demonstrated that water levels are impacted by nearby groundwater appropriation but not enough to have caused an out of water situation.

- Monitoring during 2017 and 2018 shows that water levels in the Shallow Confined aquifer(s), the same aquifer as the Hanson wells, have not dropped more than approximately 18 feet during any pumping event. This is greater than 20 feet above Mr. Hanson's pump intake.
- A new submersible pump was installed in Mr. Hanson's House Well in March of 2018 at the same depth as the original pump (40 feet deep) and has resolved the water supply issue.
- Water quality problems (sandy gray water) that Mr. Hanson continues to experience in the house does not appear to be from the well itself but occurs after the water leaves the well. It is recommended that a plumber be hired to investigate this issue.
- It is recommended that Mr. Hanson contact the Minnesota Department of Health District Hydrologist (Chris Prokosch 218-308-2114) to discuss the safety of the well construction as water is upwelling along the outside of the casing and out of the top of the casing.

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Walker, M., 2018c, Albert Anderson Well Interference Complaint Investigation Report, Minnesota Department of Natural Resources and Water Resources, MPARS.

Tables

Table 1. Hanson Well information

Well Name	Hanson House Well	Hanson Barn Well
Unique Well Number	No number assigned	No number assigned
Date Drilled	Unknown; ~1970 - 80's	Unknown
UTM Location Easting, Northing (meters)- surveyed by DNR hand held GPS unit	X: 273437.8, Y: 5294358	X: 273432.1, Y: 5294362
Ground Elevation (feet NAVD 88)- LiDAR	1148	1148
Depth (feet BGS*)	~170 feet-estimated by owner ~90 feet- estimated by driller in March 2018	77.43 feet- measured by DNR
Top of Casing Stick up (feet)	Not measured	1.75
Screened Interval (ft BGS)	Unknown	Unknown
Static Water Level	Unknown; Flowing well	Unknown; Flowing well
Well Diameter (inches)	4	3
Well Casing Material	PVC	Steel
Pump Depth (ft BGS)	Original- 40 feet; New- 40 feet	None
Pump Type	Submersible	None

*BGS stands for below ground surface.

Table 2. Appropriation permits within five miles of the Hanson House Well.

Well Owner and Permit Number	Date Initial Permit Issued	Authorized Volume and Pumping Rate	Unique Well Number	Distance (miles) from Hanson	Well Depth (feet) and Interpreted Aquifer	Reported Volume (MG) 2014	Reported Volume (MG) 2015	Reported Volume (MG) 2016	Reported Volume (MG) 2017	Reported Volume (MG) 2018
Tersteeg 2014-1861	6/9/2017	35 MGY; 1000 GPM	817079	1.57	304; QBAA- Deep Confined	0	0	0	12.8	24.4
Yaggie 2014-0797	4/25/2014	47.9 MGY; 800 GPM	801957	1.68	94; QBAA- Shallow Confined	12.3	20.7	10.9	13.8	10.9
Tersteeg 2014-1862	8/5/2016	35 MGY; 600 GPM	817080	2.18	105; QBAA- Shallow Confined	0	0	3.5	0	8.9
Tersteeg 2017-2088	5/4/2018	50 MGY; 550 GPM	824398	2.30	249; QBAA- Deep Confined	0	0	0	0	9.2
Yaggie 2012-1282	7/17/2012	51.5 MGY; 800 GPM	788660	2.44	169; QBAA- Intermediate Confined	13.9	24.2	8.6	10.4	18.7
Tersteeg 2017-2109	4/26/2018	50.2 MGY; 900 GPM	824397	2.51	401; QBAA- Basal Confined	0	0	0	0	11.3
Yaggie 2017-1676	6/9/2017	50 MGY; 700 GPM	824399	2.59	219; QBAA- Intermediate/Deep Confined	0	0	0	21.8	14.8
Tersteeg 2014-1863	8/5/2016	35 MGY; 800 GPM	817076	2.71	121; QBAA- Shallow Confined	0	0	9.4	21.9	6.5
Tersteeg 2016-0745	8/5/2016	35 MGY; 650 GPM	817077	2.86	115; QBAA- Shallow Confined	0	0	9.7	37.7	6.6
Strand 2015-2249	6/9/2016	76 MGY; 1600 GPM	817065	2.93	226; QBAA- Intermediate Confined	0	0	19.2	48.9	49.4

Table Notes: 1) MGY stands for million gallons per year. 2) GPM stands for gallons per minute. 3) Interpreted aquifer names are based on the Lindgren (1996) confined aquifer classification and reported in previous investigations (Rose, 2018; Rose and Nelson, 2018; Walker, 2018a; Walker, 2018b; Walker, 2018c). Question marks next to aquifer names indicates no available well log and the aquifer was interpreted based on the well depth. Some wells have two aquifer names (example- Shallow/Intermediate confined) as the top of the aquifer based on depth below land surface matches Lindgren (1996) criteria while the elevation of the aquifer might fit with an upper or lower aquifer based on the local hydrogeological cross sections.

Table 3. Groundwater level monitoring locations within five miles of the Hanson House Well.

Well Name	Unique Well Number	UTM Easting (meters NAD 83)	UTM Northing meters NAD 83)	Elevation of Measuring Point (feet NAVD 88)	Well Depth-feet BGS (Elevation-feet NAVD 88)	Interpreted Aquifer	Distance from Hanson House Well (miles)	Monitored By
Hanson Barn Well*	No unique number	273432.1	5294362	1149.75	79.18 (1068.82)	QBAA- Shallow Confined?	0.004 (23 feet)	DNR
Albert Anderson Barn Well*	No unique number	272408	5291396	1157.88	85.3 (1075.7)	QBAA- Shallow Confined?	1.9	DNR
Tersteeg 2014-1861 Shallow Observation Well**	824346	271995.34	5292103.80	1156.71	147 (1014.1)	QBAA- Shallow / Intermediate Confined	1.7	Permit Holder
Tersteeg 2014-1861 Deep Observation Well**	824347	271994.28	5292096.05	1169.080	308 (844.18)	QBAA- Deep Confined	1.7	Permit Holder
Mayer Garage Well***	227908	227908	273455	1166	58 (1109)	QBAA- Shallow Confined?	2.2	DNR
Yaggie 2017-1676 Test Well***	830825	274194.68	5298396.06	1131.39	91 (1038.9)	QBAA- Shallow Confined	2.6	DNR
Strand 2015-2249 Barn Well*	No unique number	277748	5294679	1166.65	45.85 (1120.2)	QBAA- Shallow Confined?	2.7	DNR
Tersteeg 2017-2109 Basal Observation Well***	831953	269568.86	5292111.71	1143.19	395 (747.1)	Basal Confined	2.8	Permit Holder
Randy Lee Livestock Well***	823575	272277.46	5289218.69	1173.2	229 (942.3)	QBAA- Intermediate/Deep Confined	3.3	DNR
Gagner Old Domestic Well***	277890	266650.28	5294818.73	1129.36	73.55 (1054.45)	QBAA- Shallow Confined?	4.2	DNR

Table Notes: 1) *Surveyed by DNR with handheld GPS. **Surveyed by professional land surveyor commissioned by permit holder. ***Surveyed by DNR using GPS/RTK/VRS and transit (surveyor report available in Rose and Nelson, 2018, Appendix B). 2) Interpreted aquifer names are based on the Lindgren (1996) confined aquifer classification and reported in previous investigations (Rose, 2018; Rose and Nelson, 2018; Walker, 2018a; Walker, 2018b; Walker, 2018c). Question marks next to aquifer names indicates no available well log and the aquifer was interpreted based on the well depth. Some wells have two aquifer names (example- Shallow/Intermediate confined) as the top of the aquifer based on depth below land surface matches Lindgren (1996) criteria while the elevation of the aquifer might fit with an upper or lower aquifer based on the local hydrogeological cross sections.

Table 4. Monitored groundwater level changes.

Well Name	Interpreted Aquifer	Monitored Time Period	Water Level Change during Tersteeg 2014-1861 Aquifer Test (Feb 23 to March 2, 2017)*	Water Level Change during 2017 Irrigation Season (May to Sept 2018)	Water Level Change during Tersteeg 2017-2019 Aquifer Test (Nov 14 to 21, 2017)*	Water Level Change during 2018 Irrigation Season (May to August 2018)
Hanson Barn Well	QBAA-Shallow Confined?	May 4 to Oct 4, 2018	Not monitored	Not monitored	Not monitored	0.7 feet decline (Aug 9 to 21, 2018)
Tersteeg 2014-1861 Shallow Observation Well	QBAA-Shallow / Intermediate Confined	On and off between Feb 6, 2017 to ongoing	1.1 feet decline	2017 partially monitored; 7.3 feet decline from July 5 to Sept 9, 2017	Approximately 1.5 feet decline	18.15 feet decline
Mayer Garage Well	QBAA-Shallow Confined?	Sept 27, 2017 to ongoing	Not monitored	Not monitored	Unknown; water levels impacted by flowing wells Oct 25, 2017	Approximately 16 feet (not including spikes)
Yaggie 2017-1676 Test Well	QBAA-Shallow Confined	Oct 5, 2017 to Oct 4, 2018 (well frozen March to May 2018)	Not monitored	Not monitored	Approximately 0.2 feet decline- to be further evaluated	5.5 feet decline
Gagner Old Domestic Well	QBAA-Shallow Confined?	DNR	Not monitored	Not monitored	Not monitored	9.6 feet decline after well stopped flowing around July 21, 2018
Albert Anderson Barn Well	QBAA-Shallow Confined?	July 26 to Oct 4, 2018	Not monitored	Not monitored	Not monitored	Unknown; 2018 partially monitored
Strand 2015-2249 Barn Well	QBAA-Shallow Confined?	Aug 9, 2018 to ongoing	Not monitored	Not monitored	Not monitored	Unknown; 2018 partially monitored
Randy Lee Livestock Well	QBAA-Intermediate / Deep Confined	Sept 27, 2017 to Oct 4, 2018	Not monitored	Not monitored	Unknown; water levels impacted by flowing wells Oct 25, 2017	Unknown; 2018 partially monitored
Tersteeg 2014-1861 Deep Observation Well	QBAA- Deep Confined	On and off between Feb 6, 2017 to ongoing	24.4 feet decline	2017 partially monitored; 22.2 feet from July 5 to Sept 29, 2017	Unknown; water levels impacted by flowing wells Oct 25, 2017	32.8 feet decline
Tersteeg 2017-2109 Basal Observation Well	Basal Confined	On and off between October 17, 2017 to ongoing	Not monitored	Not monitored	37.7 feet decline	35.9 feet decline

Figures

Figure 1: Location of Hanson House Well and nearby appropriation permits.

