

**PENNINGTON COUNTY
BOARD OF COMMISSIONER'S MEETING
COUNTY BOARD ROOM
TUESDAY, JANUARY 7TH, 2014, 10:00 A.M.**

AGENDA

Pledge of Allegiance

10:00 Reorganization

11:00 Peter Nelson – Pennington County SWCD
- Septic System Ordinance Review

11:15 Mike Flaagan – County Engineer
- Highway Dept. Items

County Auditor's Items

(This agenda is subject to change)

**OFFICIAL PROCEEDINGS
PENNINGTON COUNTY BOARD OF COMMISSIONERS
ORGANIZATIONAL MEETING
JANUARY 7th, 2014 – 10:00 A.M.**

Pursuant to M.S. 375.07, the Board of Commissioners of Pennington County met in the County Board Room in the Courthouse in Thief River Falls, Minnesota, on Tuesday, January 7th, 2014 at 10:00 a.m. Members present: _____
_____ Members absent:_____.

The County Board proceeded to organize for the year 2014 with the County Auditor-Treasurer assisting by calling for nominations for Chairman. Commissioner _____ nominated Commissioner _____ as Chairman for 2014. Commissioner _____ moved, seconded by Commissioner _____, that nominations cease and that a unanimous ballot be cast for Commissioner _____ as Chairman. Motion unanimously carried.

Commissioner _____ then called for nominations for Vice-Chairman. Commissioner _____ nominated Commissioner _____ as Vice-Chairman. Commissioner _____ moved, seconded by Commissioner _____, that nominations cease and that a unanimous ballot be cast for Commissioner _____ as Vice-Chairman. Motion unanimously carried.

Moved by Commissioner _____, seconded by Commissioner _____ that the County Board express their appreciation to Commissioner Hempel for serving as Chairman in 2013. Motion carried.

Moved by Commissioner _____, seconded by Commissioner _____, that the dates for the regular meetings of the Board will be the second Tuesday at 10:00 a.m. and the fourth Tuesday at 5:00 p.m. of each month unless otherwise called, with the exception of the January meeting that is set by law. Motion unanimously carried.

Moved by Commissioner _____, seconded by Commissioner _____, and pursuant to MS471.96, elected and appointed officials of the County be designated as representatives of the County in their respective State Association and are eligible for reimbursement of expenses by-law with presentation of verified claims. Motion unanimously carried.

Moved by Commissioner _____, seconded by Commissioner _____, to appropriate and set aside in the Revenue Fund and authorize the Auditor-Treasurer to pay necessary expenses for postage, freight, telephone, water, lights, and other utilities as provided by MS375.16 as amended. Motion unanimously carried.

Moved by Commissioner _____, seconded by Commissioner _____, that the County Board serve as a whole on the Road, Bridge, and Culvert Committee. Motion unanimously carried.

Moved by Moved by Commissioner _____, seconded by Commissioner _____, that the Human Services Committee consists of the County Board members and shall serve as a whole on the Human Services Committee. Motion unanimously carried.

Moved by Commissioner _____, seconded by Commissioner _____, to appoint Commissioner _____ to the Law Library Committee for 2014. Motion unanimously carried.

Commissioner _____ introduced the following resolution and moved for its adoption:

RESOLUTION

BE IT RESOLVED that the official newspaper of Pennington County shall be The Times for the year 2014, published weekly, each Wednesday, in Thief River Falls.

The foregoing resolution was duly seconded by Commissioner _____, and upon vote was unanimously adopted.

Moved by Commissioner _____, seconded by Commissioner _____, that Commissioners _____ and _____, along with Kenneth Olson, are appointed to the Building and Maintenance Committee to oversee the Courthouse; with the addition of Sheriff Kuznia for matters pertaining to the Law Enforcement Center, and Ken Yutrzenka for matters pertaining to the Welfare Building. Motion unanimously carried.

Moved by Commissioner _____, seconded by Commissioner _____, that Commissioner _____ and Kenneth Olson be appointed to represent Pennington County on the Thief River Falls Regional Airport Zoning Commission for the year 2014. Motion unanimously carried.

Commissioner _____ introduced the following resolution and moved its adoption:

RESOLUTION

BE IT RESOLVED, that pursuant to the by-laws of the Association of Minnesota Counties; the following officers are named delegates of the County of Pennington, to-wit: Commissioners, Engineer, and Auditor-Treasurer. Other officers may be authorized by the Board to attend as non-voting members.

The foregoing resolution was duly seconded by Commissioner _____, and upon vote was unanimously carried.

Moved by Commissioner _____, seconded by Commissioner _____, to appoint Commissioner _____ to represent Pennington County on the Thief River Falls Chamber of Commerce Board. Motion unanimously carried.

Moved by Commissioner _____, seconded by Commissioner _____, to appoint Commissioner _____ to the Inter-County Community Council Board for a one-year term beginning January 1, 2014. Motion unanimously carried.

Moved by Commissioner _____, seconded by Commissioner _____, that Commissioner _____ be appointed to the Northwest Regional Development Commission Transportation Committee. Motion unanimously carried.

Moved by Commissioner _____, seconded by Commissioner _____, to appoint Kenneth Olson as MCCC delegate with Angela Philipp as alternate. Motion unanimously carried.

Moved by Commissioner _____, seconded by Commissioner _____, to appoint Commissioner _____ to the Job's Inc. Advisory Board with Commissioner _____ as alternate. Motion unanimously carried.

Commissioner _____ moved, seconded by Commissioner _____, to appoint Commissioners _____ and _____ to serve on the County Extension Committee for 2014. Motion unanimously carried.

Moved by Commissioner _____, seconded by Commissioner _____, that Commissioner _____ be appointed to the Pennington County Historical Society Board. Motion unanimously carried.

Moved by Commissioner _____, seconded by Commissioner _____, that Commissioner _____ be appointed to the Comprehensive Local Water Plan Joint Powers Board. Motion unanimously carried.

Commissioner _____ moved, seconded by Commissioner _____, to appoint Commissioners _____ and _____ to the Solid Waste Committee for 2014. Motion unanimously carried.

Commissioner _____ moved, seconded by Commissioner _____, to appoint Commissioners Peterson and Commissioner _____ to the Highway Committee for 2014. Motion unanimously carried.

Commissioner _____ moved, seconded by Commissioner _____, to appoint Commissioner _____ to the Household Hazardous Waste Joint Powers Board with Commissioner _____ as alternate. Motion unanimously carried.

Commissioner _____ moved, seconded by Commissioner _____ that Commissioner _____ be appointed to the Land of the Dancing Sky Area Agency on Aging Board and Region I Aging Advisory Committee. Motion unanimously carried.

The County Board reviewed the insurance premiums for the County's Workmen's Compensation, Property, Liability and error and omission policies. The insurance policies are all through the Minnesota Counties Intergovernmental Trust. Commissioner _____ moved, seconded by Commissioner _____, to approve the insurance premium rates for 2014 and authorize the County Auditor-Treasurer to pay as presented. Motion unanimously carried.

Commissioner _____ moved, seconded by Commissioner _____, to re-appoint Kenneth Olson to the Regional Insurance Advisory Board of the Northwest Service Cooperative with Angie Philipp as alternate. Motion unanimously carried.

The County Board reviewed a list of Committee, Boards, and meetings that would allow for a per diem to be paid. Moved by Commissioner _____, seconded by Commissioner _____, to approve the following list of committees, boards, and meetings as meetings authorized to charge a per diem of attending on behalf of Pennington County. Motion unanimously carried.

- Airport Advisory Committee
- AMC Legislative Review Committee
- Annual Township meetings
- Area Transportation Plan
- Association of Minnesota Counties Meetings
- Budget Committee
- Building and Maintenance Committee
- BWSR Wetland Meetings
- Chamber of Commerce
- Comprehensive Local Water Plan Joint Powers Board
- Extension Committee
- Family Service Collaborative
- Feedlot meetings
- Gravel Tax Committee
- Highway Committee
- Household Hazardous Waste Meetings
- Insurance Committee

Inter-County Community Council
Job's Inc. Board
Joint City/County Meetings
Juvenile Training Center Board
Law Enforcement Radio Committee
Law Enforcement Union Negotiation Committee
Law Library Committee
Legislative Hearing & Issues
Minnesota Rural Counties Caucus
MNDOT County – Joint Facilities Committee
Multi-Events Center
Northern Counties Land Use Coordinating Board
Northland Community and Technical College
Northwest Minnesota Joint Powers Board
Northwest Regional Library Board
Northwest Regional Radio Board
NWRDC Committee on Aging
NWRDC Transportation Committee
Pembina Trail RC&D
Pennington County Housing Loan Fund
Pioneer Village Board
Red Lake Watershed Meetings
Red River Basin Joint Powers Board
Red River Valley Development
Road, Bridge, and Culvert Committee
Rocksbury Joint Zoning Board
Solid Waste Committee
Technology Committee
Thief River Falls Regional Airport Authority
Thief River Forward
Special County Board Meetings
Thief River Falls Library Board
Human Service Committee
Welfare Union Negotiation Committee

Also any other Committees that are established by the County Board or appointments made or meeting attended while representing Pennington County.

Motioned by Commissioner _____, seconded by Commissioner _____, to appoint Commission _____ to the Northwest Regional Library Board for 2014. Motion unanimously carried.

Motioned by Commissioner _____, seconded by Commissioner _____ to appoint John W. Johnson to the Northwest Regional Library Board for 2014. Motion unanimously carried.

Motioned by Commissioner _____, seconded by Commissioner _____, to appoint Commissioner _____ to the Minnesota Rural Counties Caucus for 2014, with Commissioner _____ as alternate. Motion unanimously carried.

Motioned by Commissioner _____, seconded by Commissioner _____, to appoint Commissioners _____ and _____ to the Northern Counties Land Use Board for 2014. Motion unanimously carried.

Motioned by Commissioner _____, seconded by Commissioner _____, to appoint Commissioner _____ as Pennington County's representative on the Northwest Minnesota Regional Emergency Communications Board with Commissioner _____ as alternate. Motion unanimously carried.

Motioned by _____, seconded by Commissioner _____, to appoint Commissioner _____ to the Pennington County Affordable Housing Fund Advisory Board. Motion unanimously carried.

The following resolution was motioned by Commissioner _____, seconded by Commissioner _____, and upon vote was unanimously carried.

RESOLUTION

BE IT RESOLVED, that an employee that has been given a County vehicle for their use and the employee chooses to use their own vehicle anyway, the employee will not be reimbursed the County mileage rate unless the vehicle assigned to them is inoperable.

BE IT FURTHER RESOLVED, that the meal reimbursement for travel outside the County shall not exceed \$15 for breakfast, \$20 for a noon meal and \$30 for an evening meal; that meal reimbursement shall be made for the exact expenditure and not the maximum amount allowed; itemized receipts, not totals receipts, must be attached to the claim form or no reimbursement will be made; no alcoholic beverages or tips will be reimbursed,

BE IT FURTHER RESOLVED, that there shall be no reimbursement for meals within the County of Pennington,

BE IT FURTHER RESOLVED, that the meal reimbursement without lodging shall be submitted on a claim form, with receipt (s) attached, to be processed through payroll whereby withholding tax and FICA will be deducted and that meal reimbursements with overnight lodging will not enter into the payroll system,

BE IT FURTHER RESOLVED, that the County Auditor and Welfare Director are hereby given the authority to adjust the amounts of reimbursement if the above policy is not followed,

BE IT FURTHER RESOLVED that this meal and mileage policy shall be effective January 1st, 2014 and shall be reviewed at the County Board's discretion.

Motioned by Commissioner _____, seconded by Commissioner _____, to appoint Commissioner _____ to the Inter-County Nursing Service Board. Motion unanimously carried.

Motioned by Commissioner _____, seconded by Commissioner _____, to appoint Commissioners _____ and _____ to the Personnel Policy and Labor Negotiation Committee for 2014, with Commissioner _____ to chair the committee. Motion unanimously carried.

Motioned by Commissioner _____, seconded by Commissioner _____, to appoint Commissioner _____ to the Thief River Forward Committee. Motion unanimously carried.

Motioned by Commissioner _____, seconded by Commissioner _____, to appoint Commissioner _____ to the Pennington County Safety Committee. Motion unanimously carried.

Motioned by Commissioner _____, seconded by Commissioner _____, to appoint Commissioners _____ and _____ to the Technology Committee. Motion unanimously carried.

Motioned by Commissioner _____, seconded by Commissioner _____, to appoint Commissioner _____ to the Gravel Tax Committee. Motion unanimously carried.

Motioned by Commissioner _____, seconded by Commissioner _____, to appoint Commissioners _____ and _____ to the Law Enforcement Committee. Motion unanimously carried.

Motioned by Commissioner _____, seconded by Commissioner _____, to appoint Commissioner _____ to the Red River Basin Joint Powers Board. Motion unanimously carried.

Motioned by Commissioner _____, seconded by Commissioner _____, to appoint Commissioner _____ to the Thief River Falls/Rocksbury Township Joint Zoning Board. Motion unanimously carried.

Motioned by Commissioner _____, seconded by Commissioner _____, to appoint Commissioner _____ as Pennington County's representative on the Thief River Falls Regional Airport Board. Motion carried.

PENNINGTON COUNTY
SEWAGE AND WASTEWATER TREATMENT ORDINANCE

SUBDIVISION 1 GENERAL PROVISIONS

1.10 PURPOSE

The purpose of the Sewage and Wastewater Treatment Ordinance shall be to provide minimum standards for the regulation of ~~individual~~ subsurface sewage treatment systems (SSTS) and septage disposal; including the proper location, design and construction; their necessary modification and reconstruction; their operation, maintenance and repair to protect surface water and ~~potable~~ groundwater from contamination by human sewage and waterborne household and commercial wastes; to protect the public's health and safety, and eliminate or prevent the development of public nuisances pursuant to the authority granted under ~~Minnesota Statutes chapters 115 and 145A and Minnesota Rules Chapter 7080~~ MN Statutes, Section 115.55; MN Statutes, Sections 145A.01 through 145A.08; MN Statutes, Section 375.51; or successor statutes, MN Rules 2006, Chapter 7080, and elements of 2011 Rules from Chapters 7080, 7081, 7082 and 7083 or successor rules and to local standards amending state law pertaining to sewage and wastewater treatment.

1.20 OBJECTIVES

The principal objectives of this section shall include the following:

1.21 The protection of Pennington County's lakes, wetlands, rivers and streams and supplies of ~~potable~~ groundwater essential to the promotion of public health, safety and welfare; the protection of the County's environment and its socioeconomic growth and development of the County in perpetuity.

1.22 Given the extensive resources and numerous supplies of surface water and ~~potable~~ groundwater and their susceptibility to contamination, regulation of proper ~~ISTS~~ SSTS construction, reconstruction, repair and maintenance and proper septage disposal is essential to prevent the entry and migration of contaminants, thereby ensuring the non-degradation of surface water and ~~potable~~ groundwater.

1.23 The provision of establishing minimum standards for ~~ISTS~~ SSTS placement, design, construction, reconstruction, repair and maintenance to

prevent contamination and, if contamination is discovered, to identify and control its consequences and abate its source and migration.

1.24 The prevention and control of water-borne disease, lake degradation, ~~and potable groundwater~~ related hazards, ~~and~~ public nuisance conditions through plan reviews, inspections and complaint investigation, as well as through technical assistance and education.

1.25 Provide rules, regulations, enforcement, and design standards for areas of the County which previously had not been ordinances. Specifically those areas which are not in a designated Shoreland/Flood plain area, a well head protection area or a business otherwise regulated by stricter State standards.

1.30 SCOPE

~~This section shall regulate the design, construction and repair of ISTS in Pennington County, including but not necessarily limited to individual on-site and cluster or community ISTS privy vaults and other non-water carried ISTS, repair and/or replacement of failing existing ISTS.~~

All sewage generated in unsewered areas of the County shall be treated and dispersed by an approved SSTS that is sited, designed, installed, operated, inspected and maintained in accordance with the provisions of this Ordinance or by a sewage treatment system that has been permitted by the MPCA.

SUBDIVISION 2 ADMINISTRATION

2.10 STANDARDS ADOPTED BY REFERENCE

~~This Ordinance hereby adopts by reference Minnesota Rules Chapter 7080, sections 7080.0020m 7080.0060, 7080.0065, 7080.0110, 7080.0120, 7080.0125, 7080.0130, 7080.0150, 7080.0160, 7080.0170, 7080.0175, 7080.0176, being the sections containing the technical standards and criteria contained in the “Individual Sewage Treatment Systems Program”.~~

This Ordinance hereby adopts by reference the 2006 MN Rules, Chapter 7080 as the alternative local standards for new and replacement residential systems with a flow of 2500 gallons per day or less. The County hereby adopts by reference the 2011 MN Rules, chapters 7080 and 7081 for new and replacement systems using greater than 2500 gallons per day. This adoption does not supersede the County’s right or ability to adopt local standards that are in compliance with MN Statute 115.55.

2.20 ADMINISTRATION BY STATE AGENCIES

~~2.21 For an on-site ISTS a SSTS, or group of systems that are located on adjacent properties and under single ownership, the owner or owners shall make an application for and obtain a State Disposal System Permit from the Minnesota Pollution Control Agency if the on-site ISTS SSTS or group of systems are designed to treat an average flow greater than 10,000 gallons per day.~~

The owner or owners of a single SSTS or a group of SSTS under common ownership must obtain an State Disposal System permit from the Minnesota Pollution Control Agency when all or part of proposed or existing soil dispersal components are within one-half mile of each other and the combined flow from all proposed and existing SSTS is greater than 10,000 gallons per day. The flow must be determined according to chapter 7081.0040.