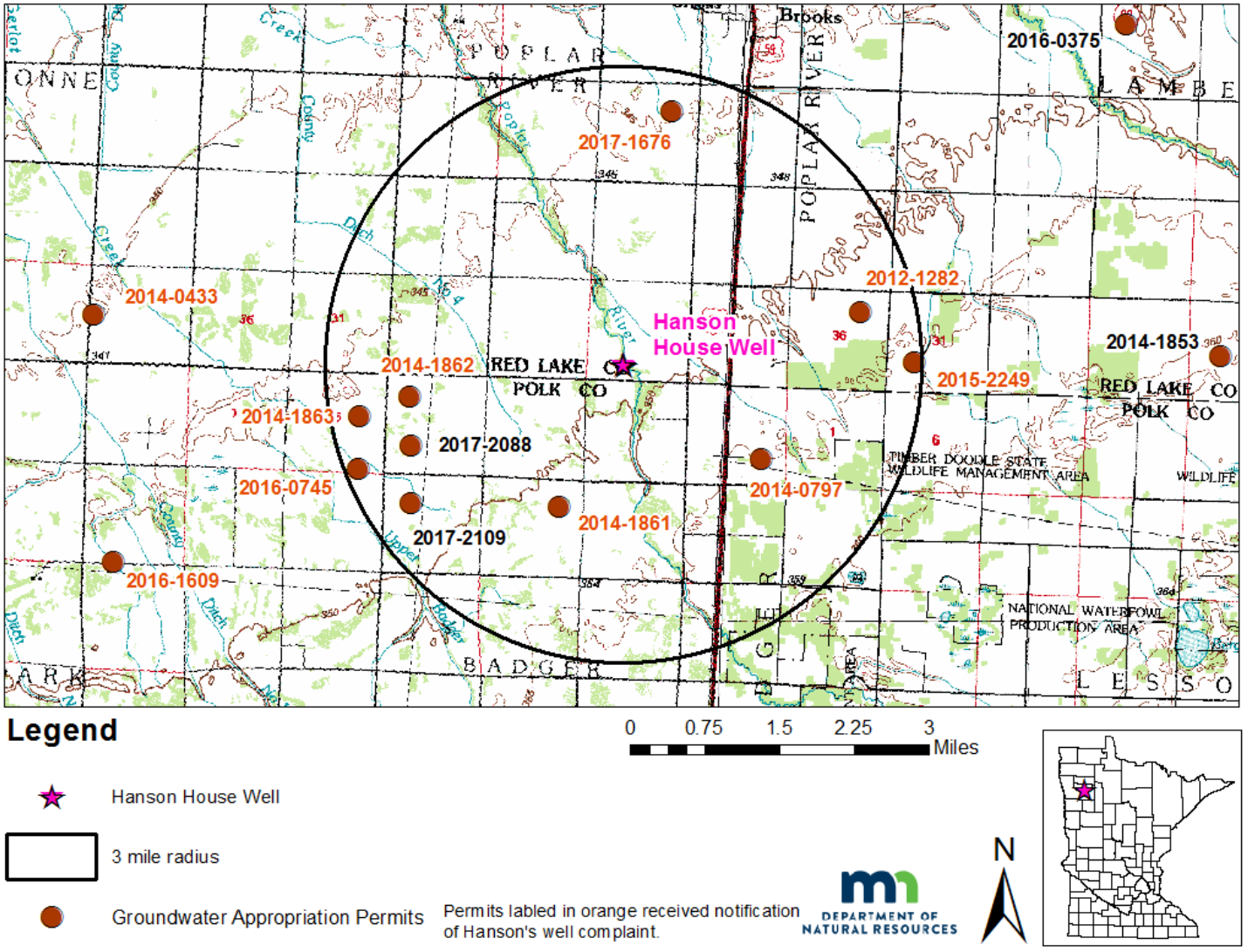


Figure 2: Hanson property site map.

Figure 3: Groundwater level monitoring locations within five miles of the Hanson House Well.

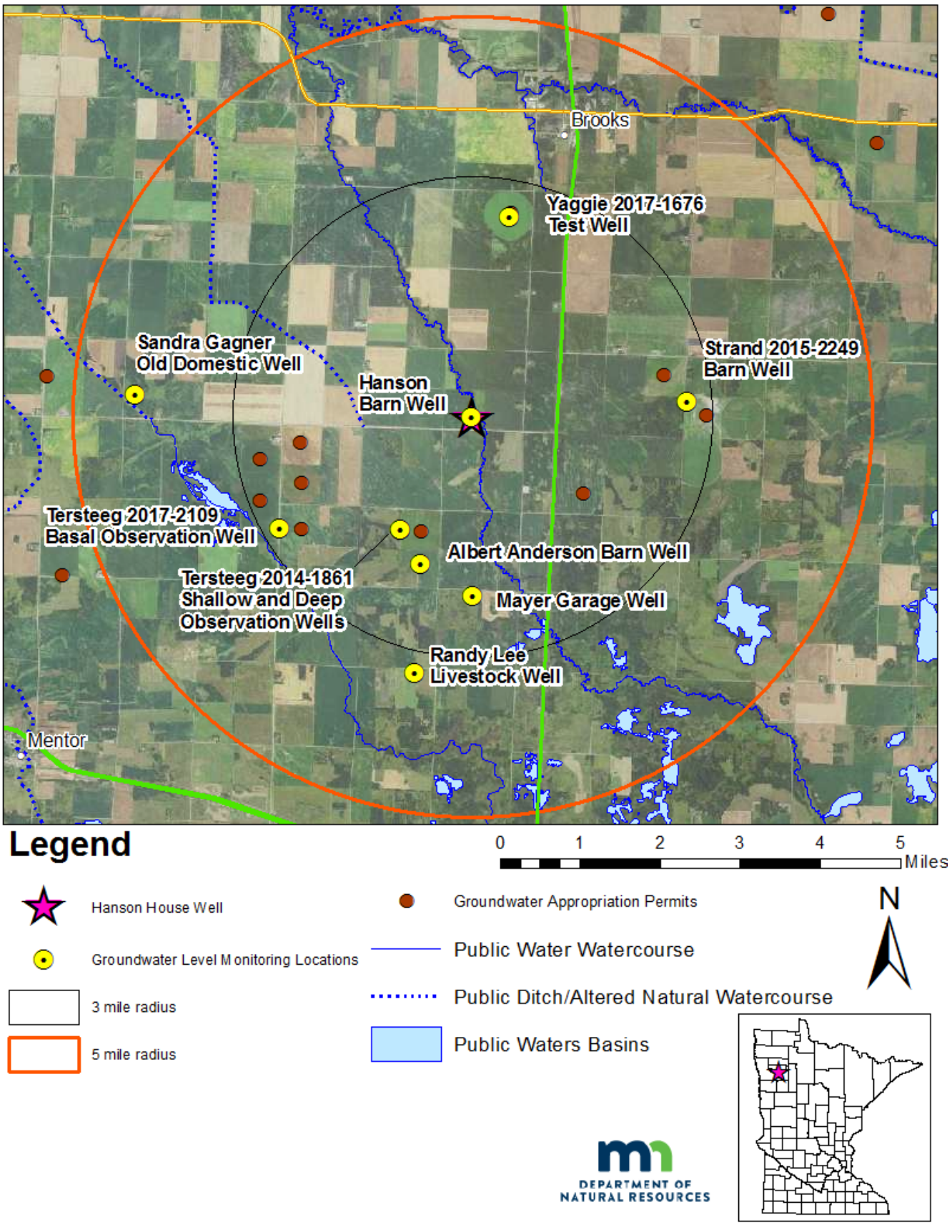


Figure 4: Timeline of Hanson well events and reported water use from nearby irrigation wells.

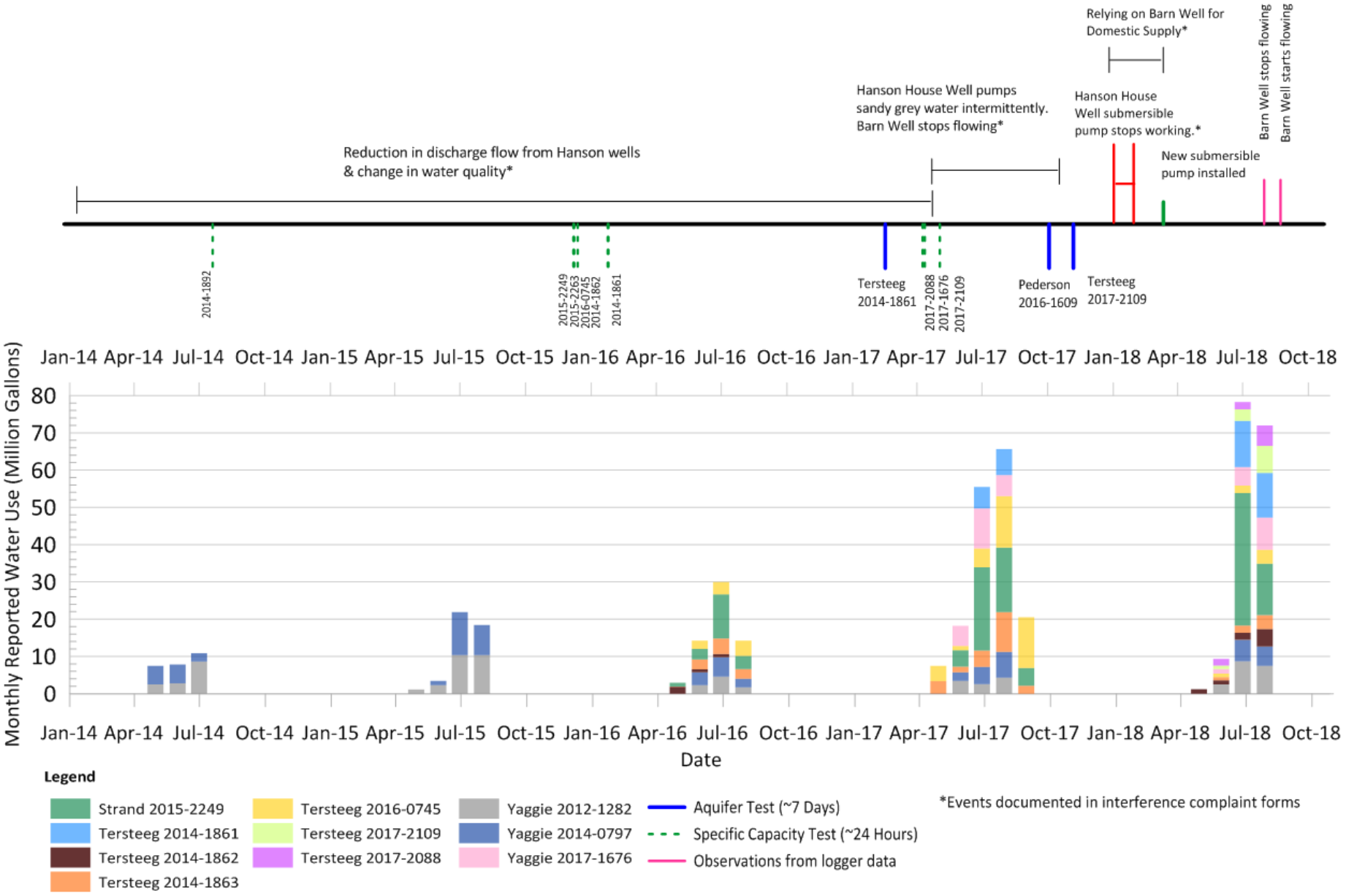


Figure 5: Hydrograph showing groundwater levels near the Hanson House Well and pumping events.

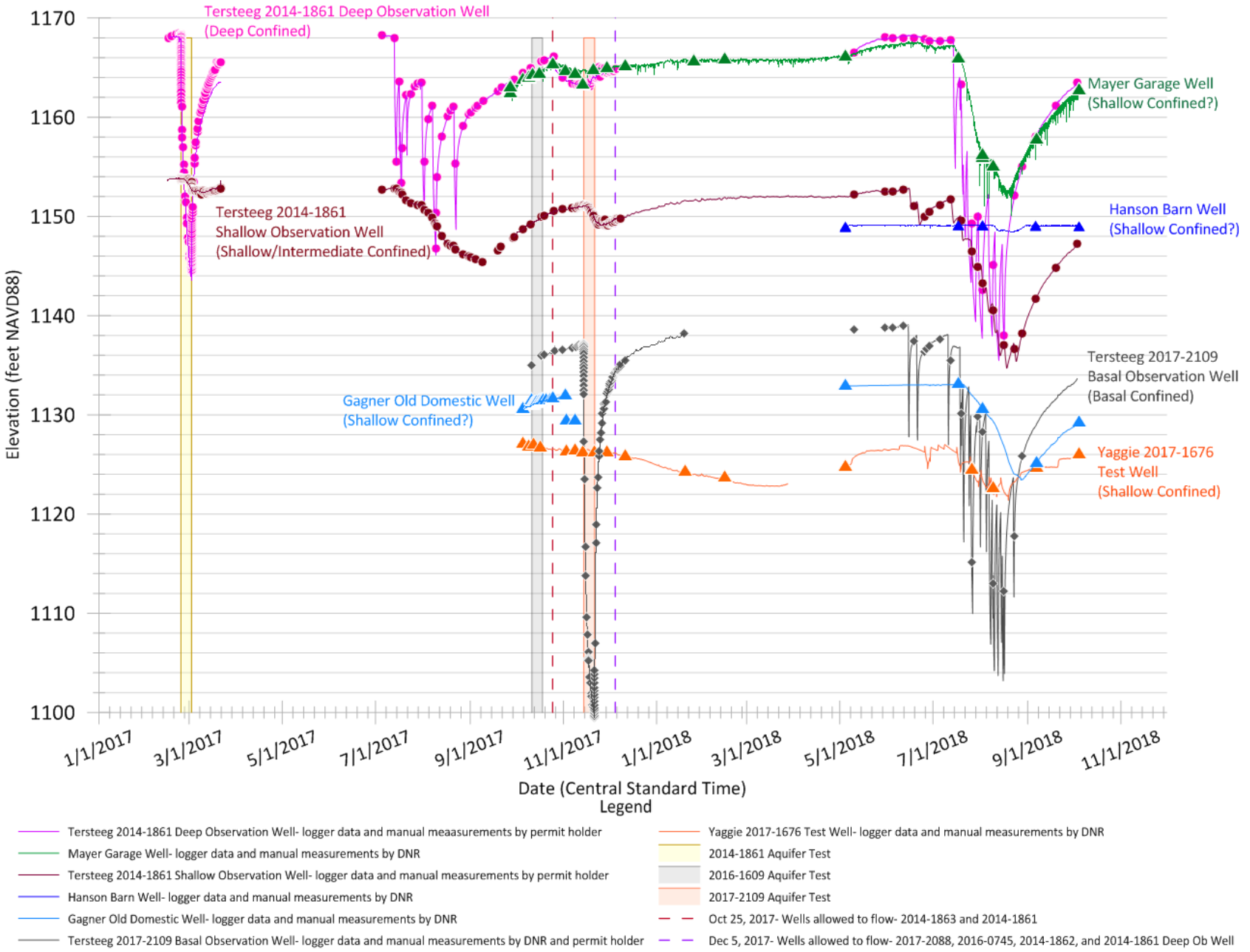
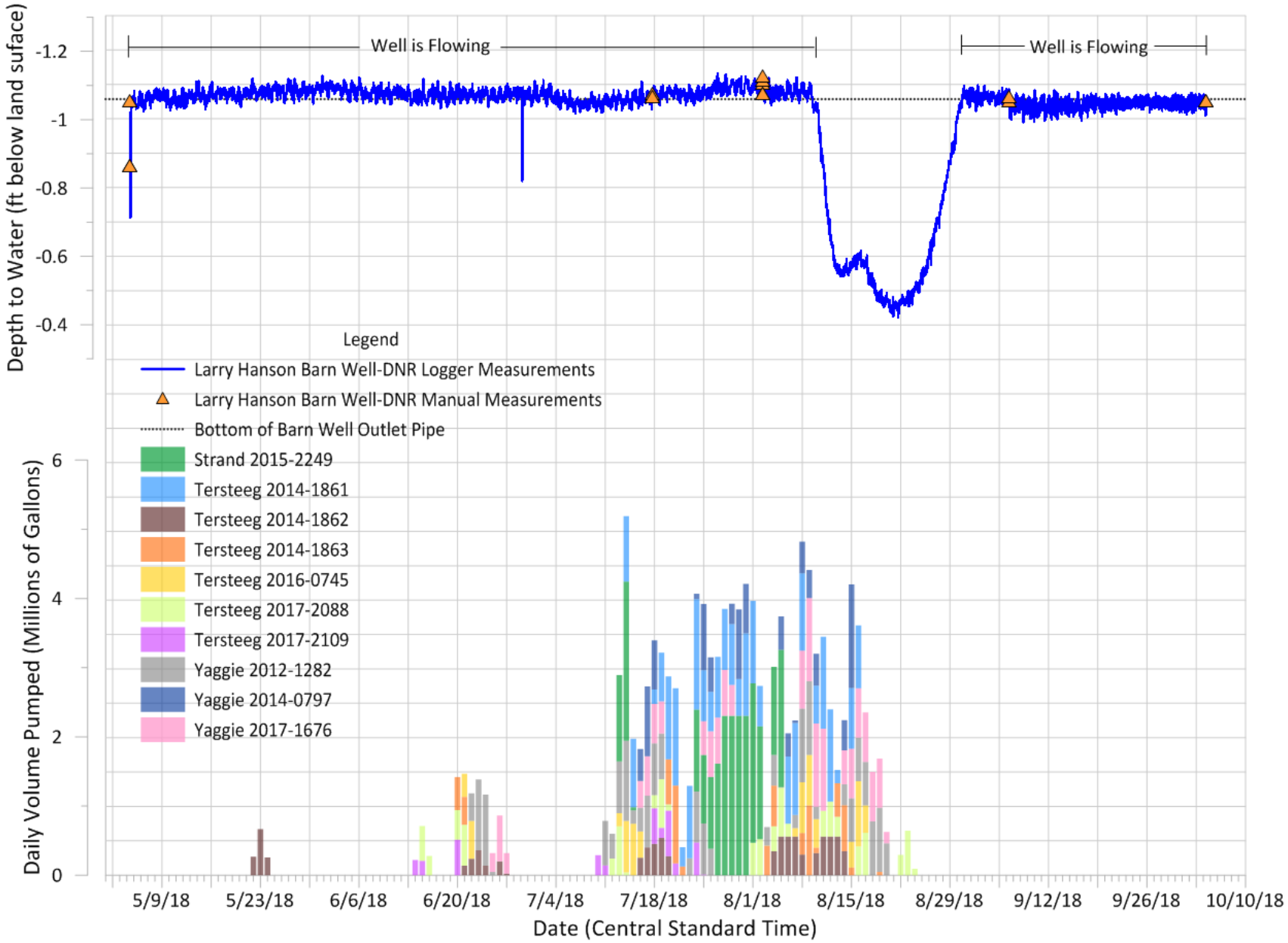


Figure 6: Hanson Barn Well hydrograph and daily reported use by nearby irrigation wells.

Note: Negative depth to water values indicate the water level is above land surface.



Appendix A- Hanson Complaint Information and Receipt

DNR Waters

WATER WELL INFORMATION

PART A — WELL LOCATION

☒ Owner's Name ☐ Authorized Agent: Larry Hanson

Telephone Number: Home (218) 687-3750; Work (218) 779-5520

Mailing Address: 21362 280th ST SE.

Place an "X" on the grid showing the exact location of your well. The grid is one section (640 acres divided into 1/4, 1/4, 1/4 sections). (1960, 40, 10 acres). *Attach a map or aerial photograph indicating the location of well(s).*

NW | NE | SW | SE — 1/2 MILE — 1 MILE

County	Township Name	Township No.	Range	Section	Fraction
Red Lake	Poplar River	150	42	34	SE 1/4 SE 1/4 SW 1/4

PART B — WELL CONSTRUCTION *(Submit a copy of original Water Well Record, if available)*

Name of Company which drilled well:	Date Completed	Drilled Depth	Present Depth
Don't No	1970's ?	170	170

CASING
MATERIAL: ☒ Steel ☐ Plastic ☐ Concrete ☐ Wood ☐ Other
Height Above (Below) Land Surface: 2 ft.
Diameter: 4 inches
Length: 170 feet
Interval: from ____ feet to ____ feet

DRILLING METHOD: (if known) ☒ Mud Rotary ☐ Air Rotary ☐ Cable Tool ☐ Bored/Augered ☐ Driven ☐ Dug ☐ Other

USE: Type & Amount in gallons per day (gpd) ☐ Other ____ gpd
☒ Domestic ____ gpd ☐ Public Supply ____ gpd
☐ Livestock ____ gpd ☐ Commercial ____ gpd
☐ Irrigation ____ gpd ☐ Industrial ____ gpd

SCREEN
SCREEN: Make Johnson
Type SS Dia.: 2"
Slot/Gage 15 Length: 10' FITTINGS:
Set between 160 ft. and 170 ft.
Or open hole from ____ ft. to ____ ft.

Original & Current Non-Pumping Water Level (Above) Land Surface:

Original	Current	
		feet
		date measured
		method of measurement (steel tape, etc.)

PUMP
TYPE: ☒ Submersible ☐ Jet, Shallow ☐ Jet, Deep ☐ Reciprocating ☐ Centrifical ☐ Other
Age: 20 years
Pumping Rate: 12 gpm
Pump Setting-submersible (Below Ground Level) 60 ft.
Drop Pipe Length--non-submersible (Below Ground Level) ____ ft.

Original & Current Pumping Water Level Below Land Surface:

Original	Current	
		feet
		date measured
		method of measurement (steel tape, etc.)

Flowing Well: ☒ Yes ☐ No

PART C — WELL CONDITION
NOTE: Attach additional sheets as needed.

		Comment (Describe method of inspection):
CASING: ☐ Cracked ☐ Holes	☐ Filled with Sediments ☐ Incrusted ☒ Other	looks good
SCREEN (if one exists): ☐ Incrusted ☐ Plugged	☒ Rusted/Corroded ☐ Other	
PUMP: ☐ Incrusted ☐ Rusted/Corroded	☒ Electrical ☐ Other	
DROP PIPE: ☐ Rusted/Corroded ☐ Holes/Cracks	☒ Water Marks ☐ Other	
DISTRIBUTION: ☐ Plugged Lines ☐ Vacuum in Lines	☐ Other	

OTHER (Describe method of inspection):

Does this well comply with the MN Health Department Water Well Construction Code? ____. If not, why not?

PART D — SIGNATURES

Well Owner or Agent:	Date:	Driller:	Date:
Larry Hanson	2-20-18	Address: Anderson Well Drilling 14493 460th St Clearbrook MN 218-776-2486	2-20-18

PART E **COMPLAINT QUESTIONNAIRE**

Please answer the following questions by providing as much information as possible. Attach any documents involved, such as receipts, worklists, bids, water level measurements, observation or related investigative information, etc.

1) Describe the problem:

1 flowing-dry
1 flowing well-trickling
(now both dry ing)

1 regular submersible pump well
pushing sand off & on since 4-17 noticed

Starting seeing problems w/ capacity about 3-4 yr ago on flowing wells

2) Indicate the number of people, livestock and other type(s) of water use supplied by the well(s):

just Larry, 1 dog & 2 cats, some family stops by off & on

3) Suspected cause of the problem:

Irrigation & tiling

4) Have you contacted well owner(s) whose well(s) you suspect might be affecting yours? Explain *(provide their name, address and phone number)*

No, suspects Yaggies (1mi SE) &/or TerSteegs (1mi SW) or Shands (2½mi E)

5) Past well problems? *(when and what was the problem?)*:

None until 2017

6) Describe any maintenance that has been done on this well:

None known; None done by Larry

7) Have you corrected the problem? Explain:

No, [redacted]

8) How do you feel this problem can be fairly resolved? *(if possible, attach a list of work, materials, and costs needed to resolve the problem)* Still has some water in 4th submersible is slower jet pump pumping (now dry) [redacted] yes, cant afford problems at property now, [redacted] it difficult to deal w/ no water health conditions & frozen conditions making would like well fixed or replaced

9) Have you complained before? When? To whom?

No, only now working w/ DNR

10) General Comments:

Eventually [redacted] Larry will have no water like his neighbors (10-11 [redacted] wells on more)

Farming or Irrigation ~ 1-5 miles SE & SW off Larry's place
3-4 miles Straight East & West

Anderson Well Drilling & Repair, Inc.
14493 460th St.
Clearbrook, MN 56634
218-776-2486 or 218-688-1400

Customer's Order No. Larry Hanson Date March 20-18
M 21362 280th ST SE
Address Erskine MINN

SOLD BY	CASH	C.O.D.	CHARGE	ON ACCT.	

QTY	DESCRIPTION	PRICE	AMOUNT	
1	1/2 hp 115V Pump		500	—
1	heat Shrink Kit		5	50
1	1/4" Gauge		3	50
	labor Service Call Changing Pump		150	—
	PP CK No 739		659	—

ALL claims and returned goods MUST be accompanied by this bill.

Received by _____

Thank You!