2.22 For dwellings including apartments, townhouses, resort units, rental cabins and condominiums, the sum of the flows from all existing and proposed sources under single management or ownership will be used to determine the need for a State Disposal System Permit.

2.23 ~~ISTS~~ SSTS serving establishments or facilities licensed or otherwise regulated by the State of Minnesota including, but not limited to: campgrounds, resorts, mobile home parks, and eating and drinking establishments, shall conform to state and local requirements and require approval by the State of Minnesota.

2.24 Any ~~ISTS~~ SSTS requiring approval by the State of Minnesota shall also comply with all local codes and this section.

2.25 Plans and specifications must receive appropriate State and Local approval before construction is initiated.

2.26 This Ordinance shall apply ~~only~~ to unsewered areas of Pennington County, ~~which are considered to be "Permit by Rule"~~. Any areas of the County which are already ordained through a designated Shoreland/Floodplain area, well head protection area or business licensed through the Minnesota Department of Health shall be governed by the stricter State standards and will not be allowed use of the Ordinance.

2.30 ADMINISTRATION BY PENNINGTON COUNTY

The Department shall regulate ~~ISTS~~ SSTS and septage disposal in Pennington County pursuant to this section.

2.31 The Department shall have the following duties and responsibilities:

- A.** To review all applications for ~~ISTS~~ SSTS in ~~Shoreland~~ designated unsewered areas of the County;
- B.** To issue all permits required by this Ordinance;
- C.** To investigate complaints regarding ~~ISTS~~ SSTS and septage disposal;
- D.** To review Certificates of Compliance or Notices of Non-Compliance where appropriate;
- E.** To issue Stop Work Orders and Notices of Violation, as applicable, pursuant to this section;
- F.** To maintain proper records for ~~ISTS~~ SSTS construction, reconstruction, inspection and repair in the ~~Shoreland/Floodplain~~ designated areas of Pennington County. ~~and inspection reports for ISTS constructed outside of the Shoreland/Floodplain designated areas.~~

2.32 Neither the issuance of permits, Certificates of Compliance nor Notices of Non-compliance as requested or issued shall be construed to represent a guarantee or warranty of the system's operation, or effectiveness. Such certificates signify that the system in question is or has been designed and installed in compliance or non-compliance with the provisions of these standards and regulations.

2.40 DEFINITIONS

As-Builts: Drawings and documentation specifying the final in place location, size and type of all system components. These records identify the results of materials testing and describe the conditions during construction. As-Builts contain a certified statement.

Bedroom: Any room used principally for sleeping purposes, and all-purpose room, a study, or a den. A room planned and intended for sleeping.

Certificate of Compliance: ~~ISTS~~ ~~A document from a licensed sewage treatment inspector fully licensed by the State of Minnesota or a qualified employee, provided to the owner of property on which a dwelling is located which is required to have an ISTS and provided to the local unit of government (LUG), indicating that said ISTS is not a failing system nor an imminent threat to public health or safety and, for new construction and replacement, is constructed in compliance with Minnesota Rules, Chapter 7080, as amended.~~ A document written after a compliance inspection certifying that a system is in compliance with applicable requirements at the time of inspection.

Compliance Inspection: Any evaluation, investigation, inspection, or other such process to make conclusions, recommendations, or statements regarding a individual SSTS, to reasonably assure a individual SSTS is in compliance as specified under part 7080.0060 as amended. Compliance inspections must be conducted by a State licensed inspector or under a license independent of the owner and the installer.

Department: The agency or agent designated by Pennington County that is a qualified employee or licensee. Environmental Administrator or other designated agent who is a qualified employee or licensee.

Failing System: At a minimum, a SSTS that fails to protect groundwater. This includes one that discharges sewage to a seepage pit, cesspool, drywell, leaching pit, or other pit; a SSTS with less than the required vertical separation distance as described in chapter 7080.0060 Subp 3; less than 3 feet of vertical separation in systems located in the floodplain and SWF and a system not abandoned in accordance with part 7080.0176. The determination of the threat to groundwater for other conditions shall be made by a Qualified Employee or State licensed inspection business.

Imminent Threat to Public Health or Safety (ITPHS): At a minimum, SSTS with a discharge of sewage or sewage effluent to the ground surface, drainage systems, ditches, or storm water drains or directly to surface water; SSTS that cause reoccurring sewage backup into a dwelling or other establishment; SSTS with electrical hazards; or sewage tanks with unsecured, damaged, or weak maintenance access covers. The determination of protectiveness for other conditions must be made by a Qualified Employee or a State licensed inspection business.

Individual Sewage Treatment Systems (ISTS): A sewage treatment system, or part thereof, serving a dwelling, or other establishment, or group thereof, and using sewage tanks or advanced treatment followed by soil treatment and disposal with a design flow of less than 5,000 gallons per day. Individual sewage treatment system includes holding tanks and privies.

Inspector: An individual qualified to review proposed plans and inspect ~~ISTS~~ SSTS, and who meet the licensure licensed and certified by the registration requirements of the Minnesota Pollution Control Agency.

Management Plan: A plan that describes necessary and recommended routine operational and maintenance requirements, periodic examination, adjustment, and testing, and the frequency of each to ensure system performance meets the

treatment expectations, including a planned course of action to prevent an illegal discharge.

MPCA: Minnesota Pollution Control Agency.

MSTS: A “midsized subsurface sewage treatment system” under single ownership that receives sewage from dwellings or other establishments having a design flow of more than 5,000 gallons per day to a maximum of 10,000 gallons per day.

Qualified Employee: A person who conducts site evaluations or designs; installs, maintains, pumps, or inspects individual subsurface sewage treatment systems as part of employment duties and is certified on the ~~ISTS-SSTS~~ professional register with specialty area endorsements applicable to the work being conducted. A qualified employee may be an apprentice if the individual has specialty area endorsements applicable to the work to be completed, has fulfilled the contractual requirement under Chapter 7080, 7081, 7082, 7083 and has been issued performance restrictions.

Redoximorphic Features: A color pattern in soil, formed by oxidation and reduction of iron or manganese in saturated soil coupled with their removal, translocation, or accrual, which results in the loss (depletion) or gain (concentration) of mineral compounds compared to the matrix color. Redoximorphic features also means: a soil matrix color controlled by the presence of ferrous iron.

Septage: Solids and liquids removed ~~during periodic maintenance of~~ from a ~~ISTS SSTS~~, or solids and liquids which are removed from toilet waste treatment devices or a holding tank.

Sewage: Any water-carried domestic waste, exclusive of footing and roof drainage, from any dwelling or ~~any other structure. industrial, agricultural or a commercial establishment.~~ Domestic waste includes liquid waste produced by toilets, bathing, laundry, culinary operations, and the floor drains associated with these sources, and specifically excludes animal waste and commercial or industrial wastewater.

Shoreland/Floodplain Development Application: The term includes, but is not limited to applications for the following: construction permits, ~~ISTS-SSTS~~ permits, vegetative alteration permits, topographic alteration permits, or other types of Shoreland/Floodplain permits such as conditional use permits, amendments to this Ordinance, variances from the provisions of the Ordinance, and the subdivision of real estate. The application is not considered complete and will

not be accepted by the Department unless all fees are paid, preliminary reviews and approvals completed, submitted with associated supporting information and documents, and such other information as required by the Department.

Soil Treatment System: A system where sewage effluent is treated and disposed of into the soil by percolation and filtration, and includes trenches, seepage beds, at-grade systems, and mound systems.

SSTS: Subsurface sewage treatment systems including ISTS and MSTs. Individual Sewage Treatment Systems (ISTS) have a design flow of 5,000 gallons per day or less. Midsized Subsurface Sewage Treatment System (MSTS) have a design flow of 5,000 to 10,000 gallons per day.

SWF: Shoreland, wellhead protection areas, food, beverage, and lodging establishments.

Toilet Waste Treatment Devices: Privies and other devices including incinerating, composting, biological, chemical, recirculating, or holding toilets.

SUBDIVISION 3 PERMITTING

3.10 PERMITS REQUIRED

~~A permit shall be obtained whenever any ISTS in Pennington County is installed, replaced, altered, repaired or extended within designated Flood plain or Shoreland. Installation, replacement, alteration, repair, or extension of a ISTS-SSTS shall not begin without first making an application for a permit and obtaining said permit from the Department for each specific installation, replacement, alteration, repair or extension pursuant to this Ordinance. Such permits are not transferable as to another person or place. Such permits shall expire 12 months after date of issuance. A permit shall not be required for the work identified under Subdivision 3.2 of this Ordinance.~~

3.11 Posting of Permits Permits shall be provided by permittee at the time of inspection upon request of inspector.

~~**3.13 Permit by Rule** Any ISTS system repaired, replaced, altered, extended or installed within Shoreland/Floodplain designated areas must have a permit issued by the Department, prior to construction. However, ISTS-SSTS systems in Pennington County which are outside the designated Shoreland/Floodplain designated areas and which do not conflict with existing well management, well head protection areas, or to systems regulated by the Minnesota Department of Health, or to systems regulated by a city or township may construct through a Permit by Rule.~~

~~Any ISTS system repaired, replaced, altered, extended or installed within the Permit by Rule designated area will be considered permitted, upon receipt of a copy of the Notice of Compliance, delivered to the Department and which was issued by an MPCA licensed inspector.~~

3.12 Operating Permits An Operating Permit shall be required of all owners of new holding tanks, Type IV, Type V, and MSTs.

3.20 PERMITS NOT REQUIRED

Permits shall not be required for the following for repair or replacement of pumps, floats or other electrical devices of the pump or baffles in a septic tank.

~~**3.21** Repair or replacement of pumps, floats or other electrical devices of the pump or baffles in a septic tank within the designated Shoreland/Floodplain area.~~

~~**3.22** ISTS work done outside the designated Shoreland/Floodplain area with direct application to Subdivision 3.13~~

~~**3.30 PROPERTY OWNERS DOING OWN WORK (SEE SECTION 7.2)**~~

~~Property owners are permitted to construct or repair ISTS on their own properties without a State license; however, owners doing their own work must comply with Subdivision 3.10 as well as other applicable provisions of this Ordinance. A property owner shall consult with a person holding a current license issued by the Minnesota Pollution Control Agency for Designer I or II if they wish to perform the site evaluation or design their own ISTS. All systems must be inspected by a State licensed inspector and a Certificate of Compliance filed with the County.~~

3.30 PERMIT APPLICATION REQUIREMENTS

3.31 Permit Application Information All applications for a ISTS SSTS Permit shall include the following information:

- A. Name and address of property owner.
- B. Legal description of the property.
- C. ISTS SSTS designer's name, address, phone number and State ISTS SSTS License number (or Department Qualified Employee name and number).
- D. Site evaluation report on a form as provided by the University of Minnesota. Including soil observations made in exposed pits or by hand augering prior to construction. The depth to periodically saturated soil shall be determined by section 4.10 of this ordinance. The soil boring log

with soil verification signatures shall be submitted with the design by the licensed designer to the Department.

- E. System design with full information including applicable construction information on forms as provided by the State and/or Department.
- F. Any other information requested pertinent to the Shoreland/Floodplain designated areas.
- G. On lots created after January 23, 1996, the system design shall include at least one designated additional soil treatment area which can support a standard, Type I, soil treatment system.
- H. Any other pertinent information as required by the ~~County~~ Department.

3.32 Application Review and Approval If after consideration of the application for a permit, the Department is satisfied that the work contemplated conforms to and complies with provisions of this Ordinance; the department shall issue a written permit granting ~~preliminary~~ approval authorizing ~~initiation~~ of construction of the system as designed.

3.33 Incomplete Application Information If after consideration of the application for a permit, the Department is not satisfied that the work contemplated will ~~not~~ conform to or comply with the provisions of this Ordinance; the Department shall deny the application for a permit. Notice of such denial shall be served on the applicant or permittee. The notice shall state the reason for denial. The permit application may be revised or corrected and resubmitted to the Department at any reasonable time for reconsideration.

3.34 Design Alteration Proposals to alter the permitted construction shall be reviewed and the proposed change accepted by the ~~inspector~~ designer prior to construction.

3.40 FEES

The Pennington County Board of Commissioners shall establish fees for permits required by this Ordinance. Fees shall be due and payable at the time of permit issuance.

3.50 VARIANCES

An affected property owner requesting a variance from standards in the Shoreland/Floodplain designated areas, must follow the procedures specified in the Pennington County Shoreland and Floodplain Ordinances. Variances requested for land areas out of the Shoreland/Floodplain designated areas must follow procedures specified in the Minnesota Rules Chapter 7080.0305 Subp.3.

3.70 PERMIT BY RULE REQUIREMENTS

In areas outside the Shoreland/Floodplain designated areas, ISTS must be installed either to the local standard provisions of this section or Minnesota Rules Chapter 7080, as applicable. Following installation of ISTS under Permit by Rule, an inspection report, prepared by a State licensed inspector, must be submitted to the County Environmental Department along with the site design and Permit by Rule Form. No prior review or approval is required under Permit by Rule.

SUBDIVISION 4 SITE SELECTION

4.10 SITE SUITABILITY FOR REPAIR, REPLACEMENT, EXTENSION OR INSTALLATION OF A TRENCH TYPE ISTS SSTS

4.11 Site suitability requirements Must be met whenever an ISTS is installed, replaced, altered, repaired or extended. Listed below are the parameters which must be met to allow the use of a trench type ISTS. For unsaturated soil separation, on-site soil samples shall be taken for observation and referenced to the NRCS Soils Survey, mottling/residual mottling features, and redoximorphic features and/or percolation test to determine the distance to the periodically saturated soil and for sizing the system.

4.12 Soil Dispute Resolution When a disagreement occurs between SSTS certified individuals and a licensed business about the depth of the periodically saturated soil, the disputing parties shall meet at the disputed site to resolve differences. The Department will make the final determination on the depth to periodically saturated soils.

4.20 LOCAL STANDARDS: ALTERATION OF EXISTING ISTS SYSTEMS.

Site suitability requirements must be met whenever a ~~existing~~ ISTS SSTS is installed replaced, repaired, altered, or extended. (Reference Section 4.10, 4.20, 4.30 and the County soils map).

4.21 Alternative “Local” Vertical Separation for New and Replacement SSTS For “Local” trench, at-grade, and mound systems, a minimum of two feet vertical separation shall be allowed between the bottom of the dispersal system and the periodically saturated soil or bedrock located in areas other than the floodplain and SWF.

4.22 Existing ISTS SSTS Systems Which do not present an imminent public health threat and have at least two feet of vertical separation between the bottom of the soil treatment system and ~~groundwater~~ periodically saturated soil, as defined by either mottling, ~~residual mottling~~, redoximorphic features and/or other

local standard provisions, are considered ~~working~~ compliant systems and do not require upgrading or alteration.

~~4.23 Repair, Alteration, and/or Extension of Existing Systems~~ are allowed if the provisions outlined in Sections 4.10, 4.20 and 4.30 are met.

~~4.23 Site Density Individual Sites~~ Trench type systems shall not be permitted to exceed one system per acre. All sites to be developed must have room for at least two ~~drainfields~~ soil treatment systems and must meet all setbacks stated in the Minnesota Rules, Chapter 7080 and the Pennington County Shoreland Ordinance. Setback requirements from wells shall meet those established by the Minnesota Department of Health.

~~4.24 Natural or Artificial Drainage~~ A drainage plan will be submitted with the system design materials which show distances to public water or to public or private drainage systems. The plan will specify how rain and excess surface water will be removed from the ~~ISTS~~ soil treatment system area. If ditching or tile is used, the locations of said ditches or tile will be designated in the plan. ~~and submitted to the owner with the system design.~~ The distance from any ditch or tile ~~to the trench~~ will not be less than ten feet from the soil treatment system.

~~4.30~~ ADDITIONAL LOCAL STANDARD PROVISIONS

The standards which allow for the continuance of, or construction of, trench systems within Pennington County are as follows:

~~4.21~~ ~~4.31~~ Soil Types Soils which are not acceptable for use with trench type ~~ISTS~~ SSTS include: I54A, I58A, I41A, I42A, B202A, I45A, I16F, I27A, B206A, B209A, I8A, and I11A. Site suitability requirements from section 4.10 shall be met. Use of the Pennington County Soils Map in conjunction with percolation tests is required to size systems and determine site suitability.

~~4.22~~ ~~4.32~~ Vegetation Native or natural vegetation is an indicator of soil saturation frequency. Installation of trench type systems ~~SSTS~~ on areas where aquatic hydrophytic type plants and trees persist is prohibited. Examples of these types of naturally occurring plants include but are not limited to cattails, sedges, rushes, tamarack, willow or other types of vegetation which reasonably demonstrate the existence of frequently saturated soil conditions.

~~4.40~~ LOCAL STANDARDS: NEW ISTS TRENCH SYSTEM INSTALLATION

Site suitability requirements must be met whenever a new ~~ISTS~~ trench system is installed or existing system replaced. (Reference Section 4.10, 4.20 and County soil maps).