Appendix B- Larry Hanson Timeline and Photographs

Timeline of Communication and Events

- On October 30, 2017, DNR was notified by Mr. Hanson that the two flowing wells on his property were having trouble; particularly the well that supplies water to his cattle and house. Mr. Hanson was also concerned about water quality and the Poplar River next to his property going dry. DNR sent well interference complaint forms to Mr. Hanson.
- On November 8, 2017, Mr. Hanson informed DNR he noticed changes in flow discharge and water quality from his wells during the summer of 2017. In this conversation, he said he had three wells; one well supplies water to his house (Hanson House Well) and two supplied water to his barns. He noted that one of his barn wells stopped flowing during the summer of 2017 and the other only trickles. However, he does not use them at this time. The Hanson House Well was reported to have a submersible pump and that it would pump sandy gray water in the house intermittently throughout the summer of 2017.
- DNR visited the Hanson residence on November 13, 2017. Mr. Larry Hanson stated he has lived on this property for 23 years and never had trouble with his domestic well until this year. There used to be another residence on the property (trailer) that was also supplied by the domestic well. In the summer of 2017, Mr. Hanson observed that when the nearby irrigation pivots were running the barn wells stopped flowing and water in the house got cloudy and sandy. Mr. Hanson had not run out of water in his house at this point but believes the well started to fill in with sand. DNR recommended a well driller be contacted if he experiences well problems again. DNR observations made at Hanson House Well:

    1) Well is located in a wooden doghouse approximately 80 feet north of his home and 10 feet southeast of the barn. The doghouse has to be lifted to access well.
    2) Well was thought to be approximately 170 feet deep but has no well record.
    3) Well is four inches in diameter constructed with PVC with a steel top.
    4) Well is flowing. Water was pooled around the well (Photo B1). Water seen to be upwelling (bubbling) alongside the well casing. A drain (Photo B1) is located near well that allows overflow water to discharge in a pipe near the river.
    5) Submersible pump installed at unknown depth.
    6) DNR could not take a water level or well depth due to the wellhead construction and visible mineral build up (Photo B2). Staff did not want to risk dislodging sediment and causing damage. Wires were exposed also at the top of the casing (Photo B1 and B2).

    During the site visit on November 13, 2017, there was thought to be two wells in the barn but it was later clarified by Mr. Hanson on a site visit dated February 14, 2018 that there is one barn well (Hanson Barn Well) and the other pipework in the barn is associated with his domestic well (Photo B3). Minnesota Department of Health staff (C. Prokosch, oral commun., December 2018) reviewed the photograph of the barn and confirmed there appeared to be only one well located there. Observations made in the barn on November 13, 2017:

    1) Hanson Barn Well is constructed of steel and is a flowing well that discharges into a cement trough (Photo B3). Mr. Hanson stated the Barn Well had not been flowing during the irrigation season. Water was seen to be discharging a small amount from a steel pipe during the visit.
    2) Barn Well currently used to water pets.

3) Pressure tank and other black piping in barn is connected to Hanson House Well (Photo B3). The discharge pipe thought to be connected to the house system was flowing into trough from a flexible black pipe during the visit.

- Hanson House Well submersible stopped working in December 2017 or January 2018.
- DNR visited the Hanson property on February 14, 2018. The Hanson House Well was no longer supplying water to the house as the submersible pump was not working. Mr. Hanson believed the pump wasn't working because it was full of sand. DNR staff could not access the domestic well as the well shed was frozen to the ground. The discharge pipe leading towards the river could not be found but water was seen to run along the ground surface in that area after removing some snow. Mr. Hanson hooked the Barn Well to the house but it was not much water according to Mr. Hanson. It is unknown how the Barn Well was hooked to the house. Mr. Hanson filled a five gallon bucket in the house to flush the toilet but was not drinking it. Water was seen to be discharging from one black flexible pipe in the barn (Photo B-4) but not from the steel discharge pipe connected to the Barn Well. Another black pipe was hooked to the house pipework system and no water was seen discharging from it (Photo B-4). DNR recommended a well driller be contacted to check the pump and fill out the well complaint forms.
- On February 20, 2018, Mr. Hanson contacted DNR notifying them it was hard to get a well driller to his house and that he may contact nearby irrigators to see if they would fix it.
- On February 23, 2018, DNR Mr. Hanson dropped off completed well interference forms into the DNR Thief River Falls office. Mr. Hanson clarified that his submersible pump in the Hanson House Well stopped working in December 2017 or January 2018 and he has limited water supply from the Barn Well. Mr. Hanson also said he started noticing the "wells were losing water" about three to four years ago. The submersible pump started having issues in April 2017.
- On March 12, 2018, Mr. Kyle Anderson of Anderson Well Drilling clarified that Part B and C of the forms were filled out based on a discussion between the driller and Mr. Hanson. Anderson Well Drilling visited the property on February 20, 2018, however he did not access the domestic well as he was not hired to do any well work at this stage. The well depth and screen setting were from Mr. Hanson's description. Mr. Anderson clarified the well screen is likely corroded, as all the old wells are in this area in his experience. However, he did not investigate the well screen. Mr. Anderson said the pump needs to be replaced but Mr. Hanson did not want to pay for a new pump at this stage.
- On March 16, 2018 DNR provided Mr. Hanson information on local cash assistance options to fix the well pump.
- A new submersible pump was installed in the Hanson House Well on March 20, 2018 by Anderson Well Drilling.
- Mr. Hanson relayed to DNR on March 28, 2018 that the well is approximately 90 feet deep according to the well driller and that the pump was set at a depth of 40 feet. The pressure of the system was bumped up from 20 psi to 40 to 50 psi. Mr. Hanson had to dig out the well shed for four days to get access to the well.
- On April 2, 2018, Mr. Hanson notified DNR he was concerned that the pump was set too shallow (40 feet) and was worried about water levels going below that. Mr. Hanson shared the costs of the work and explained the driller flushed the system a couple time and did some re-wiring. He also noted water on the ground near drain hole.
- On April 5, 2018, Mr. Anderson clarified the well was likely drilled in the 1980's as it has plastic casing. The original pump was broken into two pieces. The pump was also estimated to be from the 1980's. The driller commented that the pump was a poor design as it was tied with metal band that would corrode. The well did pump sand when he ran it for about 20 minutes. The driller commented it probably always pumped sand. The new pump was set at the same depth of old pump and could be lowered another 45 feet if needed.

- On May 4, 2018 DNR visited the Hanson property (Photo B-5). The following observations were made:
    1) Water was flowing out the top of the casing in the Hanson House Well (Photo B-6). It was a steady trickle that was unable to be measured.
    2) The flow discharge point (Photo B-7) connected to the drain near the Hanson House Well is located 49 feet east of the well. Flow from the discharge line was measured at approximately 1.9 gpm (~1/4 gallon in 7.99 seconds) and 1.6 gpm (~1/4 gallon in 9.35 seconds). The discharge looked muddy.
    3) A second discharge point (Photo B-7) is connected to the barn cement trough. It was seen to be trickling (no measurement made).
    4) The original submersible pump was seen broken into two pieces and had sediment stuck to it (Photo B-8). Mr. Hanson was unsure of the exact date the pump stopped working but likely sometime in the fall of 2017 after he talked to DNR staff. He then relied on natural flow from the Barn Well until a new submersible pump was installed. He commented it would take 7 minutes to fill one gallon (0.14 gpm).
    5) The new submersible pump was installed at 40 feet below land surface according to Mr. Hanson.
    6) The Hanson Barn Well is three inches in diameter and constructed of steel. The casing stick up on the north end is 1.75 feet. A one inch diameter flow discharge pipe is connected to the well casing and discharges into the cement trough. The land surface to the bottom of the discharge pipe is 1.06 feet. The top of the discharge pipe to the top of the well is 0.63 feet. Water was dripping from the discharge pipe. The depth of the well is 79.18 feet from the top of the casing. The well had a mushy bottom indicating sediment. There is also an iron sulfide smell. Iron flakes came out of the discharge pipe when the depth was measured.
    7) On May 4, 2018, DNR installed a transducer data logger (Rugged TROLL 200 S/N 310135) in the Hanson Barn Well (Photo B-9). The logger was set to record water levels every hour. The logger was installed at a depth of 22.35 feet below the top of casing. The water level was measured by DNR using a steel tape (#47):
        a. 5/4/2018 11:36 = 0.89 feet below top of casing (btoc),
        b. 5/4/2018 11:37 = 0.89 feet btoc
        c. 5/4/2018 12:07 = 0.7 feet btoc
- On June 18, 2018, Mr. Hanson called DNR with concern about other people's water issues in the area, DNR water level monitoring, and sand in his water. When he turned on the shower water came out gray with sand.
- DNR visited the Hanson property on August 2, 2018 to take a water level and download the data logger in the Hanson Barn Well. The following observations were made:
    1) Mr. Hanson was concerned about the water smelling from his domestic well. Water was flowing out the top of the casing of the House Well. No water was flowing at the discharge point by the river.
    2) The inside of the barn smelled like a skunk. Water was barely dripping from the Barn Well discharge pipe and into the cement trough. The data logger was downloaded and DNR took water levels using a steel tape (#52):
        a. 8/2/2018 10:55 = 0.65 feet btoc
        b. 8/2/2018 10:57 = 0.64 feet btoc
    3) Mr. Hanson was concerned about sand in his water so DNR had him pump the Hanson House Well into the cement trough. He opened a valve in the barn that was connected to the House Well at 11:10. Water levels were monitored in the Barn Well while the House Well pumped:
        a. 8/2/2018 11:08 = 0.63 feet btoc

b. 8/2/2018 11:22 = 0.68 feet btoc

c. 8/2/2018 11:26 = 0.68 feet btoc

4) Pressure readings near the pressure tank decreased while pumping. Flow was also estimated using a stop watch and bucket: 8/2/2018 11:18 = 6.5 gpm (1.75 gallons in 16.15 seconds). No sand was observed in the bucket.

5) No flow was seen coming out of the top of the Hanson House Well while it was pumping (8/2/2018 11:24).

- DNR visited the Hanson property on September 6, 2018. Observations made by DNR during the visit:

1) Domestic well was flowing out of the top of the casing (Photo B-10).

2) DNR staff took water levels in the Hanson Barn Well: 9/6/2018 11:06 = 0.7 feet btoc and 0.69 feet btoc. The data logger was removed and downloaded. The logger was reset to take measurements every 15 minutes.

3) DNR again asked Mr. Hanson to pump his domestic well as he was concerned about the sediment. No sediment was seen in the water (Photo B-11) in the barn. Flow was measured using a bucket and stop watch:

a. 9/6/2018 11:20 = 10 gpm (2.5 gallons in 15.05 seconds)

b. 9/6/2018 11:22 = 12 gpm (3 gallons in 14.73 seconds)

4) Mr. Hanson filled a bucket of water from the spigot next to house (Photo B-12) which would be water from the Hanson House Well. Water was cloudy and had a sulfur smell.

5) Mr. Hanson also expressed concern about the river and agricultural chemicals in the water.

- DNR visited the Hanson property on October 4, 2018. Observations made:

1) Water levels were taken from the Hanson Barn Well using an electronic tape (S/N 224631):

a. 10/4/2018 11:25 = 0.7 feet btoc

b. 10/4/2018 11:26 = 0.7 feet btoc.

2) Water was seen dripping from the discharge pipe connected to the Hanson Barn Well. The data logger was removed from the Barn Well.

3) The Hanson House Well was strongly flowing.

Photographs

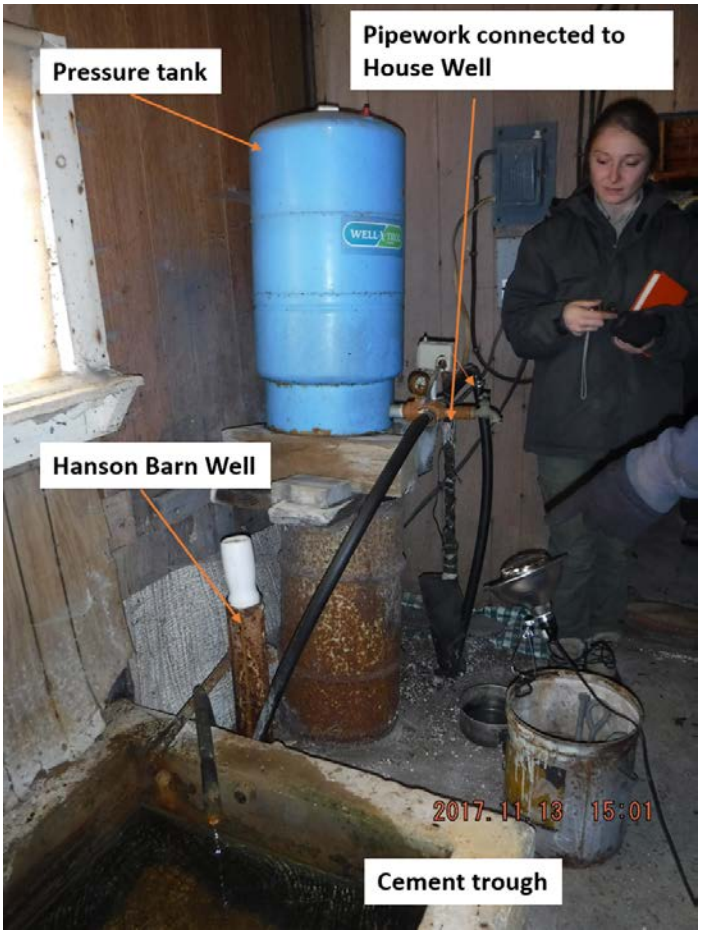
Photo B1: Hanson House Well on November 13, 2017.

Photograph taken on 11/13/2017 by DNR staff facing north.

Photo B2: Hanson House Well top of casing on November 13, 2017.

Photograph taken on 11/13/2017 by DNR staff facing north.

Photo B3: Hanson barn set up on November 13, 2017.



Photograph taken on 11/13/2017 by DNR staff facing southwest.

Photo B4: Hanson barn set up on February 14, 2018.

Photograph taken on 2/14/2018 by DNR staff facing southwest.

Photo B5: Hanson property overview on May 4, 2018.

Photograph taken on 5/4/2018 by DNR staff facing northeast.

Photo B6: Hanson House Well on May 4, 2018.

Photograph taken on 5/4/2018 by DNR staff facing northeast.

Photo B7: Discharge points on May 4, 2018.

Photograph taken on 5/4/2018 by DNR staff facing west.

Photo B8: Original submersible pump on May 4, 2018.

Photograph taken on 5/4/2018 by DNR staff facing north.

Photo B9: Hanson Barn Well on May 4, 2018.

Photograph taken on 5/4/2018 by DNR staff facing south.

Photo B10: Hanson House Well on September 6, 2018.

Photograph taken on 9/6/2018 by DNR staff facing northwest.

Photo B11: Hanson House Well water sample taken from inside the barn on September 6, 2018.

Photograph taken on 9/6/2018 by DNR staff. Water sample taken from hose near pressure tank connected Hanson House Well.

Photo B12: Hanson House Well water sample taken from spigot at the house on September 6, 2018.

Photograph taken on 9/6/2018 by DNR staff. Water sample taken from spigot at the house sourced from Hanson House Well.

Appendix C- Hydrogeologic Cross-sections

Lindgren (1996) identified various confined aquifers in this area and classified them into four categories:

1) Shallow- top of aquifer is less than 100 feet BGS and thickness ranges from 0 to 150 feet,
2) Intermediate- top of aquifer between 100 and 199 feet BGS and thickness ranges from 0 to more than 126 feet,
3) Deep- top of aquifer between 200 and 299 feet and thickness ranges from 0 to more than 126 feet, and
4) Basal- top of aquifer greater than 300 feet and thickness ranges from 0 to more than 126 feet.

The names shown on the following generalized hydrogeologic cross-sections use the confined aquifer classification by Lindgren (1996).

Lindgren (1996) further noted that, although aquifers may be lumped together under one name based on the depth criterion, there was generally insufficient information to define the extent of each one, so they do not necessarily comprise a single aquifer. The physical and hydraulic connectivity between them can vary greatly.

Figure C-1: Generalized hydrogeologic cross-section running north to south.

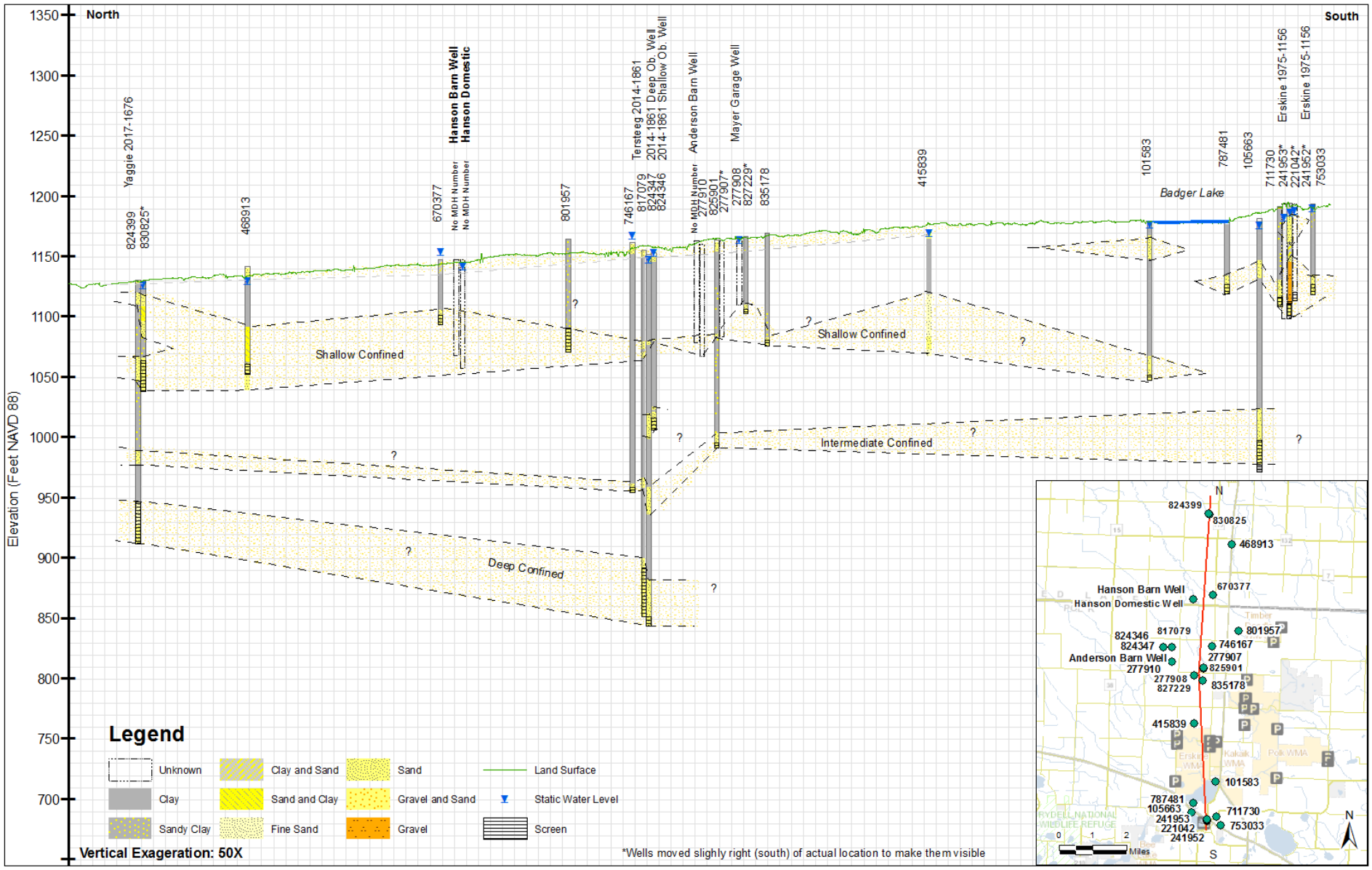
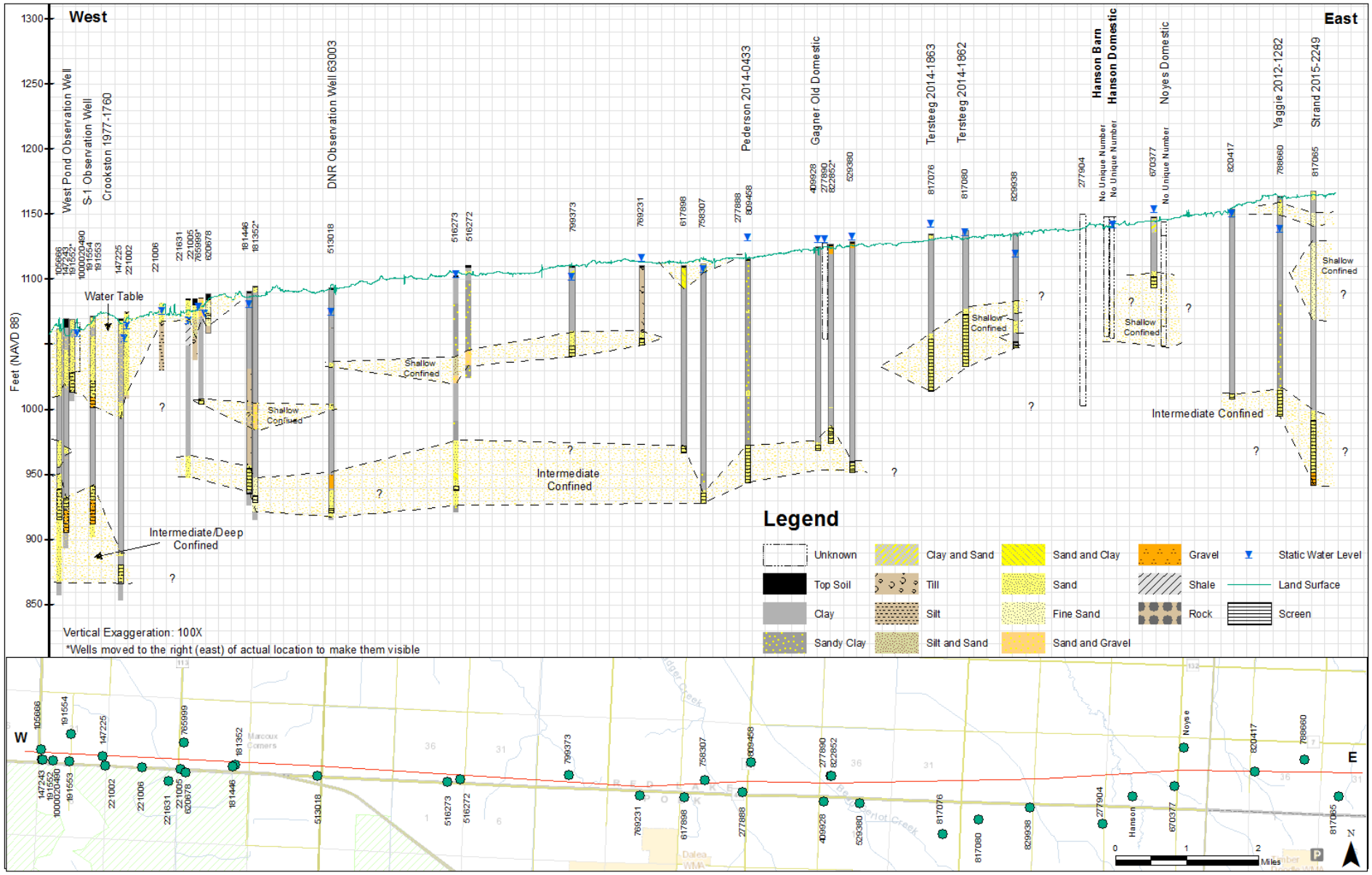


Figure C-2: Generalized hydrogeologic cross-section running west to east.



Nathan Kestner, Regional Manager, DNR EWR
Theresa Ebbenga, Assistant Regional Manager, DNR EWR
Tom Groshens, District Manager, DNR EWR
Michele Walker/Jennifer Rose, Groundwater Specialists, DNR EWR
Robert Guthrie, Groundwater Appropriation Hydrologist, DNR EWR
John Seaberg, Acting Hydrologist Supervisor
Myron Jesme, Red Lake Watershed District
Tanya Hanson, Red Lake SWCD

DEPARTMENT OF NATURAL RESOURCES

Ecological and Water Resources
500 Lafayette Road
St. Paul, MN 55155

January 15, 2019

Mr. Alex Yaggie
Yaggie Farms
PO Box 202
Plummer, MN 56748

Re: Domestic Well Interference Complaint, Red Lake County –Complaint found Not Valid
Water Appropriation Permits 2012-1282 and 2017-1676 in Red Lake County and 2014-0797 in Polk County

Dear Mr. Yaggie,

The Department of Natural Resources, Division of Ecological and Water Resources has completed its investigation regarding Mr. Larry Hanson's domestic well interference complaint near Erskine. Mr. Hanson's complaint, signed February 20, 2018, indicated he was experiencing loss of water.

Upon receipt of Mr. Hanson's completed complaint form, the Department conducted an investigation into the problem and concluded that the cause of his well interference is a faulty submersible pump. The nearby permitted appropriators did not drop water levels beyond the reach of his submersible pump.

Enclosed is the DNR Technical Review of the investigation. No further action will be taken.

Closure of this well interference complaint does not mean a future interference will not happen. If a future interference were to take place, it would be addressed through the same process.