~~4.41 Trench-Style ISTS Systems are allowed if the provisions of Sections 4.05 and 4.10 are met or at least three feet of vertical separation exists between the bottom of the soil treatment area and groundwater as defined by either mottling or residual mottling.~~

4.30 HOLDING TANKS

Holding tanks may be allowed for seasonal single family homes, sensitive sites, parks and other buildings with limited water use under the following conditions:

- A. The owner shall install a holding tank in accordance with MN Rules Section 7080.0172 subp. 3.
- B. The owner shall hire a MN licensed maintenance business to pump and haul the holding tank contents to approved land application site.
- C. Solids must be removed when their accumulation meets the limit described in MN Rules, Chapter 7080.0175. An Operating Plan shall be submitted with permit application, reference 7080.0310 Subp 6.

4.40 SSTS LOCATED IN THE FLOODPLAIN

SSTS shall not be located in a floodway and if possible, not within any part of a floodplain. If no option exists to locate a SSTS outside of a floodplain, location within the flood fringe is allowed if the bottom of the distribution medium is located at least as high as the 10-year flood elevation and if the requirements in MN Rules, Chapter 7080.0172 are met.

4.50 CLASS V INJECTION WELLS

All owners of new or replacement SSTS that are considered to be Class V injection wells, as defined in the Code of Federal Regulations, title 40, part 144, are required by the Federal Government to submit SSTS inventory information to the Environmental Protection Agency as described in CFR40 part 144. Further, owners are required to identify all Class V injection wells in property transfer disclosures.

4.60 2011 MN RULES INCLUDED IN THIS ORDINANCE

4.61 Vertical Separation Flexibility 15% Flexibility, 7080.1500 Subp. 4D A reduced vertical separation for existing systems is allowed for SSTS that were designed with at least a three feet of vertical separation distance. The maximum of fifteen percent reduction is only allowed to account for settling of sand or soil, normal variation of measurements, and interpretations of the limited layer conditions. This flexibility is not allowed on SSTS constructed with alternative local standards vertical separation.

4.62 Registered Products Final Treatment and Dispersal, including soil loading rates, shall be determined by using MN Rules Chapter 7080.2150 soil sizing tables IX and IXa.

4.63 Trench and Seepage Bed Design 7080.2210 Pressure distribution is required on seepage beds greater than twelve feet wide.

4.64 Sewage Tanks Must meet or exceed the applicable requirements of parts 7080.1910 through 7080.1960 and 7080.1980 through 7080.2020.

4.65 Distribution of Effluent 7080.2050 Subp 4J Pressure distribution pipe cleanouts must be provided to check the system for proper operation and cleaning of plugged perforations. Cleanouts must be accessible from final grade.

SUBDIVISION 5 INSPECTION REQUIREMENTS

5.10 GENERAL REQUIREMENTS

~~**5.11 Compliance Inspection**~~ Compliance inspections for construction, replacement, alteration, or repair work on ~~ISTS~~ SSTS shall be conducted by a State licensed inspector who is independent of the owner and installer.

5.20 INSPECTION REQUIREMENTS FOR NEW SYSTEMS

The installation and construction of the ~~ISTS~~ SSTS shall be in accordance with the permit requirements and application design.

5.21 Timing of Inspections If any ~~ISTS~~ SSTS component is covered before being inspected by a State licensed inspector, it shall be uncovered upon the direction of the inspector, unless acceptable photograph or video documentation is provided. Inspections shall be conducted at least once during the construction of the ~~ISTS~~ SSTS at such time as to assure that the system has been constructed per submitted and approved design. ~~All ISTS construction, alteration, repair and extensions require an inspection by a State licensed inspector.~~

5.22 Notification for Inspections ~~Inspection Report.~~ A Certificate of Compliance or Notice of Non-Compliance shall be prepared by the inspector following an inspection or review of as-built plans and submitted to the ~~Pennington County Environmental~~ Department for all ~~ISTS~~ SSTS new construction ~~which requires an inspection within Pennington County.~~ A Certificate of Compliance or Notice of Non-Compliance must include a signed statement by the inspector identifying the type of ~~ISTS~~ SSTS inspected and whether the system is in compliance with Minnesota Rules Chapter 7080.0060

and /or the local standard provisions specified in Subdivision 4 of this ~~section~~ Ordinance. A copy of the Certificate of Compliance or Notice of Non-Compliance shall be provided to the property owner and the ~~County Environmental~~ Department within ~~thirty~~ fifteen days of the compliance inspection.

5.30 INSPECTION REQUIREMENTS FOR EXISTING SYSTEMS

When required under section 5.31, the inspection must be conducted by a State licensed inspector and the results recorded on a form provided by the State. The ~~report~~ form must identify the type of ~~ISTS~~ SSTS inspected and whether the system is an imminent public health threat, a failing or ~~working~~ compliant system according to Minnesota Rules Chapter 7080.0060 and the local standard provisions specified in Subdivision 4 of this ~~section~~ Ordinance. A copy of the Certificate of Compliance or Notice of Non-compliance resulting from a compliance inspection shall be provided to the property owner and the ~~County Environmental~~ Department within ~~thirty~~ fifteen days of the inspection.

5.31 Mandatory Compliance of Existing Systems A ~~ISTS~~ SSTS shall require a compliance inspection when any one of the following conditions occur:

- A.** In designated Shoreland Management Areas, failing ~~on-site sewage treatment systems~~ SSTS shall be reconstructed pursuant to Minnesota Rules Chapter 6120 of 1989, known as “Statewide Standards for Management of Shoreland Areas”.
- B.** At any time the Department deems appropriate such as upon receiving a complaint or other information of system failure.
- C.** Addition of a bedroom on a property, within the designated Shoreland/Floodplain area.
 - 1.** If a request for an additional bedroom or variance is received between November 1 and April 30 the Department may issue a permit or variance immediately with the requirement that a compliance inspection be completed by the following June 1 or within twelve months of shoreland permit application. The applicant must submit a Certificate of Compliance within fifteen days of the Compliance Inspection, ~~by the following September 30~~.
 - 2.** If a system constructed between May 27, 1989 and January 23, 1996 does not comply with applicable requirements, and is not an imminent public health threat, a property owner applying for a permit to construct a bedroom addition in a designated Shoreland/Floodplain area, has ~~five (5) years~~, three years, from the

date of issuance of such permit to bring the system into compliance.

3. Compliance inspections finding not less than ~~two~~ three feet of separation between the bottom of the soil distribution medium and ~~potable water~~ periodically saturated soil and where an imminent public health threat does not exist are considered ~~working~~ compliant systems and do not need to be replaced or repaired.

5.32 Imminent Public Health Threat and Failing Septic Systems A Notice of Non-Compliance shall be issued and copies provided to the property owner and the County Department within ~~thirty~~ fifteen days under the following conditions:

- A. A failed ~~ISTS~~ SSTS, not considered an imminent threat to public health or safety, shall be upgraded, replaced, repaired or discontinued use in compliance with this Ordinance, as applicable within ~~five (5)~~, three years.
- B. Existing “Local” SSTS that are failing to protect groundwater in non SWF/Floodplain Areas: SSTS built before April 1, 1996 outside of protected areas designated as floodplain areas, shoreland areas, wellhead protection areas, or areas where SSTS provide sewage treatment for food, beverage, or lodging establishments shall have at least two feet of vertical separation between the bottom of the dispersal system and seasonal saturation or bedrock per MN Rules 7080.0060 Subp 3. Existing systems with less than two feet of vertical separation in these areas may fail to protect groundwater, are unlawful and shall be upgraded, replaced, or its use discontinued within three years of the owner’s receipt of a Notice of Noncompliance. The notice should specify what Ordinance provisions are violated.
- C. An ~~ISTS~~ SSTS posing an imminent threat to public health or safety shall be upgraded, replaced or repaired, or discontinued use within ten months.
- D. Existing “Local” systems built outside of the protected areas designated as floodplain areas, shoreland areas, wellhead protection areas, or areas where SSTS provide sewage treatment for food, beverage, or lodging establishments and determined to be an imminent threat to public health or safety in accordance with MN Rules, Chapter 7080.1500, Subp 4A, are unlawful and shall be upgraded, replaced, or its use discontinued within ten months of the owner’s receipt of a Notice of Noncompliance. The notice should specify what Ordinance provisions are violated.
- E. The owner(s) shall submit to the Department an acceptable replacement plan within twenty days after notification by the Department. The replacement plan shall identify the location and design of the ~~ISTS~~ SSTS

and a schedule for its replacement. Failure to submit and execute an acceptable replacement plan is a violation of this Ordinance.

5.33 Scope of Certification

A certification of an existing system is valid for three years from the certification date. A certification for a new system is valid for five years from the certification date. ~~The Department may not require recertification of a ISTS SSTS within three years for an existing system or five years for a new system, from the certification date~~ Certificates are valid providing the system does not fail or become and imminent public health threat or other cause as deemed appropriate by the Department.

5.40 NOTICE OF VIOLATIONS

5.41 Cause to Issue a Notice of Violation Unresolved and either separate, recurrent, or continuing violations of this Ordinance by an applicant, permittee, installer or other persons, as determined by inspection, re-inspection, or investigations shall constitute non-conformance or non-compliance with this Ordinance.

5.42 Serving a Notice of Violation A Notice of Violation shall be served by mail upon the applicant, permittee, installer or other person found to be in violation of this Ordinance.

5.43 Contents of a Notice of Violation A Notice of Violation shall contain the following:

- A. A statement documenting the findings of fact through inspections, re-inspections or investigations.
- B. A list of specific violations of this Ordinance.
- C. The specific requirements for correction or removal of said violations.
- D. A mandatory time schedule for correction, removal and compliance with this Ordinance.
- E. Specific enforcement actions that will be taken if corrective action is not completed.

5.44 State Notification of Violations Any inspection, installation, design, construction, alteration, or repair of a ~~ISTS~~ SSTS by a licensed ~~person~~ business or any pumping and disposal of septage by a licensed ~~pumper~~ maintainer business or hauler done in violation of the provisions of this Ordinance may be cause for notification to the Minnesota Pollution Control Agency.

SUBDIVISION 6 HEALTH AND ENVIRONMENTAL PROTECTION

6.10 ADDITIONAL STANDARDS: The following standards shall also apply.

6.11 Separation Distances

- A. The separation distance from a well to a ~~ISTS~~ SSTS shall be at least fifty feet or as specified in M.S. 3011, Minnesota Rules Chapter 4725, as amended.
- B. The separation distances from ~~ISTS~~ SSTS to designated lakes and rivers shall be identified in the Pennington County Shoreland Ordinance.

6.12 Maintenance

- A. The owner of a ~~ISTS~~ SSTS or the owner's agent shall regularly, but in no case less frequently than every three years, measure or remove the accumulations of scum and sludge in the septic tank and is responsible for full maintenance of the ~~ISTS~~ SSTS as indicated by Minnesota Rules Chapter 7080.0175.
- B. Management plans for all new or replacement SSTS shall be provided by the licensed designer. The plans shall include operating, monitoring and maintenance requirements for the new or replacement system. Homeowners are required every three years to maintain their sewage tank per instructions in 7080.2450 Subp 2.

~~**6.13 Alternative and Experimental Systems** This subdivision hereby adopts by reference Minnesota Rules Chapter 7080.0910, Alternative and Experimental Systems. (Repealed)~~

6.13 Abandonment of SSTS All systems with no future intent for use must be abandoned in accordance with MN Rules, Chapter 7080.0176.

6.20 SEPTAGE DISPOSAL AND TREATMENT

6.21 Separation Requirements for Land Application of Septage Domestic septage disposal and treatment standards shall comply with US Environmental Protection Agency rules as found in the CFR40 Part 503 entitled "Standards for the Use or Disposal of Sewage Sludge," and Minnesota Pollution Control Agency Chapter 7080 rules.

- A. **Land Spreading Location** Spreading sites shall be located such that the following minimum separation distances are maintained:

- | | |
|----------------------------|---------------------|
| 1. Private water wells | 200 Feet |
| 2. Municipal well | 1000 Feet |
| 3. Occupied dwellings | 200 Feet |
| 4. Commercial developments | 300 <u>600</u> Feet |

- | | |
|-------------------------------|-------------------------|
| 5. Recreational areas | 300 600 Feet |
| 6. Property lines | 50 Feet |
| 7. Public road right-of-ways | 50 Feet |
| 8. Public and private ditches | 25 Feet |

B. Separation from Surface Waters Septage shall not be land spread in designated Shoreland Management Areas as identified in the Pennington County Shoreland Ordinance.

SUBDIVISION 7 LICENSING REQUIREMENTS

7.10 SITE EVALUATORS, DESIGNERS, INSTALLERS, INSPECTORS, AND MAINTAINERS

No person or business shall engage in the evaluation, inspection, design, installation, construction, alteration, extension, repair, maintenance, or pumping of ~~on-site~~ subsurface sewage treatment systems in Pennington County without first obtaining a license to perform such tasks from the Minnesota Pollution Control Agency.

7.20 LICENSE EXEMPTION

A license is not required for:

- A.** An individual who is constructing a system on land that is owned or leased by the individual and functions solely as a dwelling or seasonal dwelling for that individual. A design is required from ~~based upon a design developed in consultation with~~ a SSTS licensed designer. The system must be inspected in accordance with Subdivision 5.20 of this Ordinance. A Certificate of Compliance or Notice of Non-compliance must be issued for the system by a licensed inspector.
- B.** An individual who performs labor or services under a licensee.
- C.** A farmer who pumps sewage waste from ~~individual~~ subsurface sewage treatment systems from dwellings or other establishments that are owned or leased by the farmer and disposes of those wastes on land that is owned or leased by the farmer.
- D.** A property owner who personally gathers information, evaluates, or investigates the ~~ISTS~~ SSTS on or serving the property to provide a disclosure.

SUBDIVISION 8 ENFORCEMENT AND REGULATION

8.10 ENFORCEMENT

8.11 Violations Any person, firm, corporation or other entity who violates any of the provisions of this Ordinance or who makes any false statement on a Certificate of Compliance, shall be guilty of a misdemeanor, punishable by imprisonment or a fine or both as defined by law.

8.12 County Attorney Action In the event of a violation of this Ordinance, in addition to other remedies, the County Attorney may institute appropriate actions or proceedings to prevent, restrain, correct or abate such violations.

~~5.12~~ 8.13 Access to Premises and Records Upon request of the Department, the applicant, permittee, or any other person shall allow access at any reasonable time to the affected premises as well as any related records, for the purpose of regulating and enforcing this Ordinance.

~~5.13~~ 8.14 Interference Prohibited No person shall hinder or otherwise interfere with the Department in the performance of their duties and responsibilities pursuant to this Ordinance. Refusal to allow the Department reasonable access to the Department property shall be deemed a separate and distinct offense, whether or not any other specific violations are cited.

~~5.30~~ 8.15 Stop Work Orders Whenever any work is ~~being done~~ conducted contrary to the provisions of this Ordinance, the Department may order the work stopped by verbal or written notice personally served upon the installer or owner. Authorization to proceed is received from the Department.

Date of Effect:

This amended ordinance shall be in effect from and after its passage and approval, as provided by law.

Passed and approved the _____ day of _____, 2014.

Chairman, Pennington County Board of Commissioners

Attest: _____, County Auditor

DRAFT

DRAFT

Commission Meeting
January 7, 2014

1. Award District 2 Counties Chevron Placement
 - Award to A& H Co., Inc. Ironton
 - \$602,250.00

2. Dues for Transportation Alliance
 - \$1,565.00

3. Other



**PCHD
Project Bid Abstract**

Project Name: Chevron Contract No.:
 Client: Pennington County Highway Department Project No.: SP 088-070-038
 Bid Opening: 12/31/2013 11:00 AM Owner: Pennington County Highway Department

Project: SP 088-070-038 - Chevron				Engineers Estimate		A & H Co, Inc.		ID Sign Solutions	
Item No.	Item	Units	Quantity	Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
2	2021.501 MOBILIZATION	LUMP SUM	1	\$5,000.00	\$5,000.00	\$40,500.00	\$40,500.00	\$16,500.00	\$16,500.00
1	2564.602 Install Sign Chevron 18"x24" (W1-8) Type 1	EACH	7490	\$239.87	\$1,796,626.30	\$75.00	\$561,750.00	\$90.36	\$676,796.40
Totals for Project SP 088-070-038					\$1,801,626.30		\$602,250.00		\$693,296.40
% of Estimate for Project SP 088-070-038							-66.57%		-61.52%

I hereby certify that this is an exact reproduction of bids received.

Certified By: _____ License No. _____
 Date: _____

Wetland Delineation Report

*Reviewed + sent
back comments
on 1st draft 1/2/14
Received 2nd copy 1/6/14*

Pennington County Wetland Bank Site

T. 153 N., R. 40 W., Sec 34

Pennington County, MN

Prepared for:

Bryan Malone

Pennington SWCD

201 Sherwood Avenue South

Thief River Falls, MN 56701

Prepared by:

West Central Environmental Consultants, Inc.

14 Green River Road

Morris, MN 56267

January 3, 2014

WCEC Project No. 13-9815-30

WCEC

West Central Environmental Consultants, Inc.

Nationwide Services
www.wcec.com

Environmental



Emergency Response



Industrial Services

1.0 Introduction

West Central Environmental Consultants, Inc. (WCEC) was retained by Pennington County – Soil and Water Conservation District (hereinafter, “Applicant”) to complete a wetland delineation in Pennington County, Minnesota. The delineation area is located along the east bank of the Red Lake River in the NW $\frac{1}{4}$ of Section 34, of T. 153 N., R. 40 W. (**Figure 1**). The purpose of the wetland delineation was to determine the area of wetland created for a proposed wetland bank. WCEC was on-site to conduct the wetland delineation on October 2-4, 2013. The area was experiencing a drier than average period for this time of year. Several days of dry, clear weather preceded the delineation; however, light to heavy precipitation occurred during each of the three day delineation event. The results of the delineation are included in this wetland delineation report.

2.0 Site Details and Methods

On October 2-4, 2013, WCEC delineated an area 101.73 acres in size. Historically, the site has been used for agriculture. Two ditches and spoil piles were created to control the site hydrology during the growing season. The ditches and spoil piles comprised of 2.50 acres and 2.99 acres, respectively, of the total acreage. Also, three Type 3 Wetlands, totaling 1.30 acres in size, were located on the site prior to the restoration. The acreages for the pre-existing ditches, spoil piles, and Type 3 Wetlands are in addition to, and not included in, the wetland and upland acreages discussed below.

WCEC utilized an online resource from the University of Minnesota to calculate the antecedent precipitation for Pennington County at the time of the site visit. The site location was drier than normal for the time of year. Antecedent precipitation calculations are included as Appendix C.

Wetlands present within the above referenced property were identified and delineated using the procedures described in the Minnesota Wetland Conservation Act, the Army Corps of Engineers (ACOE) Manual for Identifying and Delineating Wetlands, 1987 edition, and the Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region. This method utilizes the standard multi-parameter approach (vegetation, hydrology, and soils) for wetland identification as outlined in the Corps of Engineers Wetland Determination Data Forms. In general, an area is considered a wetland if Hydrophytic Vegetation, Wetland Hydrology and Hydric Soils are present.

Wetland Delineation Report, December 2013

Pennington County Wetland Bank Site, Pennington County, Minnesota

Location (T.R.Sec. ¼): T. 153 N., R. 40 W., Sec. 34
(Figure 1)

ACOE Delineation Method: Routine Level 3

Resources used:

USFWS NWI	<input checked="" type="checkbox"/> (Figure 5)
NRCS Web Soil Survey	<input checked="" type="checkbox"/> (Appendix A)
MN DNR PWI	<input checked="" type="checkbox"/> (Figure 6)
USGS Topo	<input checked="" type="checkbox"/> (Figure 1)
Aerial photos	<input checked="" type="checkbox"/>
National wetland plant list	<input checked="" type="checkbox"/>

WCEC's wetland delineation followed the ACOE procedure for identifying wetland boundaries by completing the appropriate number of transects, investigating the required wetland criteria, and identifying the boundary between the wetland and upland. A soil sampling auger or tiling shovel was used to complete soil sampling plots and check the soils and hydrology at periodic intervals throughout the delineated boundary to confirm accuracy and/or adjust the boundary accordingly.

Wetland boundaries were geolocated using sub-meter accuracy global positioning systems (GPS) and incorporated within a geographic information system (GIS) using ArcGIS 10.0 GIS software. The site survey data is being used to aid in site planning.

3.0 Results and Discussion

Upland	
Location and Transect:	T1-Upland, T2-Upland (Figure 3a)
Size:	6.17 acres, 268,631 ft ²
Type(s):	Upland
Dominant Vegetation:	Smooth Brome, Big Bluestem, Little Bluestem
Source of Hydrology:	Runoff from precipitation events and snowmelt
Dominant Soil:	Loam
Hydric Soil Indicator:	No Hydric Soil Indicator was identified
USDA Soil Type:	Kratka fine sandy loam; Reiner fine sandy loam; Smiley loam (Appendix A)
NWI Classification:	None (Figure 5)
Consistent with NWI	No wetland identified by NWI in this location
Consistent with Soil Survey	Consistent with components of soil descriptions identified in the USDA Soil Survey (Appendix A, Appendix B)
Watershed:	Major: Red Lake River; Minor: Red Lake River
Notes:	

Wetland Delineation Report, December 2013

Pennington County Wetland Bank Site, Pennington County, Minnesota

Wetland 1	
Location and Transect:	T1-Wetland, T2-Wetland, E1, E2, A1 (Figure 3b)
Size:	23.05 acres, 1,004,011 ft ²
Type(s):	Type 2 – Wet to Wet-Mesic Prairie
Dominant Vegetation:	Big Bluestem, Little Bluestem, Kentucky Bluegrass, Tessoek Sedge, Reed Canary Grass
Source of Hydrology:	Runoff and perched water table from precipitation events and snowmelt
Dominant Soil:	Loam
Hydric Soil Indicator:	Depleted Below Dark Surface
USDA Soil Type:	Borup Loam; Fluvaquents, frequently flooded-Hapludolls complex; Kratka fine sandy loam; Smiley loam (Appendix A)
NWI Classification:	None (Figure 5)
Consistent with NWI	No wetland identified by NWI in this location
Consistent with Soil Survey	Consistent with components of soil descriptions identified in the USDA Soil Survey (Appendix A, Appendix B)
Watershed:	Major: Red Lake River; Minor: Red Lake River
Notes:	<ul style="list-style-type: none"> Type 2 Wetlands were identified along the east and west portions of the site.

Wetland 2	
Location and Transect:	B1, F1 (Figure 3c)
Size:	4.60 acres, 200,443 ft ²
Type(s):	Type 3 – Shallow Marsh
Dominant Vegetation:	Reed Canary Grass, Spotted Water-hemlock, Giant Reed Grass, Lesser Duckweed
Source of Hydrology:	Runoff and perched water table from precipitation events and snowmelt
Dominant Soil:	Muck and Loam
Hydric Soil Indicator:	Black histic
USDA Soil Type:	Borup Loam; Fluvaquents, frequently flooded-Hapludolls complex (Appendix A)
NWI Classification:	PEMCd (Figure 5)
Consistent with NWI	The identified wetlands were consistent with the NWI classification
Consistent with Soil Survey	Consistent with components of soil descriptions identified in the USDA Soil Survey (Appendix A, Appendix B)
Watershed:	Major: Red Lake River; Minor: Red Lake River
Notes:	<ul style="list-style-type: none"> Four Type 3 Wetlands were identified along the west portion of the site. Before restoring the site, three small Type 3 Wetlands existed at the site. The area of the pre-existing wetlands increased following site restoration. The pre-existing wetlands totaled 1.30 acres; this is in addition to the 4.60 acres created after the restoration.

Wetland 3	
Location and Transect:	C1 (Figure 3d)
Size:	57.74 acres, 2,515,218.5 ft ²
Type(s):	Type 6 – Shrub Swamp
Dominant Vegetation:	Sandbar Willow, Sphagnum Moss, Kentucky Bluestem, Reed Canary Grass
Source of Hydrology:	Runoff and perched water table from precipitation events and snowmelt
Dominant Soil:	Loam
Hydric Soil Indicator:	Depleted Below Dark Surface
USDA Soil Type:	Borup Loam; Fluvaquents, frequently flooded-Hapludolls complex; Kratka fine sandy loam; Smiley loam (Appendix A)
NWI Classification:	PEMC (Figure 5)
Consistent with NWI	The identified wetland was consistent with the NWI classification
Consistent with Soil Survey	Consistent with components of soil descriptions identified in the USDA Soil Survey (Appendix A, Appendix B)
Watershed:	Major: Red Lake River; Minor: Red Lake River
Notes:	<ul style="list-style-type: none"> • A large Type 6 Wetland was identified within the center portion of the site. • Two man-made ditches and spoil piles existed before the site restoration. The ditches and spoil piles totaled 5.00 acres; this is in addition to the 57.74 acres created after the restoration.

Wetland 4	
Location and Transect:	D1 (Figure 3e)
Size:	3.38 acres, 147,230 ft ²
Type(s):	Type 7 – Hardwood forest
Dominant Vegetation:	Quaking Aspen, Green Ash, Bur Oak, Reed Canary Grass, Prairie Rose
Source of Hydrology:	Runoff and perched water table from precipitation events and snowmelt
Dominant Soil:	Loam
Hydric Soil Indicator:	Depleted Below Dark Surface
USDA Soil Type:	Reiner fine sandy loam; Smiley loam (Appendix A)
NWI Classification:	None (Figure 5)
Consistent with NWI	No wetland identified by NWI in this location
Consistent with Soil Survey	Consistent with components of soil descriptions identified in the USDA Soil Survey (Appendix A, Appendix B)
Watershed:	Major: Red Lake River; Minor: Red Lake River
Notes:	<ul style="list-style-type: none"> • A large Type 6 Wetland was identified within the center portion of the site. • A man-made spoil pile existed before the site restoration. The spoil pile totaled 0.49 acres; this is in addition to the 57.74 acres created after the restoration.

Wetland Delineation Report, December 2013

Pennington County Wetland Bank Site, Pennington County, Minnesota

To confirm delineation accuracy, two sampling transects (T1-Upland/T1-Wetland and T2-Upland/T2-Wetland) and one verification location (E2) were completed along the wetland boundary and provide increased sample density. Also, at least one sampling point completed in each plant community type. Specifics of observed vegetation, hydrology and soil characteristics were placed on the Army Corps of Engineers (ACOE) Wetland Determination Data Forms for Routine Determination (**Appendix B**). As an additional elevation source, WCEC mapped the delineation boundary on a Minnesota LiDAR elevation base map (**Figure 4**). Photos of the site are included in **Appendix E**.

Upland: One large upland type was located along the northeast portion of the site. The upland plant communities are classified as prairie grassland. Most of the delineation boundary is in this plant community type.

4.0 Summary

On October 2-4, WCEC delineated an area 101.73 acres in size. The majority of the site was observed to be wetland (**Figure 2, Figure 4**). Four wetland types were identified and 1 upland area (**Figure 3a-e**). The source of hydrology for the wetland communities is from the perched water table, precipitation and runoff. These wetlands meet the wetland criteria outlined in the *Army Corps of Engineers (ACOE) Manual for Identifying and Delineating Wetlands, 1987 edition, and the Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region*.

Pennington County intends to preserve the site as a Wetland Bank. The purpose of the wetland delineation was to identify wetland locations and types prior to final approval of Bank status.

This report outlines the professional observations and recommendations of West Central Environmental Consultants. No warranty is intended or implied. If you have any questions regarding this report, or would like additional information, please feel free to contact me at 320-589-2039

Sincerely,



Christopher T. Lesmeister
Project Manager

LIST OF FIGURES

Figure 1: Site Location Map

Figure 2: Wetland Delineation Map

Figure 3: Plant Community Maps

Figure 4: Wetland Delineation and Elevation Map

Figure 5: U.S. Fish and Wildlife Service – National Wetlands Inventory Maps

Figure 6: Minnesota Department of Natural Resources – Public Waters Maps

FIGURE 1

Site Location Map

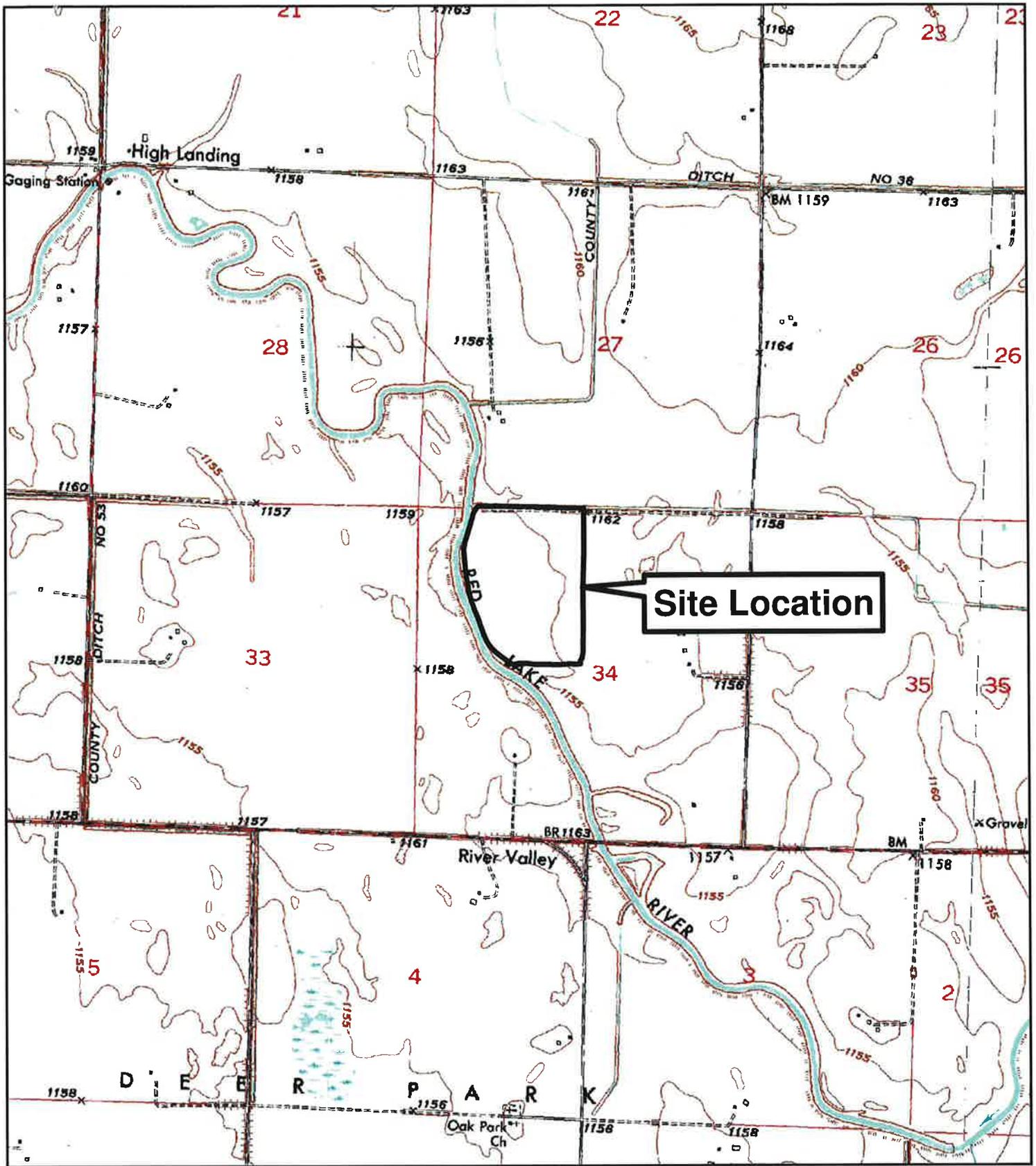
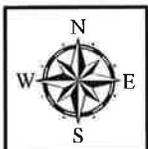


Figure 1: Site Location Map (USGS 7.5 Minute Quadrangle Topographic Base Map)
 WCEC Project No.: 13-9815-30, Pennington County Wetland Bank Site, Thief River Falls, MN



DATE: 12.06.2013
 DRAWN BY: CTL

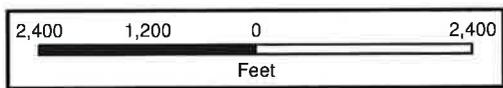


FIGURE 2

Wetland Delineation Map

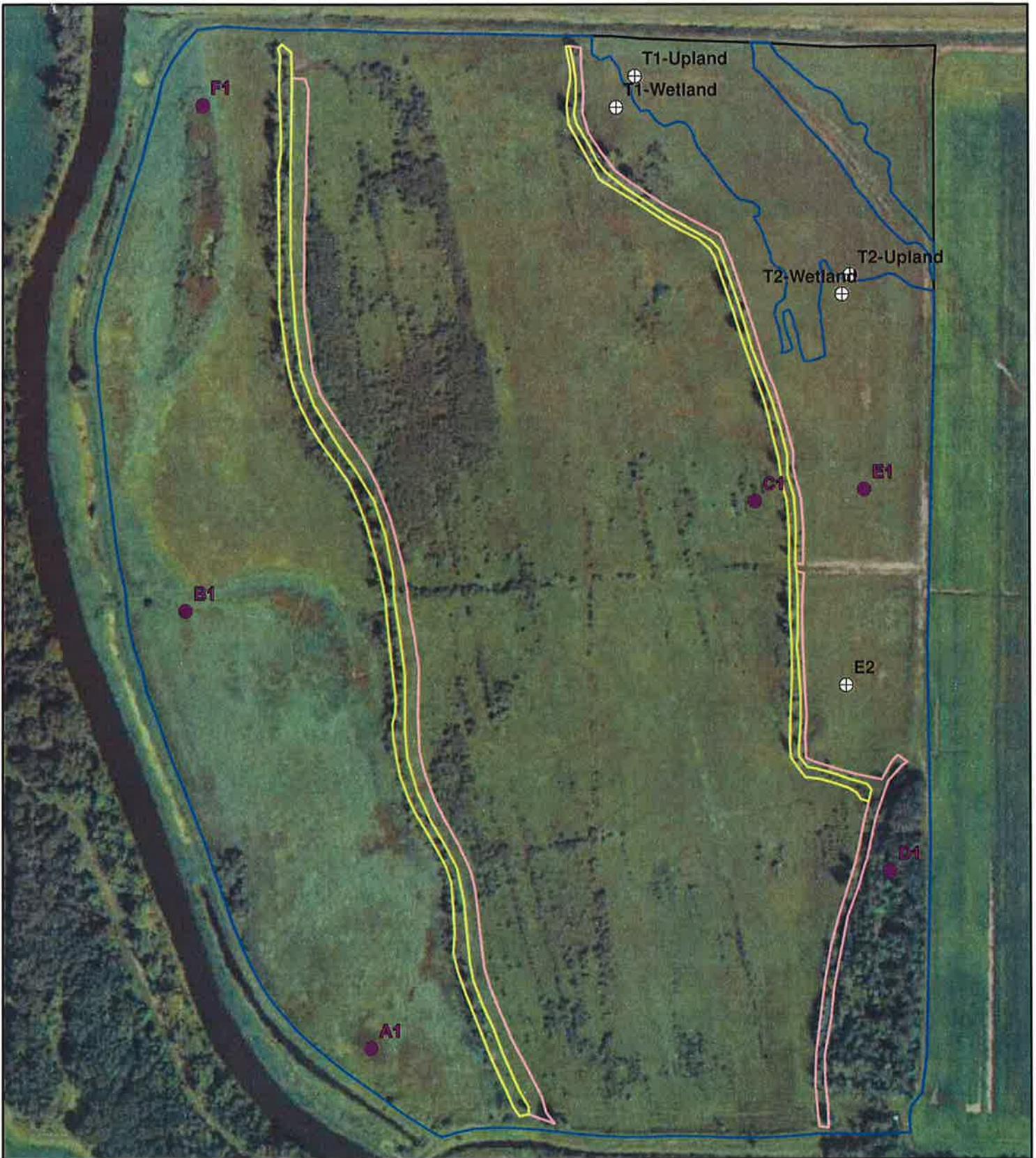
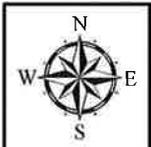
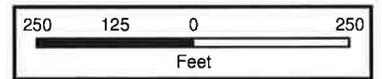