If you have any questions, please call me at 651-259-5034 or contact me at Carmelita.nelson@state.mn.us.

Sincerely,

Carmelita Nelson
Well Interference Coordinator
651-259-5034
Carmelita.nelson@state.mn.us

Ec: Nicole Bernd – West Polk SWCD
Rachel Klein – East Polk SWCD
Nathan Kestner, Regional Manager, DNR EWR
Theresa Ebbenga, Assistant Regional Manager, DNR EWR
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Myron Jesme, Red Lake Watershed District
Tanya Hanson, Red Lake SWCD

DEPARTMENT OF NATURAL RESOURCES

Ecological and Water Resources
500 Lafayette Road
St. Paul, MN 55155

January 15, 2019

Mr. Earl Pederson
Pederson Farms
3077 County Highway 42
Bejou, MN 56516

Re: Domestic Well Interference Complaint, Red Lake County –Complaint found Not Valid
Water Appropriation Permit 2014-0433 in Red Lake County

Dear Mr. Pederson,

The Department of Natural Resources, Division of Ecological and Water Resources has completed its investigation regarding Mr. Larry Hanson's domestic well interference complaint near Erskine. Mr. Hanson's complaint, signed February 20, 2018, indicated he was experiencing loss of water.

Upon receipt of Mr. Hanson's completed complaint form, the Department conducted an investigation into the problem and concluded that the cause of his well interference is a faulty submersible pump. The nearby permitted appropriators did not drop water levels beyond the reach of his submersible pump.

Enclosed is the DNR Technical Review of the investigation. No further action will be taken.

Closure of this well interference complaint does not mean a future interference will not happen. If a future interference were to take place, it would be addressed through the same process.

If you have any questions, please call me at 651-259-5034 or contact me at Carmelita.nelson@state.mn.us.

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Robert Guthrie, Groundwater Appropriation Hydrologist, DNR EWR
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Myron Jesme, Red Lake Watershed District
Tanya Hanson, Red Lake SWCD

DEPARTMENT OF NATURAL RESOURCES

Ecological and Water Resources
500 Lafayette Road
St. Paul, MN 55155

January 15, 2019

Mr. Scott Tersteeg
80829 County Road 13
Olivia, MN 56277

Re: Domestic Well Interference Complaint, Red Lake County –Complaint found Not Valid
Water Appropriation Permits 2014-1861, 2014-1862, 2014-1863, 2016-0745, in Polk County

Dear Mr. Tersteeg,

The Department of Natural Resources, Division of Ecological and Water Resources has completed its investigation regarding Mr. Larry Hanson's domestic well interference complaint near Erskine. Mr. Hanson's complaint, signed February 20, 2018, indicated he was experiencing loss of water.

Upon receipt of Mr. Hanson's completed complaint form, the Department conducted an investigation into the problem and concluded that the cause of his well interference is a faulty submersible pump. The nearby permitted appropriators did not drop water levels beyond the reach of his submersible pump.

Enclosed is the DNR Technical Review of the investigation. No further action will be taken.

Closure of this well interference complaint does not mean a future interference will not happen. If a future interference were to take place, it would be addressed through the same process.

If you have any questions, please call me at 651-259-5034 or contact me at Carmelita.nelson@state.mn.us.

Sincerely,

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651-259-5034
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Myron Jesme, Red Lake Watershed District
Tanya Hanson, Red Lake SWCD

DEPARTMENT OF NATURAL RESOURCES

Ecological and Water Resources
500 Lafayette Road
St. Paul, MN 55155

January 15, 2019

Mr. Brent Strand
3542 6th St. E
West Fargo, ND 58078

Re: Domestic Well Interference Complaint, Red Lake County –Complaint found Not Valid
Water Appropriation Permit 2015-2249 in Red Lake County

Dear Mr. Strand,

The Department of Natural Resources, Division of Ecological and Water Resources has completed its investigation regarding Mr. Larry Hanson's domestic well interference complaint near Erskine. Mr. Hanson's complaint, signed February 20, 2018, indicated he was experiencing loss of water.

Upon receipt of Mr. Hanson's completed complaint form, the Department conducted an investigation into the problem and concluded that the cause of his well interference is a faulty submersible pump. The nearby permitted appropriators did not drop water levels beyond the reach of his submersible pump.

Enclosed is the DNR Technical Review of the investigation. No further action will be taken.

Closure of this well interference complaint does not mean a future interference will not happen. If a future interference were to take place, it would be addressed through the same process.

If you have any questions, please call me at 651-259-5034 or contact me at Carmelita.nelson@state.mn.us.

Sincerely,

Carmelita Nelson
Well Interference Coordinator
651-259-5034
Carmelita.nelson@state.mn.us

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Robert Guthrie, Groundwater Appropriation Hydrologist, DNR EWR

John Seaberg, Acting Hydrologist Supervisor, DNR EWR
Myron Jesme, Red Lake Watershed District
Tanya Hanson, Red Lake SWCD

Red Lake Watershed District

Permit # **19-001**

Status Report: **Approved**

Applicant Information

Name	Organization	Address	Email	Phone Number(s)
Earl Pederson	**Pederson Brothers**	**3077 County Hwy 42** **Bejou, MN 56516**		tel:**218-790-4106** mobile: fax:

General Information

(1) The proposed project is a:

Surface Drainage (New Ditch or Improvement)

(2) Legal Description

(3) County: **Red Lake** Township: **Emardville** Range: **42** Section: **16** 1/4: **Part of SW and SE**

(4) Describe in detail the work to be performed. **Clean north ditch of township road.**

(5) Why is this work necessary? Explain water related issue/problem being solved. **Improve agricultural land drainage.**

Status

Status	Notes	Date
Approved	**None**	**Jan. 24, 2019**
Received	**None**	**Jan. 3, 2019**

Conditions

P.A. #19001 – (re-apply of P.A. #16074 – expired) new permit 'scope of work' is the same Red Lake Watershed District (RLWD) approval as per approval of Emardville Township specs/conditions; proposed work is within township road Right-of Way. All excavation shall be consistent with the existing road and ditch slopes and there shall be no vertical excavation faces. Existing drainage/flow patterns shall not be changed or diverted. The RLWD has performed an elevation survey of the ditch bottoms, and existing culverts. A copy of the survey has been provided to the applicant with the proposed ditch grade for excavation. For proposed work on lands not owned by applicant, he/she must obtain, in writing, permission from the affected landowners to perform proposed work. Applicant is responsible for utility locates by calling Gopher 1. (1-800-252-1166)

NOTE: This permit does not relieve the applicant of any requirements for other permits which may be necessary from Township, County, State, or Federal Government Agencies.

Red Lake Watershed District

Permit # **19-002**

Status Report: **Approved**

Applicant Information

Name	Organization	Address	Email	Phone Number(s)
	Red Lake County Highway Department	**204 7th Street SE** **Red Lake Falls, MN 56750**		tel:**218-253-2697** mobile: fax:

General Information

(1) The proposed project is a:

Culvert Installation / Removal / Modification

(2) Legal Description

(3) County: **Red Lake** Township: **Terrebonne** Range: **43** Section: **27** 1/4: **SE1/4**

(4) Describe in detail the work to be performed. **Remove and replace existing center line 60" csp and 117" csp-a culvert with a 138"x88" RCPA in County Road No. 12.**

(5) Why is this work necessary? Explain water related issue/problem being solved. **Center line culvert is in need of replacement.**

Status

Status	Notes	Date
Approved	**None**	**Jan. 24, 2019**
Received	**None**	**Jan. 4, 2019**

Conditions

P.A. #19002 Red Lake Co. Hwy. Dept. (Co. Hwy. #12; CD #2) – Terrebonne Twp. – sec. 26, 27 - replace existing metal centerline culverts (2 – lines) with 1 – line of 138 in. concrete arch pipe. The proposed culvert flowline elevation shall be set in accordance with the legal ditch grade of CD #2 - approve

NOTE: This permit does not relieve the applicant of any requirements for other permits which may be necessary from Township, County, State, or Federal Government Agencies.

Red Lake Watershed District

Permit # **19-003**

Status Report: **Approved**

Applicant Information

Name	Organization	Address	Email	Phone Number(s)
	Polk County Highway Department	**820 Old Hwy 75 South Crookston, MN 56716**		tel:**218-281-3972** mobile: fax:

General Information

(1) The proposed project is a:

Road Grading

(2) Legal Description

(3) County: **Polk** Township: **Brandsvold** Range: **40** Section: **23** 1/4:

(4) Describe in detail the work to be performed. **Grade and widen CSAH 3. Will include culvert replacements.**

(5) Why is this work necessary? Explain water related issue/problem being solved. **CSAH 3 is deficient in slope, safety improvement.**

Status

Status	Notes	Date
Approved	**None**	**Jan. 24, 2019**
Received	**None**	**Jan. 10, 2019**

Conditions

P.A. #19003 Polk Co. Hwy. Dept. (Co. Hwy. #3) – Brandsvold & Queen Twps. – road project; (overlay, widen, shouldering, & culvert work) - approve

NOTE: This permit does not relieve the applicant of any requirements for other permits which may be necessary from Township, County, State, or Federal Government Agencies.

Red Lake Watershed District

Permit # **19-004**

Status Report: **Approved**

Applicant Information

Name	Organization	Address	Email	Phone Number(s)
	Garden Valley Technologies	**PO Box 259** **Erskine, MN 56535**		tel:**218-687-5251** mobile: fax:

General Information

(1) The proposed project is a:

Utility Installations

(2) Legal Description

(3) County: **Polk** Township: **Grove Park** Range: **43** Section: **33** 1/4:

(4) Describe in detail the work to be performed. **Install new fiber optic cables to replace existing cables. Protected water crossings will be directional bored.**

(5) Why is this work necessary? Explain water related issue/problem being solved. **Updating existing telephone lines.**

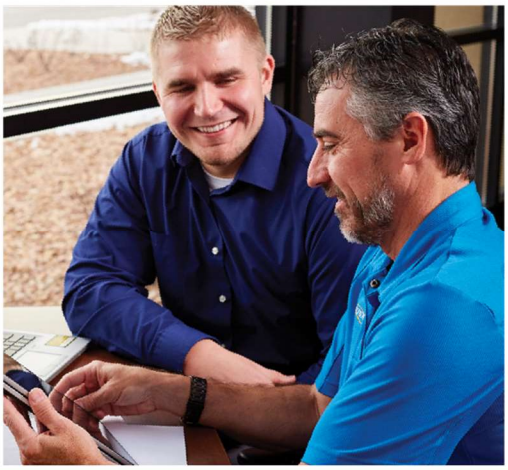
Status

Status	Notes	Date
Approved	**None**	**Jan. 24, 2019**
Received	**None**	**Jan. 18, 2019**

Conditions

P.A. #19004 – Garden Valley Telephone Co. – fiber optic cable installation Red Lake Watershed District (RLWD) approval as per approval of all affected road and ditch authorities and utilities; new lines shall be installed at a minimum of at least 3 feet below the flowline (channel bottom) of rivers, streams, ditches, legal and natural drains.

NOTE: This permit does not relieve the applicant of any requirements for other permits which may be necessary from Township, County, State, or Federal Government Agencies.


COPIER/PRINTER RECOMMENDATION

Prepared For:

Client Name:	Mr. Myron Jesme
Company Name:	Red Lake Watershed
Address:	
	Thief River Falls, MN 56701
Phone:	
Email:	
Date:	1/14/2018
Expiration Date:	

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Copier / Department	Current Canon C5045	New Canon C5550i II / Using MN State Contract Purchase Option	New Canon C5550i II / Using MN State Contract 60-Month Lease Option
Purchase / Lease		$ 7,199.28	$ 142.98
Maintenance Black	$ 0.014932	$ 0.0074	$ 0.0074
Monthly Black Average	8,333	3,000	3,000
Maintenance Color	$ 0.12442	$ 0.0550	$ 0.0550
Monthly Color Average	5,000	6,219	6,219
Maintenance Color	$ 0.12442		
Excess Color usage	1,219		
Total Facility Lease			$ 142.98
Total Facility Service & Supplies	$ 604.59	$ 369.25	$ 369.25
Total Facility Equipment, Service & Supplies	$ 604.59	$ 369.25	$ 512.22

State of Minnesota Contract #84336

Specifications

- NEW Canon C5550i II
- 50 BW Pages Per Minute
- 46 Color Pages Per Minute
- 100 Sheet Bypass Tray
- (2) 550 Sheet Paper Trays
- (1) 2,500 Sheet Large Capacity Tray
- 150 Sheet Single Pass Document Feeder
- Automatic Duplexing
- Color Network Printing and Scan
- External Stapler Finisher
- Scan to M-Files Capability
- Fax and PC Fax

- **Purchase Option..... $7,199.28**
- **60 Month FMV Lease Option .....$142.98 Month**

Service and Supplies

- **$369.25 Month Includes 3,000 BW Excess Billed @ .0074 / 6,219 Color Excess Billed @ .055**
- **Includes travel time, all parts, labor, drums and toner**
- **3 Year Service Rate Lock**

DELIVERY, INSTALLATION, INITIAL SUPPLIES AND INITIAL TRAINING

Delivery, Installation, Initial Supplies & Initial Training..... Included

Minnesota Association of Watershed Districts
www.mnwatershed.org | mnwatershed@gmail.com

The MAWD Legislative Reception and Day at the Capitol provide MAWD members with a great opportunity to build relationships with legislators and to advance issues important for maximizing the effectiveness of local watershed management entities.

MAWD will formally invite all legislators to join us for the Wednesday evening reception, but follow-up invitations from constituents are helpful.

SCHEDULE OF EVENTS

Location: The DoubleTree Hotel, 411 Minnesota Street, Saint Paul, MN 55101

Wednesday, February 20

9:30 A.M. – 1:00 P.M. MN Association of Watershed Administrators Meeting (595 Aldine St., St. Paul)

11:00 A.M. – 1:00 P.M. MAWD Board of Directors Meeting

2:00 P.M. - 4:30 P.M. MAWD LEGISLATIVE BRIEFING

- Overview of the 2019 MAWD legislative platform including talking points
- Presentations by lead agency staff
- Discussions with key legislators and committee chairs
- Training on "Tips and Tricks for Meeting with Legislators"

5:00 P.M. - 7:00 P.M. LEGISLATIVE RECEPTION

- An opportunity to visit with legislators in an informal setting

Thursday, February 21

8:00 A.M. - 4:00 P.M. DAY AT THE CAPITOL (on your own with shuttles provided)

- Meet with legislators (Contact information here: www.leg.state.mn.us/leg/legdir)
  - Please call your legislators at least one week in advance to schedule appointments.
  - They want to hear and connect with you while you are in town!
- Take a free guided tour of the Capitol (www.mnhs.org/capitol/activities/tours)
- Attend legislative committee hearings
  - Wednesdays 8-9:30 a.m. House Subcommittee on Water
  - Wednesdays 9:45-11:15 a.m. House Environment Policy
  - Wednesdays 10:30 a.m. – 12:00 Senate Environment and Natural Resource Finance
  - Thursdays 9:45 – 11:15 a.m. House Agriculture Finance
  - Thursdays 12:45 – 2:15 p.m. House Environment Finance

Save the Date

2019 Red River Watershed Management Board (RRWMB) & Flood Damage Reduction Work Group (FDRWG) 21st Annual Joint Conference

Mark your calendar for our upcoming 21st Annual Joint Conference.

Add To Calendar

March 20-21, 2019

A Sneak-Peek at a Couple Conference Presenters!

Don't Treat Your Soil Like Dirt

Soil is one of Earth's most vital and precious resources. It provides support and nourishment that plants need in order to grow. This session will explore soil health and the interconnection between the microbial life, organic matter, and soil structure as well as what you can realistically expect from your individual fields. We'll look at management options that improve the health and productivity of our soil.

Jodi DeJong-Hughes has been a Regional Educator with the University of Minnesota Extension for over 22 years. Her area of specialization includes tillage systems, soil compaction, and improving soil health. Jodi's work focuses on reducing soil erosion and building soil health to improve the grower's bottom line and to reduce the movement of soil and nutrients to our natural waterways. She enjoys working alongside growers, Ag. industry, and government agencies to bring high quality, educational programs and research to the people of Minnesota.

Understanding MN Landowners' Values, Attitudes & Behaviors towards Wildlife & Wildlife Habitat

This presentation reviews information collected by a 2016 survey of MN landowners. The main purpose of the study was to describe how landowners think about and relate to their land, wildlife and wildlife habitat.

Dr. Larry Gigliotti, is currently an Assistant Unit Leader for the USGS South Dakota Cooperative Fish and Wildlife Research Unit. Prior to this position at the South Dakota State University Larry worked for the South Dakota Game, Fish and Parks Department from 1993 – 2011. Larry's expertise is in the "human dimensions" of fish and wildlife management.

Conference will be held at the Courtyard Marriott1080 28th Ave South, Moorhead, MN.

__Driving Directions__

More details to follow as they are finalized.

2019 Red River Basin Drainage Conference
Tuesday - March 19, 2019
Marriott Hotel and Convention Center
Moorhead, MN

8:00 – 8:45 AM	**Registration**
8:45 AM	**Welcome** Robert Sip, Executive Director, RRWMB
8:50 AM	**Overview of Model Drainage Rules and Guidance in the Red River Basin of Minnesota** Louis Smith, Attorney, Smith Partners Law Firm
9:20 AM	**Overview of Drainage Rules and Regulations in the Red River Basin of North Dakota** Sean Fredricks, Attorney, Ohnstad Twitchell Law Firm
9:50 AM	**Break**
10:00 AM	**Incorporating Basin Technical and Scientific Advisory Committee Recommendations Into Local Drainage Projects** Chad Engels, Engineer, Moore Engineering
10:40 AM	**Multipurpose Drainage Water Management From a State Agency Perspective** Al Kean, Chief Engineer, BWSR
11:20 AM	**Implementing Multipurpose Drainage Water Management in Northwest Minnesota** Nate Dalager, Engineer, HDR
12:00 Noon	**Lunch**
1:00 PM	**Drainage Permitting Challenges and Successes** Mark Aanenson, Environmental Scientist, Houston Engineering
1:40 PM	**Implementing 103E Processes in the Red River Basin of Minnesota – Repairs, Maintenance, Redeterminations of Benefits, and Petitions** John Kolb, Attorney, Rinke – Noonan Law Firm
2:40 PM	**Minnesota Drainage Case Law Update** John Kolb, Attorney, Rinke – Noonan Law Firm
3:40 PM	**Break**
3:55 PM	**Panel Discussion** Moderator - Louis Smith, Attorney, Smith Partners Law Firm
4:45 PM	**Conclusion**

Red Lake Watershed District - Administrators Report

January 24, 2019

Red River Watershed Management Board – LeRoy, Les and I attended the RRWMB meeting held at the East Grand Forks City Hall at 9:30 am, January 15, 2019. This meeting will be held in conjunction with the Red Basin Commission Conference as well as the International Red River Board which are all held in Grand Forks.

I will be attending a RRWMB finance committee meeting this afternoon at 1:30.

Thief River 1W1P – Advisory and Policy Committee meeting was held at 9:30 am, Wednesday January 9, 2019 at the Red Lake Watershed District Board Room. The main objective for the meeting was to review Section 4 to develop a draft which can be submitted to the Policy Committee for approval. The Planning Committee had a five-hour meeting January 22 to review the Watershed-Wide Implementation Worksheet.

The intent is to get all the changes incorporated in the draft for Section 4, submit to the Advisory and Policy Committee for review. Then hopefully have that section approved at the next meeting scheduled for 9:00 am March 13th at the Red Lake Watershed District office.

MPCA Waters and Watershed Meeting – I have agreed to sit in at a round table discussion February 6th in Brainard, to discuss partnerships on developing projects. My part in the discussion will be sharing partnerships that we had while developing and constructing the Grand Marais Outlet Restoration and Cut Channel.

Myron Vacation – I will be on Vacation February 7th and 8th.

Water Quality Report – I have included in your packet the September 2018 Water Quality Report submitted by Corey.

RED LAKE WATERSHED DISTRICT
MONTHLY WATER QUALITY REPORT

September 2018

By Corey Hanson, Red Lake Watershed District Water Quality Coordinator. 1/23/2019.

- ✓ Water quality sampling results
- ✓ River Watch and other educational events

Wildflowers were blooming along the Grand Marais Creek Outlet Restoration

Red Lake Watershed District Long-Term Monitoring Program

A fourth round of sampling at long-term water quality monitoring sites was completed in September. Water quality was good at most of the 71 sites throughout the RLWD that were visited in this month, but high concentrations of pollutants were found in some locations.

High concentrations of *E. coli* bacteria (>126 MPN/100ml) were found:

- Branch A of Judicial Ditch 21
- Chief's Coulee at Dewey Ave in northern Thief River Falls
- Clearwater River at CSAH 24, near the Clearwater Lake inlet
- Clearwater River at CSAH 127
- Darrigan's Creek
- Heartsville Coulee at 13th St in East Grand Forks
- Judicial Ditch 73 upstream of Rydell NWR (191.8 MPN/100ml)
- Judicial Ditch 73 at the Maple Lake inlet (488.4 MPN/100ml – concentration increased from upstream of Rydell NWR to downstream of the NWR)
- Lost River upstream of Pine Lake
- Lost River at CSAH 8
- Moose River at CSAH 54
- Mud River at Hwy 89

- North Cormorant River at CSAH 36
- O' Briens Creek
- Polk County Ditch 14 at CSAH 10 near the Maple Lake Outlet
- Poplar River at CSAH 30, near Fosston
- Ruffy Brook at CSAH 11
- Thief River at 140th Ave NE (Hillyer Bridge)

High concentrations of total phosphorus (greater than the applicable river nutrient region standards) were found:

- Darrigan's Creek
- Heartsville Coulee at 13th St in East Grand Forks
- Hill River at 335th Ave SE, upstream of Hill River Lake
- Moose River at CSAH 54
- Mud River at Hwy 89
- North Cormorant River at CSAH 36
- O' Briens Creek
- Poplar River at CSAH 30, near Fosston
- Poplar River at 310th St. SE, South of Brooks
- Poplar River at County Road 118, NE of Brooks
- Ruffy Brook at CSAH 11
- Silver Creek at CR 111

A high concentration (>15 mg/L) of total suspended solids (excess sediment, muddy water) was found in the Moose River at CSAH 54. The September total suspended solids samples from the Red Lake River near Fisher, in Crookston, and near Gentilly (impaired reaches) met (were lower than) the 65 mg/L standard. International Water Institute staff reported that they had noticed excavation along the Mud River upstream of Highway 89. They also recorded elevated concentrations of total suspended solids in their July and August samples.

Low dissolved oxygen levels were found in:

- Clear Brook at CSAH 92
- Clearwater River at Tower Rd, south of Bagley
- Coburn Creek near Blackduck Lake.
- Heartsville Coulee at 13th St in East Grand Forks
- Judicial Ditch 30 at 140th Ave NE, north of Thief River Falls
- Judicial Ditch 73 upstream of Rydell NWR
- Judicial Ditch 73 at the Maple Lake inlet
- North Cormorant River at CSAH 36
- O' Briens Creek
- Walker Brook at CSAH 19

RED LAKE WATERSHED DISTRICT
MONTHLY WATER QUALITY REPORT

September 2018

Dry conditions (no flow) were found in some of the smaller streams that are monitored for the RLWD long-term monitoring program. Samples were not collected at sites that had no flow. Field measurements (stage, dissolved oxygen, temperature, pH, and specific conductivity) may have been recorded if there was standing water at the sampling locations

- Beau Gerlot Creek at County Road 114
- Black River at CSAH 18
- Burnham Creek at 320th Ave SW
- Grand Marais Creek at 110th St. NW
- Hill River at CSAH 35
- Kripple Creek at 180th Ave SW
- Lower Badger Creek at County Road 114
- Pennington County Ditch 21
- Polk County Ditch 1
- Polk County Ditch 2
- RLWD Ditch 15
- Terrebonne Creek at CSAH 92

Dry conditions (look at the dry sediment bar downstream) in the Black River on 9/11/2018

Dissolved Oxygen Logger Deployments

Dissolved oxygen loggers were deployed in August.