Figure 2: Wetland Delineation Map (2010 Aerial Photography Base Map)
 WCEC Project No.: 13-9815-30, Pennington County Wetland Bank, Thief River Falls, MN



DATE: 12.12.2013
 DRAWN BY: CTL

Legend	
—	Perimeter
—	Approximate Wetland Boundary
—	Ditch
—	Spoil Pile
⊕	Transect Sample Location
●	Plant Community Sample Location

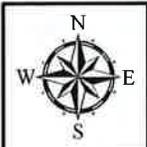


FIGURE 3

Plant Community Maps



Figure 3a: Plant Community Map (2010 Aerial Photography Base Map)
WCEC Project No.: 13-9815-30, Pennington County Wetland Bank, Thief River Falls, MN



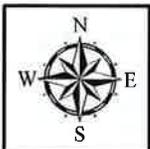
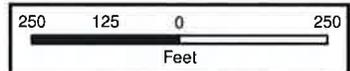
DATE: 11.27.2013
 DRAWN BY: CTL

Legend			
	Perimeter		Type 3
	Upland		Type 6
	Type 2		Type 7
	Plant Community Sample Location		Transect Sample Location





Figure 3b: Plant Community Map (2010 Aerial Photography Base Map)
WCEC Project No.: 13-9815-30, Pennington County Wetland Bank, Thief River Falls, MN



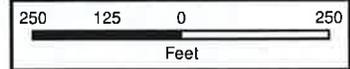
DATE: 11.27.2013
 DRAWN BY: CTL

Legend	
— Perimeter	— Type 3
— Upland	— Type 6
— Type 2	— Type 7
● Plant Community Sample Location	⊕ Transect Sample Location





Figure 3c: Plant Community Map (2010 Aerial Photography Base Map)
WCEC Project No.: 13-9815-30, Pennington County Wetland Bank, Thief River Falls, MN



DATE: 11.27.2013
 DRAWN BY: CTL

Legend			
	Perimeter		Type 3
	Upland		Type 6
	Type 2		Type 7
	Plant Community Sample Location		Transect Sample Location





Figure 3d: Plant Community Map (2010 Aerial Photography Base Map)
WCEC Project No.: 13-9815-30, Pennington County Wetland Bank, Thief River Falls, MN



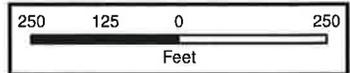
DATE: 11.27.2013
 DRAWN BY: CTL

Legend			
	Perimeter		Type 3
	Upland		Type 6
	Type 2		Type 7
	Plant Community Sample Location		Transect Sample Location





Figure 3e: Plant Community Map (2010 Aerial Photography Base Map)
WCEC Project No.: 13-9815-30, Pennington County Wetland Bank, Thief River Falls, MN



DATE: 11.27.2013
 DRAWN BY: CTL

Legend		
— Perimeter	— Type 3	● Plant Community Sample Location
— Upland	— Type 6	⊕ Transect Sample Location
— Type 2	— Type 7	



FIGURE 4

Wetland Delineation and Elevation Map

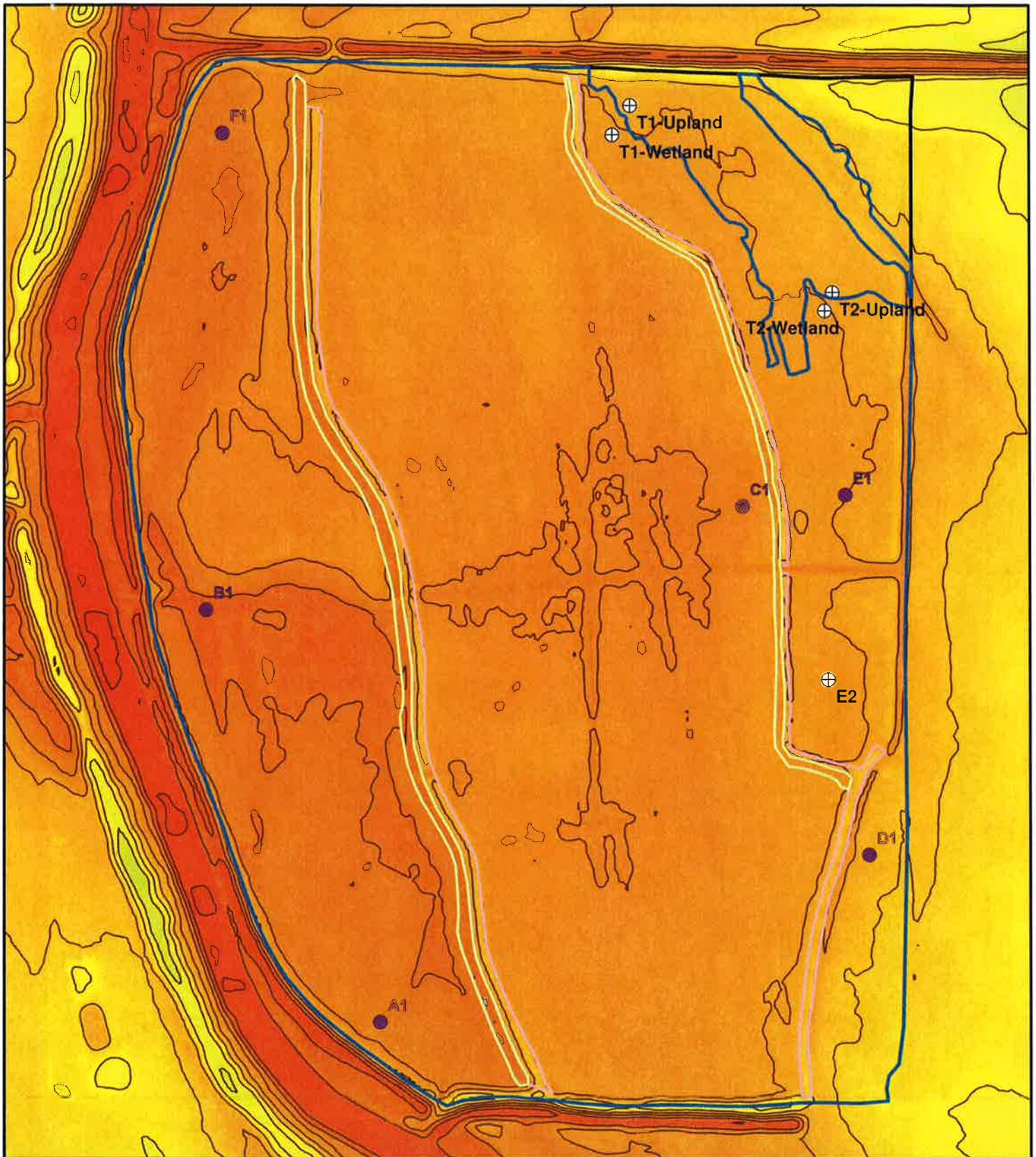
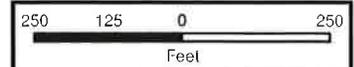


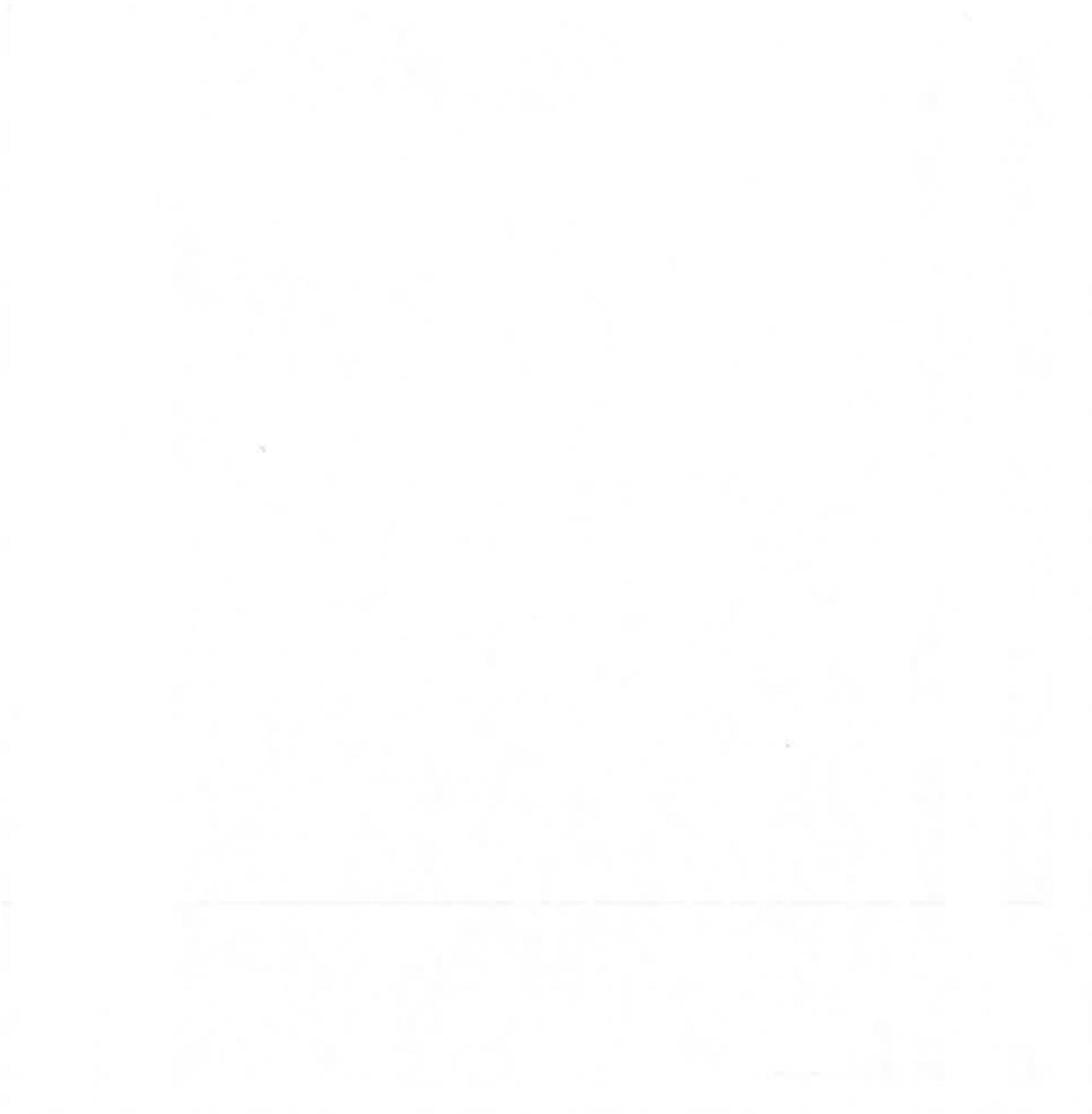
Figure 4: Wetland Delineation and Elevation Map (MN LiDAR Elevation Base Map)
 WCEC Project No.: 13-9815-30, Pennington County Wetland Bank, Thief River Falls, MN



	DATE: 12.2.2013	Legend — Perimeter — Approx. Wetland Boundary ⊕ Transect Location	Contour (2' interval) Com. Sample Location High : 358 meters Low : 349 meters	Ditch Spoil Pile
	DRAWN BY: CTL			

FIGURE 5

U.S. Fish and Wildlife Service – National Wetlands Inventory Maps

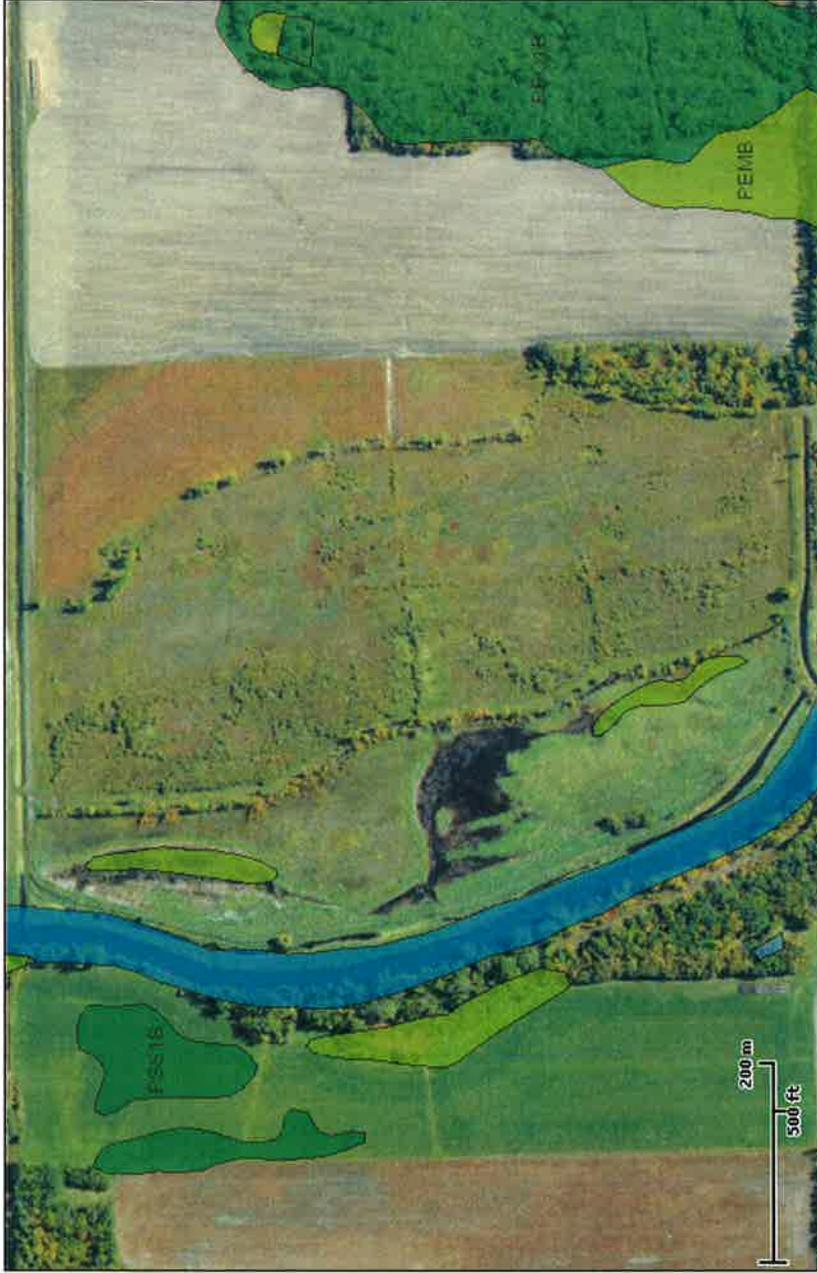




U.S. Fish and Wildlife Service National Wetlands Inventory

Pennington County
Wetland Bank Site

Dec 10, 2013



Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy of the data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

User Remarks:



U.S. Fish and Wildlife Service National Wetlands Inventory

Pennington County
Wetland Bank Site

Dec 10, 2013



Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or completeness of the data shown on this map. All users should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

User Remarks:



U.S. Fish and Wildlife Service

National Wetlands Inventory

Pennington County
Wetland Bank Site

Dec 10, 2013



Wetlands

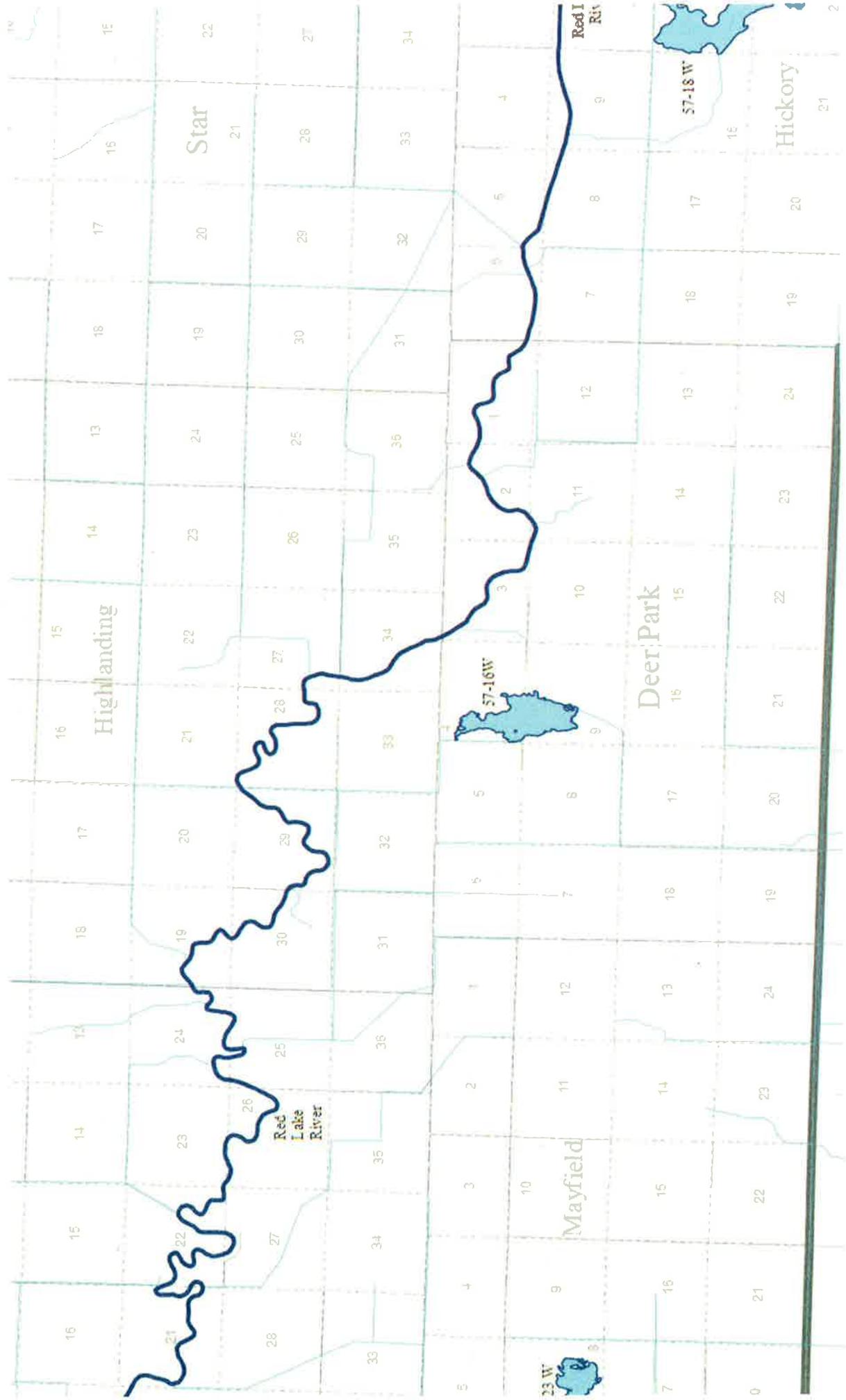
- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

User Remarks:

FIGURE 6

Minnesota Department of Natural Resources -- Public Waters Maps



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Highland

Star

Deer Park

Mayfield

Hickory

Red Lake River

Red Lake River

57-16W

57-18W

23 W



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LIST OF APPENDICIES

Appendix A: USDA Web Soil Survey

Appendix B: Wetland Determination Data Forms

Appendix C: Antecedent Precipitation

Appendix D: Groundwater Monitoring Data from Pennington County NRCS

Appendix E: Photographs

APPENDIX A

USDA Web Soil Survey



A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Pennington County, Minnesota

Pennington County Wetland Bank Site



December 5, 2013

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://soils.usda.gov/sqi/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<http://offices.sc.egov.usda.gov/locator/app?agency=nrsc>) or your NRCS State Soil Scientist (http://soils.usda.gov/contact/state_offices/).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Soil Data Mart Web site or the NRCS Web Soil Survey. The Soil Data Mart is the data storage site for the official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the

Custom Soil Resource Report

individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



Map Scale: 1:6,990 if printed on A portrait (8.5" x 11") sheet



Map projection: Web Mercator. Corner coordinates: WGS84. Edge tics: UTM Zone 15N WGS84

MAP LEGEND

Area of Interest (AOI)			Spoil Area
	Area of Interest (AOI)		Stony Spot
Soils			Very Stony Spot
	Soil Map Unit Polygons		Wet Spot
	Soil Map Unit Lines		Other
	Soil Map Unit Points		Special Line Features
Special Point Features		Water Features	
	Blowout		Streams and Canals
	Borrow Pit	Transportation	
	Clay Spot		Rails
	Closed Depression		Interstate Highways
	Gravel Pit		US Routes
	Gravelly Spot		Major Roads
	Landfill		Local Roads
	Lava Flow	Background	
	Marsh or swamp		Aerial Photography
	Mine or Quarry		
	Miscellaneous Water		
	Perennial Water		
	Rock Outcrop		
	Saline Spot		
	Sandy Spot		
	Severely Eroded Spot		
	Sinkhole		
	Slide or Slip		
	Sodic Spot		

MAP INFORMATION

The soil surveys that comprise your AOI w

Please rely on the bar scale on each map measurements

Source of Map: Natural Resources Con
 Web Soil Survey URL: <http://websoilsur>
 Coordinate System: Web Mercator (EP

Maps from the Web Soil Survey are basec
 projection, which preserves direction and:
 distance and area. A projection that prese
 Albers equal-area conic projection, should
 calculations of distance or area are requir

This product is generated from the USDA-I
 the version date(s) listed below.

Soil Survey Area: Pennington County, A
 Survey Area Data: Version 8, May 25, 2

Soil map units are labeled (as space allows
 or larger.

Date(s) aerial images were photographed
 2011

The orthophoto or other base map on whic
 compiled and digitized probably differs fro
 imagery displayed on these maps. As a re
 of map unit boundaries may be evident.

Custom Soil Resource Report

Map Unit Legend

Pennington County, Minnesota (MN113)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
I5A	Borup loam, 0 to 2 percent slopes	25.3	11.0%
I16F	Fluvaquents, frequently flooded-Hapludolls complex, 0 to 30 percent slopes	39.7	17.3%
I38A	Kratka fine sandy loam, 0 to 2 percent slopes	43.9	19.1%
I50A	Reiner fine sandy loam, 0 to 3 percent slopes	57.0	24.8%
I59A	Smiley loam, 0 to 2 percent slopes	58.5	25.5%
W	Water	5.1	2.2%
Totals for Area of Interest		229.6	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially

Custom Soil Resource Report

where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a soil series. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into soil phases. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A complex consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An association is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An undifferentiated group is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include miscellaneous areas. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Pennington County, Minnesota

15A—Borup loam, 0 to 2 percent slopes

Map Unit Setting

Elevation: 750 to 1,250 feet

Mean annual precipitation: 19 to 24 inches

Mean annual air temperature: 36 to 45 degrees F

Frost-free period: 110 to 135 days

Map Unit Composition

Borup and similar soils: 75 percent

Minor components: 25 percent

Description of Borup

Setting

Landform: Deltas

Landform position (three-dimensional): Dip

Down-slope shape: Concave

Across-slope shape: Linear

Parent material: Coarse-silty glaciolacustrine deposits

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 14.17 in/hr)

Depth to water table: About 0 to 18 inches

Frequency of flooding: None

Frequency of ponding: Occasional

Calcium carbonate, maximum content: 40 percent

Gypsum, maximum content: 3 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 3.9 mmhos/cm)

Sodium adsorption ratio, maximum: 2.0

Available water capacity: High (about 11.0 inches)

Interpretive groups

Farmland classification: Prime farmland if drained

Land capability (nonirrigated): 2w

Hydrologic Soil Group: A/D

Ecological site: Wet Meadow (R056XY102ND)

Other vegetative classification: Wet (G056XY900ND)

Typical profile

0 to 12 inches: Loam

12 to 34 inches: Loam

34 to 60 inches: Very fine sandy loam

Minor Components

Glyndon

Percent of map unit: 9 percent

Landform: Deltas

Landform position (three-dimensional): Talf, rise

Custom Soil Resource Report

Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: Limy Subirrigated (R056XY087ND)
Other vegetative classification: Subirrigated (G056XY700ND)

Rosewood

Percent of map unit: 8 percent
Landform: Flats on lake plains, swales on lake plains
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: Wet Meadow (R056XY102ND)

Augsburg

Percent of map unit: 5 percent
Landform: Flats on lake plains, swales on lake plains
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: Wet Meadow (R056XY102ND)

Augsburg, depressional

Percent of map unit: 3 percent
Landform: Depressions on lake plains
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: Shallow Marsh (R056XY101ND)

116F—Fluvaquents, frequently flooded-Hapludolls complex, 0 to 30 percent slopes

Map Unit Setting

Elevation: 750 to 1,250 feet
Mean annual precipitation: 19 to 24 inches
Mean annual air temperature: 36 to 45 degrees F
Frost-free period: 110 to 135 days

Map Unit Composition

Fluvaquents, frequently flooded, and similar soils: 55 percent
Hapludolls, rarely flooded, and similar soils: 25 percent
Minor components: 20 percent

Description of Fluvaquents, Frequently Flooded

Setting

Landform: Flats on flood plains, swales on flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches

Custom Soil Resource Report

Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 14.17 in/hr)
Depth to water table: About 0 to 10 inches
Frequency of flooding: Frequent
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline (0.0 to 2.0 mmhos/cm)
Available water capacity: Moderate (about 8.1 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 6w
Hydrologic Soil Group: A/D

Typical profile

0 to 16 inches: Fine sandy loam
16 to 80 inches: Stratified loamy sand to silt loam

Description of Hapludolls, Rarely Flooded

Setting

Landform: Escarpments on flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Glaciolacustrine deposits and/or till

Properties and qualities

Slope: 2 to 30 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.14 to 1.42 in/hr)
Depth to water table: About 59 to 80 inches
Frequency of flooding: Rare
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Available water capacity: High (about 10.4 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 2e
Hydrologic Soil Group: B

Typical profile

0 to 9 inches: Loam
9 to 60 inches: Loam

Minor Components

Hapludalfs, rarely flooded

Percent of map unit: 7 percent
Landform: Escarpments on flood plains
Down-slope shape: Linear
Across-slope shape: Linear

Water

Percent of map unit: 5 percent

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Landform: Flood plains

Fairdale, occasionally flooded

Percent of map unit: 5 percent

Landform: Rises on flood plains

Down-slope shape: Convex

Across-slope shape: Linear

Bowstring, frequently flooded

Percent of map unit: 2 percent

Landform: Swales on flood plains

Down-slope shape: Concave

Across-slope shape: Linear

Rauville, frequently flooded

Percent of map unit: 1 percent

Landform: Oxbows on flood plains

Down-slope shape: Concave

Across-slope shape: Concave

138A—Kratka fine sandy loam, 0 to 2 percent slopes

Map Unit Setting

Elevation: 750 to 1,250 feet

Mean annual precipitation: 19 to 24 inches

Mean annual air temperature: 36 to 45 degrees F

Frost-free period: 110 to 135 days

Map Unit Composition

Kratka and similar soils: 70 percent

Minor components: 30 percent

Description of Kratka

Setting

Landform: Swales on lake plains, flats on lake plains

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Glaciolacustrine deposits over till

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.14 to 1.42 in/hr)

Depth to water table: About 0 to 30 inches

Frequency of flooding: None

Frequency of ponding: Occasional

Calcium carbonate, maximum content: 20 percent

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Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline (0.0 to 2.0 mmhos/cm)
Available water capacity: High (about 9.1 inches)

Interpretive groups

Farmland classification: Prime farmland if drained
Land capability (nonirrigated): 2w
Hydrologic Soil Group: B/D

Typical profile

0 to 11 inches: Fine sandy loam
11 to 18 inches: Loamy fine sand
18 to 25 inches: Fine sand
25 to 80 inches: Loam

Minor Components

Smiley

Percent of map unit: 7 percent
Landform: Swales on lake plains, flats on lake plains
Down-slope shape: Linear
Across-slope shape: Linear

Foldahl

Percent of map unit: 5 percent
Landform: Rises on lake plains
Down-slope shape: Convex
Across-slope shape: Linear

Kratka, very cobbly

Percent of map unit: 5 percent
Landform: Swales on lake plains, flats on lake plains
Down-slope shape: Linear
Across-slope shape: Linear

Strathcona

Percent of map unit: 5 percent
Landform: Swales on lake plains, flats on lake plains
Down-slope shape: Linear
Across-slope shape: Linear

Strandquist

Percent of map unit: 3 percent
Landform: Swales on lake plains, flats on lake plains
Down-slope shape: Linear
Across-slope shape: Linear

Kratka, depressional

Percent of map unit: 3 percent
Landform: Depressions on lake plains
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: Wet Meadow (R056XY102ND)

Linveldt

Percent of map unit: 2 percent
Landform: Rises on lake plains
Down-slope shape: Convex
Across-slope shape: Linear

Custom Soil Resource Report

I50A—Reiner fine sandy loam, 0 to 3 percent slopes

Map Unit Setting

Elevation: 750 to 1,250 feet

Mean annual precipitation: 19 to 24 inches

Mean annual air temperature: 36 to 45 degrees F

Frost-free period: 110 to 135 days

Map Unit Composition

Reiner and similar soils: 70 percent

Minor components: 30 percent

Description of Reiner

Setting

Landform: Rises on lake plains

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Till

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.14 to 1.42 in/hr)

Depth to water table: About 20 to 49 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 25 percent

Gypsum, maximum content: 1 percent

Maximum salinity: Nonsaline (0.0 to 2.0 mmhos/cm)

Available water capacity: High (about 10.2 inches)

Interpretive groups

Farmland classification: All areas are prime farmland

Land capability (nonirrigated): 1

Hydrologic Soil Group: C

Typical profile

0 to 7 inches: Fine sandy loam

7 to 17 inches: Clay loam

17 to 21 inches: Loam

21 to 35 inches: Loam

35 to 80 inches: Loam

Minor Components

Smiley

Percent of map unit: 12 percent

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Landform: Swales on lake plains, flats on lake plains

Down-slope shape: Linear

Across-slope shape: Linear

Reiner, very cobbly

Percent of map unit: 7 percent

Landform: Rises on lake plains

Down-slope shape: Convex

Across-slope shape: Linear

Linveldt

Percent of map unit: 5 percent

Landform: Rises on lake plains

Down-slope shape: Convex

Across-slope shape: Linear

Kratka

Percent of map unit: 3 percent

Landform: Flats on lake plains, swales on lake plains

Down-slope shape: Linear

Across-slope shape: Linear

Ecological site: Wet Meadow (R056XY102ND)

Eckvoll

Percent of map unit: 3 percent

Landform: Rises on lake plains

Down-slope shape: Convex

Across-slope shape: Linear

159A—Smiley loam, 0 to 2 percent slopes

Map Unit Setting

Elevation: 750 to 1,250 feet

Mean annual precipitation: 19 to 24 inches

Mean annual air temperature: 36 to 45 degrees F

Frost-free period: 110 to 135 days

Map Unit Composition

Smiley and similar soils: 65 percent

Minor components: 35 percent

Description of Smiley

Setting

Landform: Flats on lake plains, swales on lake plains

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Till

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Custom Soil Resource Report

Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.14 to 1.42 in/hr)
Depth to water table: About 0 to 30 inches
Frequency of flooding: None
Frequency of ponding: Occasional
Calcium carbonate, maximum content: 30 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline (0.0 to 2.0 mmhos/cm)
Available water capacity: High (about 10.8 inches)

Interpretive groups

Farmland classification: Prime farmland if drained
Land capability (nonirrigated): 2w
Hydrologic Soil Group: B/D

Typical profile

0 to 12 inches: Loam
12 to 19 inches: Clay loam
19 to 42 inches: Loam
42 to 80 inches: Loam

Minor Components

Smiley, very cobbly

Percent of map unit: 10 percent
Landform: Flats on lake plains, swales on lake plains
Down-slope shape: Linear
Across-slope shape: Linear

Kratka

Percent of map unit: 9 percent
Landform: Flats on lake plains, swales on lake plains
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: Wet Meadow (R056XY102ND)

Roliss

Percent of map unit: 5 percent
Landform: Flats on lake plains, swales on lake plains
Down-slope shape: Linear
Across-slope shape: Linear

Reiner

Percent of map unit: 4 percent
Landform: Rises on lake plains
Down-slope shape: Convex
Across-slope shape: Linear

Linveltdt

Percent of map unit: 3 percent
Landform: Rises on lake plains
Down-slope shape: Convex
Across-slope shape: Linear

Smiley, depressional

Percent of map unit: 3 percent
Landform: Depressions on lake plains

Custom Soil Resource Report

Down-slope shape: Concave
Across-slope shape: Linear

Strandquist

Percent of map unit: 1 percent
Landform: Swales on lake plains, flats on lake plains
Down-slope shape: Linear
Across-slope shape: Linear

W—Water

Map Unit Setting

Elevation: 750 to 1,250 feet
Mean annual precipitation: 19 to 24 inches
Mean annual air temperature: 36 to 45 degrees F
Frost-free period: 110 to 135 days

Map Unit Composition

Water: 100 percent

Soil Information for All Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

Land Classifications

Land Classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Hydric Rating by Map Unit

This rating indicates the proportion of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor nonhydric components in the higher positions on the landform, and map units that are made up dominantly of nonhydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is designated as "hydric," "predominantly hydric," "partially hydric," "predominantly nonhydric," or "nonhydric" depending on the rating of its respective components and the percentage of each component within the map unit.