- Poplar River at CR 118 (Station S007-608 on Assessment Unit 09020305-504)
- Poplar River at 310th St. SE (Station S009-392 on Assessment Unit 09020305-518)
- Lost River at CSAH 7 (Station S004-500 on Assessment Unit 09020305-645)
- Lost River at Lindberg Lake Road (Station S005-501 on Assessment Unit 09020305-530)
- Mud River in Grygla (Station S008-122 on Assessment Unit 09020304-507)
- Grand Marais Creek at 130th St. NW (Station S008-904 on Assessment Unit 09020306-513)

Dissolved oxygen levels in the Poplar River at CR 118 and 310th St SE remained above 5 mg/L throughout the first week of September. The Poplar River dropped below 5 mg/L on and around 9/17/2018 (1 day at CR 118 and 3 days at 310th St) after several days of rainfall. The dissolved oxygen levels in the Lost River at Lindberg Lake Road remained above 5 mg/L in every day of the September deployments. The Lost River downstream of Anderson Lake at CSAH 7, however, experienced large fluctuations (as much as 6 mg/L) in dissolved oxygen levels and dissolved oxygen levels that regularly dropped below 5 mg/L. More investigation is needed to determine if dissolved oxygen levels in the river are influenced by dissolved oxygen levels and algae concentrations in Anderson Lake. Dissolved oxygen levels in the Mud River at Grygla regularly dropped below 5 mg/L. The dissolved oxygen logger in Grand Marais Creek was removed on September 4, 2018 because the stream was no longer flowing. The rest of the dissolved oxygen loggers were retrieved on September 24, 2018.

Clearwater River Watershed Restoration and Protection Strategy (WRAPS) Project

- Objective 10 – Report Writing
    - Actions and strategies were added to a list of Clearwater River WRAPS Restoration and Protection Strategies. The list was organized into a spreadsheet and shared with members of the Clearwater River WRAPS core team (technical advisory committee). Strategies were sorted by the HUC10 subwatershed(s) in which they will be implemented. Also, there is a table for strategies that will be implemented on a watershed-wide scale.

River Watch

River Watch Kick-Off events were held at the Ralph Engelstad Arena in Thief River Falls and in Grand Forks. More information about the River Watch Kick-Off events can be found in the October 2018 International Water Institute River Rendezvous newsletter: https://mailchi.mp/730d3bedd55d/iwi-river-rendezvous-newsletter-fall-2018?fbclid=IwAR2oZS90QrlT8--eVOmGnqQ47R1aePj4GrewvbEUDdxwJh1PR-mPnHC8_AU. “Schools come from all directions to attend a Kickoff event where they get to meet other River Watch teams, take notes on the Forum assignment, and enjoy a great view of the river from the seat of a canoe.” “All River Watch teams will be involved in watershed problem solving this year as they prepare for the River Watch Forum. Students will work with local groups and agencies to identify a problem in their watershed and then develop a proposal to solve that problem. This proposal will be complete with realistic action steps and will be submitted to River Watch staff in the form of an ArcGIS Story Map.”

Staff from the RLWD helped the Win-E-Mac River Watch program collect water quality data on September 20, 2018. RLWD Technician, Ashley Hitt, also spoke with 4th graders from Challenger Elementary School about watersheds, where our water flows, the importance of water quality, and water quality monitoring (with some hands-on transparency measurements).

RED LAKE WATERSHED DISTRICT
MONTHLY WATER QUALITY REPORT

September 2018

Grand Marais Creek Watershed Restoration and Protection Strategy (WRAPS)

Comments were received from the MPCA and EPA on the Grand Marais Creek WRAPS report. District staff used those comments to edit the TMDL report. The TMDL edits were completed and a revised version of the report was sent to the MPCA Project Manager on September 14, 2018.

Thief River One Watershed One Plan (TR1W1P)

RLWD staff reviewed a draft TR1W1P actions table and a draft version of Section 5 (Implementation Programs) of the plan. A table with 156 actions was reviewed by Planning Work Group and BWSR staff at a 95/2018 meeting. On 9/13/2018, the Planning Work Group met to discuss Section 5. Ideas for future capital improvement projects (projects that would cost more than $150,000) were added to the plan. Project partners gathered information for a table that describes estimated baseline funding available for plan implementation. The Planning Work Group participated in a phone conference to discuss the October meeting.

2018 Blue-Green Algae Blooms

District staff informed MPCA staff about the blue-green algae blooms that had been discovered throughout the District during the summer of 2018.

Mud River Blue-Green Algae Testing

Sampling and dissolved oxygen logger deployments in the Mud River continued in response to a past dog deaths from blue-green algae. The Mud River, in Grygla, was sampled in September and tested for the presence of blue-green algal toxins. The Abraxis test kit indicated that there were no measurable algal toxins present in the sample.

Other Notes

- Water quality related notes from the September 13, 2018 Red Lake Watershed District Board of Managers meeting:
    - The Red Lake River 1W1P Planning Work Group (PWG) met via telephone conference to discuss the budget for all LGU partners concerning the approved BWSR Clean Water Funds Grant. The intent of the meeting was to better develop an internal budget document for the LGU's to assist in their planning and funding in the future. A PWG meeting with BWSR and MPCA staff will be held on September 17th to discuss a potential MPCA 319 Grant application.
    - The Thief River PWG met at the Pennington SWCD to go over the Thief River 1W1P action document that was developed by Houston Engineering, Inc. This document was an attempt to put in action items from all LGU plans, into the Thief River 1W1P.
    - Staff member Hanson attended the Polk County WRAC meeting on September 11, 2018.

  - Staff members Hanson, Hitt and Slowinski participated in the Pennington County SWCD Outdoor Education Day for area youth in Pennington County.
  - Administrator Jesme participated in a phone conference with staff from HDR Engineering and MnDNR regarding the Burnham Creek Wildlife Management Area structure to discuss alternatives for the replacement of the outlet structure.
- Water quality related notes from the September 27, 2018 Red Lake Watershed District Board of Managers meeting:
  - Lisa Newton and Kelsey Hedlund, East Polk SWCD, presented the Shayne Munter Water and Sediment Basin project located in Section 35 of Hill River Township in Polk County. The project will reduce erosion along a private drainage system that flows directly into the Hill River. Newton stated that four berms with tile would be installed to allow for subsurface drainage instead of surface runoff and reduce erosion into the Hill River. The project's cost is estimated to be $32,979.60. Newton stated that they have 50% of cost share funds, with the landowner contributing 25% of the project costs. Newton requested the remaining 25% from the District's 2018 Erosion Control Funds in the amount of $8,244.90. Manager Dwight questioned the Clean Water Fund Grant application for the Clearwater River Watershed and Cameron Lake that the Board supported at their August 23, 2018 meeting. Newton stated that they did not apply for the Cameron Lake grant at this time. The Board approved a motion to contribute 25% of the project costs up to $10,000 for the Shayne Munter Water and Sediment Basin Project, from the District's 2018 Erosion Control Funds.
- There was a complaint about filamentous algae along the shore of Red Lake and a possible connection to discharge from wild rice paddies east of the lake.
- DNR and RLWD staff began planning an October geomorphic study of the Burnham Creek watershed. The goal of the work will be to find answers to some questions about the watershed:
  - Where is the channel actively eroding excessive sediment into the system?
    - If eroding, where is the channel in the evolutionary process? What can be done to guide the channel into a more stable form?
    - If not eroding, what factors are critical for stability? What protection steps can be taken to maintain stability?
  - Where is longitudinal connectivity creating poor connectivity conditions?
  - Where is lateral connectivity in poor condition, resulting in potentially decreased habitat and increased instability?
  - Where is the channel efficiently transporting sediment?
  - Where is the channel unable to transport the supplied quantity of sediment?
  - What channel management practices and land uses are contributing to sediment yield and river impairment?
  - How are the cumulative effects of various watershed processes affecting water resources?
- The MPCA provided an opportunity for local water managers to comment on the content and format of Watershed Restoration and Protection Reports via a survey.

RED LAKE WATERSHED DISTRICT
MONTHLY WATER QUALITY REPORT

September 2018

September 2018 Meetings and Events

- **September 5, 2018 –** Thief River One Watershed One Plan Planning Workgroup meeting to discuss the Section 4 actions table.
- **September 10, 2018 –** Pennington County Water Resources Advisory Committee meeting
    - SSTS Grants: Two systems are left to be upgraded along Chief's Coulee. A portion of Chief's Coulee between Dewey and Atlantic Avenues will be televised (inspected with a robotic camera system).
    - Ditch outlet analysis: Drone flights have been completed for the inspection of all but a "handful" of ditch outlets
    - The Pennington SWCD submitted a grant application of streambank stabilization projects along the Red Lake River within Thief River Falls and for a culvert inventory along Pennington County Ditch 96
    - Pennington SWCD staff reported that 2018 was a busy summer for the Wetland Conservation Act (WCA) program. They are working on a wetland replacement plan for the Black River Impoundment. They are going to hire a Conservation Planner and have placed an advertisement for the job opening in the newspaper. Matt Sorvig, a new technician at the SWCD, has been working on staking buffers and finding alternative practices. SWCD staff helped with a "Dirt Rich" soil health event.
    - RLWD staff gave an update on monitoring results, blue-green algae, WRAPS projects, and Clean Water Fund grant applications.
    - The City of Thief River Falls is working with engineers to include some enhancements like sedimentation ponds for the Westside Flood Damage Reduction Project. Mayor Holmer was appointed to the Red River Basin Commission.
- **September 11, 2018 –** Polk County Water Resources Advisory Committee
    - East Grand Forks applied for a grant to plant windbreaks along a ditch on the north side of the city.
    - The MPCA 319 Small Watersheds Program was discussed.
    - The Sand Hill Watershed District (SHWD) is officially pulling out of the Red River Watershed Management Board (RRWMB). There was discussion about the manner in which the exit occurred and potential reasons for the departure. RLWD staff did not comment on the issue.
    - Polk County Environmental Services is looking for help on how to do rain collection projects (technical aspects like rain garden design). The technical service area Conservation Engineer, Jim Hest, was recommended as a potential source of assistance in project design.
    - Well interference was discussed. Thirty-two verbal and formal complaints have been submitted. Twelve have been investigated. Eight of those have been resolved. The other four are still being actively investigated. Funding for geological surveys, which would help with managing groundwater resources in the county, has been cut.

  - Clifford Lake, within Rydell National Wildlife Refuge, has experienced a blue-green algae bloom.
  - Updates on the Red Lake River, Clearwater, and Grand Marais Creek TMDLs were provided by the MPCA and RLWD.
  - A WASCOB is being installed near the Hill River, upstream of Hill River Lake (see notes from the 9/27/2018 Board of Managers meeting in this report)
  - As of the end of August 2018, more than 5,000 parcels have been reviewed for Buffer Law compliance
  - Polk County Environmental Services deployed PVC pipe zebra mussel test kits in the Red River and in lakes. A bunch of zebra mussels were found on the East Grand Forks side of the river near the access. No zebra mussels have been found in Polk County lakes so far.
- **September 12, 2018 –** Pennington SWCD Outdoor Education Day at Oakland Park in Thief River Falls. RLWD staff helped with the water cycle, aquatic invasive species, and minnow racing stations

- **September 13, 2018 –** Thief River One Watershed One Plan Planning Work Group meeting to discuss Section 5: Implementation Programs
- **September 17, 2018 –** Red Lake River One Watershed One Plan Planning Work Group meeting to prepare for a meeting with the MPCA to discuss potential EPA funding for a targeted watershed restoration effort
  - This project will focus on a smaller watershed with near-field-scale comprehensive planning to achieve a measurable change in water quality in the Red Lake River between CD 96 and Red Lake Falls (Assessment Unit 09020303-504). Only a few watersheds in the state are being selected for this funding. If the Red Lake River is chosen, a detailed plan will be developed.
- **September 17, 2018 –** Meeting with the MPCA to discuss potential 319 grant funding for the Red Lake River
- **September 25, 2018 –** Northwest Minnesota Water Festival in Warren
- **September 26, 2018 –** Northwest Minnesota Water Festival in Fertile

RED LAKE WATERSHED DISTRICT
MONTHLY WATER QUALITY REPORT

September 2018

Northwest Minnesota Water Festival in Warren

Red Lake Watershed District Monthly Water Quality Reports are available online: http://www.redlakewatershed.org/monthwq.html.

Learn more about the Red Lake Watershed District at www.redlakewatershed.org.

Learn more about the watershed in which you live (Red Lake River, Thief River, Clearwater River, Grand Marais Creek, or Upper/Lower Red Lakes) at www.rlwdwatersheds.org.

"Like" the Red Lake Watershed District on Facebook to stay up-to-date on RLWD reports and activities.