"Hydric" means that all components listed for a given map unit are rated as being hydric. "Predominantly hydric" means components that comprise 66 to 99 percent of the map unit are rated as hydric. "Partially hydric" means components that comprise 33 to 66 percent of the map unit are rated as hydric. "Predominantly nonhydric" means components that comprise up to 33 percent of the map unit are rated as hydric. "Nonhydric" means that none of the components are rated as hydric. The assumption here is that all components of the map unit are rated as hydric or nonhydric in the

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underlying database. A "Not rated or not available" map unit rating is displayed when none of the components within a map unit have been rated.

In Web Soil Survey, the Summary by Map Unit table that is displayed below the map pane contains a column named 'Rating'. In this column the percentage of each map unit that is classified as being hydric is displayed.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

References:

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

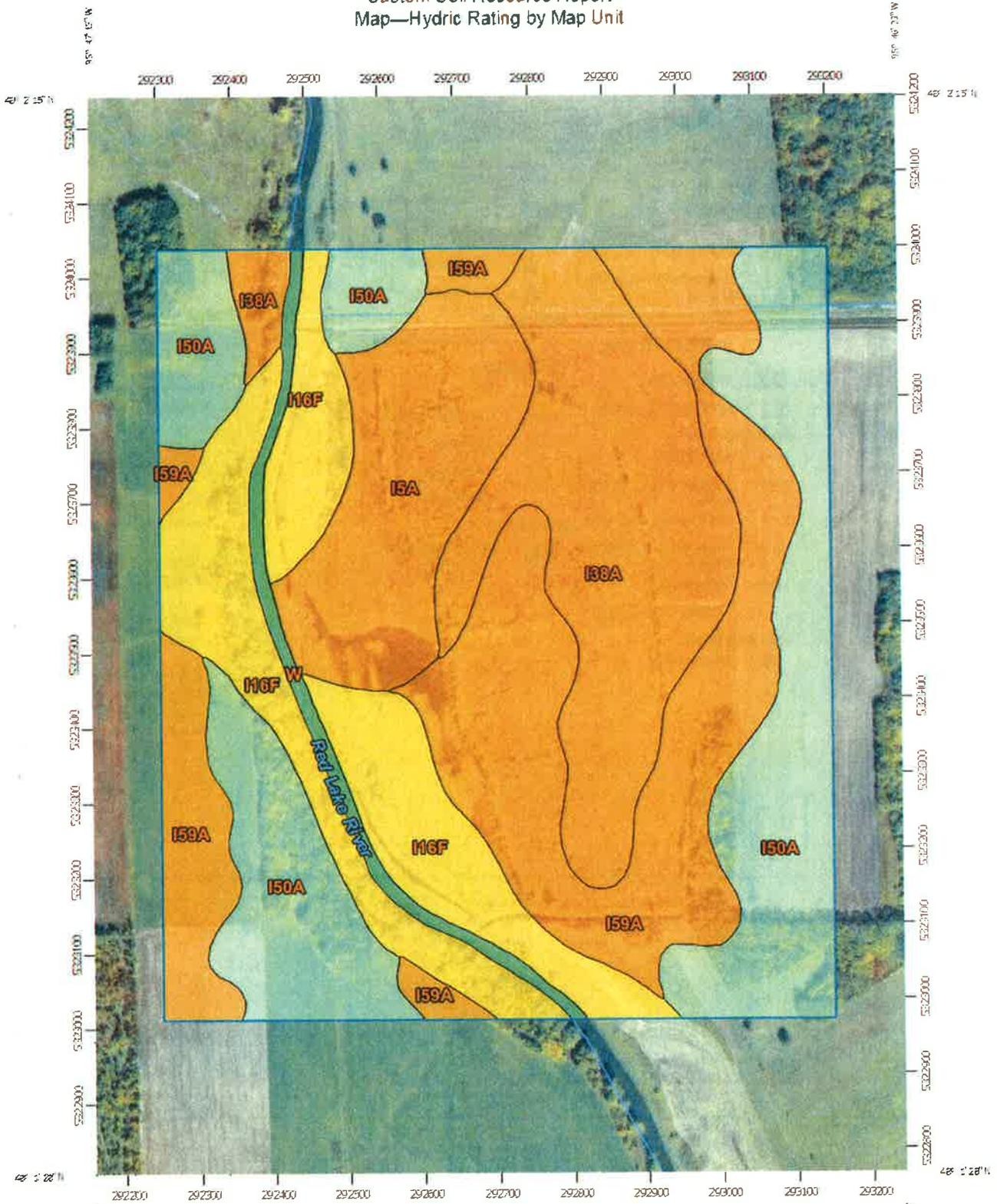
Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Custom Soil Resource Report Map—Hydric Rating by Map Unit



Map Scale: 1:6,990 if printed on A portrait (8.5" x 11") sheet.

0 100 200 400 600 Meters

0 300 600 1200 1800 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

MAP LEGEND

Area of Interest (AOI)		 Predominantly Hydric (56 to 99%)	
 Area of Interest (AOI)		 Partially hydric (33 to 65%)	
Soils		 Predominantly nonhydric (1 to 32%)	
Soil Rating Polygons		 Nonhydric (0%)	
 Hydric (100%)		 Not rated or not available	
 Predominantly Hydric (66 to 99%)		Water Features	
 Partially hydric (33 to 65%)		 Streams and Canals	
 Predominantly nonhydric (1 to 32%)		Transportation	
 Nonhydric (0%)		 Rails	
 Not rated or not available		 Interstate Highways	
Soil Rating Lines		 US Routes	
 Hydric (100%)		 Major Roads	
 Predominantly Hydric (66 to 99%)		 Local Roads	
 Partially hydric (33 to 65%)		Background	
 Predominantly nonhydric (1 to 32%)		 Aerial Photography	
 Nonhydric (0%)			
 Not rated or not available			
Soil Rating Points			
 Hydric (100%)			

MAP INFORMATION

The soil surveys that comprise your AOI w

Please rely on the bar scale on each map measurements

Source of Map: Natural Resources Con
Web Soil Survey URL: <http://websoilsur>
Coordinate System: Web Mercator (EPS

Maps from the Web Soil Survey are basec
projection, which preserves direction and
distance and area. A projection that prese
Albers equal-area conic projection, should
calculations of distance or area are requir

This product is generated from the USDA-I
the version date(s) listed below.

Soil Survey Area: Pennington County, A
Survey Area Data: Version 8, May 25, 2

Soil map units are labeled (as space allows
or larger.

Date(s) aerial images were photographed:
2011

The orthophoto or other base map on whi
compiled and digitized probably differs fro
imagery displayed on these maps. As a re
of map unit boundaries may be evident.

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Table—Hydric Rating by Map Unit

Hydric Rating by Map Unit— Summary by Map Unit — Pennington County, Minnesota (MN113)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
I5A	Borup loam, 0 to 2 percent slopes	91	25.3	11.0%
I16F	Fluvaquents, frequently flooded-Hapludolls complex, 0 to 30 percent slopes	58	39.7	17.3%
I38A	Kratka fine sandy loam, 0 to 2 percent slopes	93	43.9	19.1%
I50A	Reiner fine sandy loam, 0 to 3 percent slopes	15	57.0	24.8%
I59A	Smiley loam, 0 to 2 percent slopes	93	58.5	25.5%
W	Water	0	5.1	2.2%
Totals for Area of Interest			229.6	100.0%

Rating Options—Hydric Rating by Map Unit

Aggregation Method: Percent Present

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

References

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United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. <http://soils.usda.gov/>

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United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210.

APPENDIX B

Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site 9815 - Pennington County Wetland Bank City/County: Pennington Sampling Date: 10/03/13
 Applicant/Owner: Pennington County State: MN Sampling Point: T1-Upland
 Investigator(s): Christopher T. Lesmeister Section, Township, Range: T153 N, R40 W, S34
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, non _____ Slope (%) _____
 Subregion (LRR _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name _____ NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes _____ No X¹ (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____
Hydric soil present? <u>N</u>	
Indicators of wetland hydrology present? <u>N</u>	

Remarks: (Explain alternative procedures here or in a separate report.)

¹Antecedant precipitation analysis indicates that the site location was dryer than normal
 UTM NAD 83 Zone 15N - 5323877.72m Northing, 292834.41m Easting

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet	
1	_____	_____	_____	_____	Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A)	
2	_____	_____	_____	_____	Total Number of Dominant Species Across all Strata: <u>1</u> (B)	
3	_____	_____	_____	_____	Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B)	
4	_____	_____	_____	_____		
5	_____	_____	_____	_____		
		<u>0</u>	= Total Cover			
Sapling/Shrub stratum	(Plot size: <u>15</u>)				Prevalence Index Worksheet	
1	_____				Total % Cover of:	
2	_____				OBL species <u>0</u> x 1 = <u>0</u>	
3	_____				FACW species <u>0</u> x 2 = <u>0</u>	
4	_____				FAC species <u>25</u> x 3 = <u>75</u>	
5	_____				FACU species <u>100</u> x 4 = <u>400</u>	
		<u>0</u>	= Total Cover		UPL species <u>30</u> x 5 = <u>150</u>	
		<u>155</u>	= Total Cover		Column totals <u>155</u> (A) <u>625</u> (B)	
		<u>0</u>	= Total Cover		Prevalence Index = B/A = <u>4.03</u>	
Herb stratum	(Plot size: <u>5</u>)				Hydrophytic Vegetation Indicators:	
1	<u>Bromus inermis</u>	<u>90</u>	<u>Y</u>	<u>FACU</u>	____ Rapid test for hydrophytic vegetation	
2	<u>Andropogon gerardii</u>	<u>25</u>	<u>N</u>	<u>FAC</u>	____ Dominance test is >50%	
3	<u>Ratibida pinnata</u>	<u>20</u>	<u>N</u>	<u>UPL</u>	____ Prevalence index is ≤3.0*	
4	<u>Schizachyrium scoparium</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)	
5	<u>Dalea candida</u>	<u>5</u>	<u>N</u>	<u>UPL</u>	____ Problematic hydrophytic vegetation* (explain)	
6	<u>Dalea purpurea</u>	<u>5</u>	<u>N</u>	<u>UPL</u>	____	
7	_____				*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
8	_____					
9	_____					
10	_____					
		<u>155</u>	= Total Cover			
Woody vine stratum	(Plot size: _____)				Hydrophytic vegetation present? <u>N</u>	
1	_____					
2	_____					
		<u>0</u>	= Total Cover			

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: T1-Upland

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 2/1	100						Sandy Silt
6 +	2.5YR 6/3	90	2.5YR 6/8	10	C	M		Sandy Clay Silt

¹Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. ²Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators: <input type="checkbox"/> Histisol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR F) <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> High Plains Depressions (F16) (MLRA 72 & 73 of LRR H)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 1 cm Muck (A9) (LRR I, J) <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) <input type="checkbox"/> Dark Surface (S7) (LRR K, L) <input type="checkbox"/> High Plains Depressions (F16) (LRR H outside of MLRA 72 & 73) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (explain in remarks)
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³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric soil present? <u> N </u>
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Remarks:

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (where not tilled) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) (where tilled) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)	

Field Observations: Surface water present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X Depth (inches): _____ Water table present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X Depth (inches): _____ Saturation present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? <u> N </u>
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Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site 9815 - Pennington County Wetland Bank City/County: Pennington Sampling Date: 10/03/13
 Applicant/Owner: Pennington County State: MN Sampling Point: T1-Wetland
 Investigator(s): Christopher T. Lesmeister Section, Township, Range: T153 N, R40 W, S34
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, non _____ Slope (%) _____
 Subregion (LRR _____) Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name _____ NWI Classification: _____

Are climatic/hydrologic conditions of the site typical for this time of the year? Yes _____ No X¹ (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? present? Yes

SUMMARY OF FINDINGS (If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>Y</u>	Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: _____
Hydric soil present? <u>Y</u>	
Indicators of wetland hydrology present? <u>Y</u>	

Remarks: (Explain alternative procedures here or in a separate report.)
¹Antecedant precipitation analysis indicates that the site location was dryer than normal
 UTM NAD 83 Zone 15N - 5323855.99m Northing, 292821.19m Easting

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet
1 _____					Number of Dominant Species that are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across all Strata: <u>3</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>66.67%</u> (A/B)
2 _____					
3 _____					
4 _____					
5 _____					
		<u>0</u> = Total Cover			
Sapling/Shrub stratum	(Plot size: <u>15</u>)	Absolute % Cover	Dominant Species	Indicator Status	Prevalence Index Worksheet
1 <u>Salix interior</u>		<u>1</u>		FACW	Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>61</u> x 2 = <u>122</u> FAC species <u>40</u> x 3 = <u>120</u> FACU species <u>50</u> x 4 = <u>200</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>151</u> (A) <u>442</u> (B) Prevalence Index = B/A = <u>2.93</u>
2 _____					
3 _____					
4 _____					
5 _____					
		<u>1</u> = Total Cover			
Herb stratum	(Plot size: <u>5</u>)	Absolute % Cover	Dominant Species	Indicator Status	Hydrophytic Vegetation Indicators:
1 <u>Equisetum laevigatum</u>		<u>40</u>	Y	FACW	Rapid test for hydrophytic vegetation <u>X</u> Dominance test is >50% <u>X</u> Prevalence index is ≤3.0* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
2 <u>Andropogon gerardii</u>		<u>40</u>	Y	FAC	
3 <u>Sorghastrum nutans</u>		<u>30</u>	Y	FACU	
4 <u>Solidago gigantea</u>		<u>20</u>	N	FACW	
5 <u>Schizachyrium scoparium</u>		<u>20</u>	N	FACU	
6 _____					
7 _____					
8 _____					
9 _____					
10 _____					
		<u>150</u> = Total Cover			
Woody vine stratum	(Plot size: _____)	Absolute % Cover	Dominant Species	Indicator Status	Hydrophytic vegetation present?
1 _____					<u>Y</u>
2 _____					
		<u>0</u> = Total Cover			

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: T1-Wetland

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 2/1	100						Sandy Silt
8 +	2.5YR 6/2	80	2.5YR 6/8	20	C	PL		Silty Sand

¹Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. ²Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators: <input type="checkbox"/> Histisol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR F) <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H) <input checked="" type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> High Plains Depressions (F16) (MLRA 72 & 73 of LRR H)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 1 cm Muck (A9) (LRR I, J) <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) <input type="checkbox"/> Dark Surface (S7) (LRR K, L) <input type="checkbox"/> High Plains Depressions (F16) (LRR H outside of MLRA 72 & 73) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (explain in remarks)
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Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric soil present? <u>Y</u>
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Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (where not tilled) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) (where tilled) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)

Field Observations: Surface water present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water table present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? <u>Y</u>
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Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Soil was moist at 10" below surface grade

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site 9815 - Pennington County Wetland Bank City/County: Pennington Sampling Date: 10/04/13
 Applicant/Owner: Pennington County State: MN Sampling Point: T2-Upland
 Investigator(s): Christopher T. Lesmeister Section, Township, Range: T153 N, R40 W, S34
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, non _____ Slope (%) _____
 Subregion (LRR) _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name _____ NWI Classification: _____

Are climatic/hydrologic conditions of the site typical for this time of the year? Yes _____ No X¹ (If no, explain in remarks)

Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes

Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____
Hydric soil present? <u>N</u>	
Indicators of wetland hydrology present? <u>N</u>	

Remarks: (Explain alternative procedures here or in a separate report.)

¹Antecedant precipitation analysis indicates that the site location was dryer than normal
 UTM NAD 83 Zone 15N - 5323740.42m Northing, 292983.89m Easting

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across all Strata: <u>2</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>50.00%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		Prevalence Index Worksheet Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>20</u> x 2 = <u>40</u> FAC species <u>87</u> x 3 = <u>261</u> FACU species <u>60</u> x 4 = <u>240</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>167</u> (A) <u>541</u> (B) Prevalence Index = B/A = <u>3.24</u>
Sapling/Shrub stratum	(Plot size: <u>15</u>)				
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		
Herb stratum	(Plot size: <u>5</u>)				
1	<u>Andropogon gerardii</u>	<u>80</u>	<u>Y</u>	<u>FAC</u>	
2	<u>Schizachyrium scoparium</u>	<u>60</u>	<u>Y</u>	<u>FACU</u>	
3	<u>Solidago gigantea</u>	<u>20</u>	<u>N</u>	<u>FACW</u>	
4	<u>Poa pratensis</u>	<u>7</u>	<u>N</u>	<u>FAC</u>	
5					
6					
7					
8					
9					
10					
		<u>167</u>	= Total Cover		
Woody vine stratum	(Plot size: _____)				
1					
2					
		<u>0</u>	= Total Cover		

Hydrophytic Vegetation Indicators:
 _____ Rapid test for hydrophytic vegetation
 _____ Dominance test is >50%
 _____ Prevalence index is ≤3.0*
 _____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
 _____ Problematic hydrophytic vegetation* (explain)
 *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? N

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: T2-Upland

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-11	10YR 2/1	100						Sandy Loam
11 +	2.5YR 5/3	80	10YR 5/8	20	C	M		Silty Sand

¹Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. ²Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histisol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR F) <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> High Plains Depressions (F16) (MLRA 72 & 73 of LRR H)
	<input type="checkbox"/> 1 cm Muck (A9) (LRR I, J) <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) <input type="checkbox"/> Dark Surface (S7) (LRR K, L) <input type="checkbox"/> High Plains Depressions (F16) (LRR H outside of MLRA 72 & 73) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (explain in remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if present):
 Type: _____
 Depth (inches): _____

Hydric soil present? N

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (where not tilled) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) (where tilled) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface water present?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	X <input checked="" type="checkbox"/>	Depth (inches): _____
Water table present?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	X <input checked="" type="checkbox"/>	Depth (inches): _____
Saturation present? (includes capillary fringe)	Yes <input type="checkbox"/>	No <input type="checkbox"/>	X <input checked="" type="checkbox"/>	Depth (inches): _____

Wetland Hydrology Present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site 9815 - Pennington County Wetland Bank City/County: Pennington Sampling Date: 10/04/13
 Applicant/Owner: Pennington County State: MN Sampling Point: T2-Wetland
 Investigator(s): Christopher T. Lesmeister Section, Township, Range: T153 N, R40 W, S34
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, non _____ Slope (%) _____
 Subregion (LRR _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name _____ WVI Classification: _____

Are climatic/hydrologic conditions of the site typical for this time of the year? Yes _____ No X¹ (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes _____
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? present? Yes _____

SUMMARY OF FINDINGS (If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>Y</u>	Is the sampled area within a wetland? <u>Y</u>
Hydric soil present? <u>Y</u>	
Indicators of wetland hydrology present? <u>Y</u>	

Remarks: (Explain alternative procedures here or in a separate report.)
¹Antecedant precipitation analysis indicates that the site location was dryer than normal
 UTM NAD 83 Zone 15N - 5323726.58m Northing, 292979.01m Easting

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across all Strata: <u>4</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>75.00%</u> (A/B)
1	_____	_____	_____	_____	
2	_____	_____	_____	_____	
3	_____	_____	_____	_____	
4	_____	_____	_____	_____	
5	_____	_____	_____	_____	
		<u>0</u>	= Total Cover		
Sapling/Shrub stratum	(Plot size: <u>15</u>)	Absolute % Cover	Dominant Species	Indicator Status	Prevalence Index Worksheet Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>31</u> x 2 = <u>62</u> FAC species <u>90</u> x 3 = <u>270</u> FACU species <u>50</u> x 4 = <u>200</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>171</u> (A) <u>532</u> (B) Prevalence Index = B/A = <u>3.11</u>
1	<u>Salix interior</u>	<u>5</u>	<u>Y</u>	<u>FACW</u>	
2	_____	_____	_____	_____	
3	_____	_____	_____	_____	
4	_____	_____	_____	_____	
5	_____	_____	_____	_____	
		<u>5</u>	= Total Cover		
Herb stratum	(Plot size: <u>5</u>)	Absolute % Cover	Dominant Species	Indicator Status	
1	<u>Andropogon gerardii</u>	<u>50</u>	<u>Y</u>	<u>FAC</u>	
2	<u>Schizachyrium scoparium</u>	<u>50</u>	<u>Y</u>	<u>FACU</u>	
3	<u>Poa pratensis</u>	<u>40</u>	<u>Y</u>	<u>FAC</u>	
4	<u>Solidago gigantea</u>	<u>20</u>	<u>N</u>	<u>FACW</u>	
5	<u>Salix interior</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
6	<u>Phalaris arundinacea</u>	<u>1</u>	<u>N</u>	<u>FACW</u>	
7	_____	_____	_____	_____	
8	_____	_____	_____	_____	
9	_____	_____	_____	_____	
10	_____	_____	_____	_____	
		<u>166</u>	= Total Cover		
Woody vine stratum	(Plot size: _____)	Absolute % Cover	Dominant Species	Indicator Status	
1	_____	_____	_____	_____	
2	_____	_____	_____	_____	
		<u>0</u>	= Total Cover		

Remarks: (Include photo numbers here or on a separate sheet)

Hydrophytic vegetation present? Y

SOIL

Sampling Point: T2-Wetland

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 2/1	100						Silty Loam
8 +	2.5YR 7/2	90	2.5YR 6/8	30	C	M		Silty Sand

¹Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. ²Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR F)
- 1 cm Muck (A9) (LRR F, G, H)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- 2.5 cm Mucky Peat or Peat (S2) (LRR H)
- 5 cm Mucky Peat or Peat (S3)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- High Plains Depressions (F16) (MLRA 72 & 73 of LRR H)

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) (LRR I, J)
 - Coast Prairie Redox (A16) (LRR K, L, R)
 - Dark Surface (S7) (LRR K, L)
 - High Plains Depressions (F16) (LRR H outside of MLRA 72 & 73)
 - Reduced Vertic (F18)
 - Red Parent Material (TF2)
 - Very Shallow Dark Surface (TF12)
 - Other (explain in remarks)
- ³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric soil present? Y

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Dry-Season Water Table (C2)
- Oxidized Rhizospheres on Living Roots (where not tilled)
- Presence of Reduced Iron (C4)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Sparsely Vegetated Concave Surface (B8)
- Drainage Patterns (B10)
- Oxidized Rhizospheres on Living Roots (where tilled)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- FAC-Neutral Test (D5)
- Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface water present? Yes No Depth (inches): _____
 Water table present? Yes No Depth (inches): _____
 Saturation present? Yes No Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site 9815 - Pennington County Wetland Bank City/County: Pennington Sampling Date: 10/04/13
 Applicant/Owner: Pennington County State: MN Sampling Point: E2
 Investigator(s): Christopher T. Lesmeister Section, Township, Range: T153 N, R40 W, S34
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, non _____ Slope (%) _____
 Subregion (LRR _____) Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name _____ NWI Classification: _____

Are climatic/hydrologic conditions of the site typical for this time of the year? Yes _____ No X¹ (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes _____
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u>	Is the sampled area within a wetland? <u>Y</u>
Hydric soil present? <u>Y</u>	
Indicators of wetland hydrology present? <u>Y</u>	
f yes, optional wetland site ID: _____	

Remarks: (Explain alternative procedures here or in a separate report.)
¹Antecedant precipitation analysis indicates that the site location was dryer than normal
 UTM NAD 83 Zone 15N - 5323452.52m Northing, 292981.31m Easting

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across all Strata: <u>2</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		
Sapling/Shrub stratum	(Plot size: <u>15</u>)	Absolute % Cover	Dominant Species	Indicator Status	
1	<i>Populus tremuloides</i>	<u>2</u>		FAC	
2					
3					
4					
5					
		<u>2</u>	= Total Cover		
Herb stratum	(Plot size: <u>5</u>)	Absolute % Cover	Dominant Species	Indicator Status	
1	<i>Andropogon gerardii</i>	<u>50</u>	Y	FAC	Hydrophytic Vegetation Indicators: _____ Rapid test for hydrophytic vegetation <u>X</u> Dominance test is >50% <u>X</u> Prevalence index is ≤3.0* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) _____ Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
2	<i>Phalaris arundinacea</i>	<u>40</u>	Y	FACW	
3	<i>Schizachyrium scoparium</i>	<u>30</u>	N	FACU	
4	<i>Vicia americana</i>	<u>20</u>	N	FACU	
5	<i>Solidago gigantea</i>	<u>15</u>	N	FACW	
6	<i>Poa pratensis</i>	<u>10</u>	N	FAC	
7	<i>Populus tremuloides</i>	<u>1</u>	N	FAC	
8	<i>Salix interior</i>	<u>1</u>	N	FACW	
9					
10					
		<u>167</u>	= Total Cover		
Woody vine stratum	(Plot size: _____)	Absolute % Cover	Dominant Species	Indicator Status	
1					Hydrophytic vegetation present? <u>Y</u>
2					
		<u>0</u>	= Total Cover		

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: E2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 2/1	100						Silty Loam
8 +	2.5YR 7/2	70	2.5YR 5/6	30	C	M		Silt with Sand and Clay

¹Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. ²Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- Histisol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR F)
- 1 cm Muck (A9) (LRR F, G, H)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- 2.5 cm Mucky Peat or Peat (S2) (LRR)
- 5 cm Mucky Peat or Peat (S3)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- High Plains Depressions (F16) (MLRA 72 & 73 of LRR H)

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) (LRR I, J)
 - Coast Prairie Redox (A16) (LRR K, L, R)
 - Dark Surface (S7) (LRR K, L)
 - High Plains Depressions (F16) (LRR H outside of MLRA 72 & 73)
 - Reduced Vertic (F18)
 - Red Parent Material (TF2)
 - Very Shallow Dark Surface (TF12)
 - Other (explain in remarks)
- ³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric soil present? Y

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Dry-Season Water Table (C2)
- Oxidized Rhizospheres on Living Roots (where not tilled)
- Presence of Reduced Iron (C4)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Sparsely Vegetated Concave Surface (B8)
- Drainage Patterns (B10)
- Oxidized Rhizospheres on Living Roots (C3) (where tilled)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- FAC-Neutral Test (D5)
- Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface water present? Yes No Depth (inches): _____
 Water table present? Yes No Depth (inches): _____
 Saturation present? Yes No Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site 9815 - Pennington County Wetland Bank City/County: Pennington Sampling Date: 10/03/13
 Applicant/Owner: Pennington County State: MN Sampling Point: A1
 Investigator(s): Christopher T. Lesmeister Section, Township, Range: T153 N, R40 W, S34
 Landform (hillslope, terrace, etc.): Local relief (concave, convex, non Slope (%)
 Subregion (LRR Lat: Long: Datum:
 Soil Map Unit Name NWI Classification:

Are climatic/hydrologic conditions of the site typical for this time of the year? Yes No X¹ (If no, explain in remarks)
 Are vegetation, soil, or hydrology significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation, soil, or hydrology naturally problematic? present? Yes

SUMMARY OF FINDINGS (If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>Y</u>	Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: _____
Hydric soil present? <u>Y</u>	
Indicators of wetland hydrology present? <u>Y</u>	

Remarks: (Explain alternative procedures here or in a separate report.)
¹Antecedant precipitation analysis indicates that the site location was dryer than normal
 UTM NAD 83 Zone 15N - 5323197.16m Northing, 292647.71m Easting

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: 30)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet	
1						Number of Dominant Species that are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across all Strata: <u>1</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)
2						
3						
4						
5						
		0 = Total Cover				
Sapling/Shrub stratum	(Plot size: 15)	Absolute % Cover	Dominant Species	Indicator Status	Prevalence Index Worksheet	
1						Total % Cover of: OBL species <u>80</u> x 1 = <u>80</u> FACW species <u>10</u> x 2 = <u>20</u> FAC species <u>5</u> x 3 = <u>15</u> FACU species <u>20</u> x 4 = <u>80</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>115</u> (A) <u>195</u> (B) Prevalence Index = B/A = <u>1.70</u>
2						
3						
4						
5						
		0 = Total Cover				
Herb stratum	(Plot size: 5)	Absolute % Cover	Dominant Species	Indicator Status		
1	<i>Phalaris arundinacea</i>	80	Y	OBL		
2	<i>Bromus inermis</i>	20	N	FACU		
3	<i>Poa pratensis</i>	5	N	FAC		
4	<i>Solidago gigantea</i>	5	N	FACW		
5	<i>Mentha arvensis</i>	5	N	FACW		
6						
7						
8						
9						
10						
		115 = Total Cover				
Woody vine stratum	(Plot size:)	Absolute % Cover	Dominant Species	Indicator Status	Hydrophytic Vegetation Indicators:	
1						Rapid test for hydrophytic vegetation <input checked="" type="checkbox"/> Dominance test is >50% <input checked="" type="checkbox"/> Prevalence index is ≤3.0* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
2						
		0 = Total Cover				

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: A1

Profile Description: (Describe to the depth needed to document the Indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-11	10YR 2/1	100						Clay Silt
11 +	10YR 4/1	70	10YR 4/6	30	C	M		Clay Silt

¹Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. ²Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- Histisol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR F)
- 1 cm Muck (A9) (LRR F, G, H)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- 2.5 cm Mucky Peat or Peat (S2) (LRR
- 5 cm Mucky Peat or Peat (S3)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- High Plains Depressions (F16)

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) (LRR I, J)
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- High Plains Depressions (F16)
- (LRR H outside of MLRA 72 & 73)
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric soil present? Y

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required, check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Dry-Season Water Table (C2)
- Oxidized Rhizospheres on Living Roots (where not tilled)
- Presence of Reduced Iron (C4)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Sparsely Vegetated Concave Surface (B8)
- Drainage Patterns (B10)
- Oxidized Rhizospheres on Living Roots (C3) (where tilled)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- FAC-Neutral Test (D5)
- Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface water present? Yes No Depth (inches): _____
 Water table present? Yes No Depth (inches): _____
 Saturation present? Yes No Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site 9815 - Pennington County Wetland Bank City/County: Pennington Sampling Date: 10/03/13
 Applicant/Owner: Pennington County State: MN Sampling Point: B1
 Investigator(s): Christopher T. Lesmeister Section, Township, Range: T153 N, R40 W, S34
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, non _____ Slope (%) _____
 Subregion (LRR _____) Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name _____ NWI Classification: _____

Are climatic/hydrologic conditions of the site typical for this time of the year? Yes _____ No X¹ (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? present? Yes
 (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u>	Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: _____
Hydric soil present? <u>Y</u>	
Indicators of wetland hydrology present? <u>Y</u>	

Remarks: (Explain alternative procedures here or in a separate report.)
¹Antecedant precipitation analysis indicates that the site location was dryer than normal
 UTM NAD 83 Zone 15N - 5323503.41m Northing, 292517.58m Easting

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across all Strata: <u>2</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		Prevalence Index Worksheet Total % Cover of: OBL species <u>45</u> x 1 = <u>45</u> FACW species <u>97</u> x 2 = <u>194</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>142</u> (A) <u>239</u> (B) Prevalence Index = B/A = <u>1.68</u>
Sapling/Shrub stratum	(Plot size: <u>15</u>)	Absolute % Cover	Dominant Species	Indicator Status	
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		
Herb stratum	(Plot size: <u>5</u>)	Absolute % Cover	Dominant Species	Indicator Status	Hydrophytic Vegetation Indicators: _____ Rapid test for hydrophytic vegetation <u>X</u> Dominance test is >50% <u>X</u> Prevalence index is ≤3.0* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) _____ Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1	<u>Phalaris arundinacea</u>	<u>97</u>	<u>Y</u>	<u>FACW</u>	
2	<u>Cicuta maculata</u>	<u>40</u>	<u>Y</u>	<u>OBL</u>	
3	<u>Cyperus bipartitus</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
4					
5					
6					
7					
8					
9					
10					
		<u>142</u>	= Total Cover		
Woody vine stratum	(Plot size: _____)	Absolute % Cover	Dominant Species	Indicator Status	
1					
2					
		<u>0</u>	= Total Cover		

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: B1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 2/1	100						Muck
3-11	10YR 2/1	100						Sandy Muck
11 +	10YR 3/1	80	10YR 4/4	10	C	PL		Silty Sand
			10YR 4/1	10	D	M		

¹Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. ²Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- Histisol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR F)
- 1 cm Muck (A9) (LRR F, G, H)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- 2.5 cm Mucky Peat or Peat (S2) (LRR
- 5 cm Mucky Peat or Peat (S3)

- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- High Plains Depressions (F16) (MLRA 72 & 73 of LRR H)

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) (LRR I, J)
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- High Plains Depressions (F16) (LRR H outside of MLRA 72 & 73)
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric soil present? Y

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Dry-Season Water Table (C2)
- Oxidized Rhizospheres on Living Roots (where tilled)
- Presence of Reduced Iron (C4)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Sparsely Vegetated Concave Surface (B8)
- Drainage Patterns (B10)
- Oxidized Rhizospheres on Living Roots (where tilled)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- FAC-Neutral Test (D5)
- Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface water present? Yes No Depth (inches):
 Water table present? Yes No Depth (inches): 19" *
 Saturation present? Yes No Depth (inches):
 (includes capillary fringe)

Wetland Hydrology Present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

* Water Table measured at 19" bsg after 10 minutes in an open bore hole

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site 9815 - Pennington County Wetland Bank City/County: Pennington Sampling Date: 10/02/13
 Applicant/Owner: Pennington County State: MN Sampling Point: C1
 Investigator(s): Christopher T. Lesmeister Section, Township, Range: T153 N, R40 W, S34
 Landform (hillslope, terrace, etc.): Local relief (concave, convex, non Slope (%)
 Subregion (LRR Lat: Long: Datum:
 Soil Map Unit Name NWI Classification:

Are climatic/hydrologic conditions of the site typical for this time of the year? Yes No X¹ (If no, explain in remarks)
 Are vegetation, soil, or hydrology significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation, soil, or hydrology naturally problematic? present? Yes

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID:
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Remarks: (Explain alternative procedures here or in a separate report.)

¹Antecedant precipitation analysis indicates that the site location was dryer than normal
 UTM NAD 83 Zone 15N - 5323579.02m Northing, 292918.85m Easting

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: 30)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet
1	<i>Salix interior</i>	20	Y	FACW	Number of Dominant Species that are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across all Strata: <u>5</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)
2					
3					
4					
5					
		20 = Total Cover			
Sapling/Shrub stratum	(Plot size: 15)	Absolute % Cover	Dominant Species	Indicator Status	Prevalence Index Worksheet
1	<i>Salix interior</i>	70	Y	FACW	Total % Cover of: OBL species <u>100</u> x 1 = <u>100</u> FACW species <u>170</u> x 2 = <u>340</u> FAC species <u>70</u> x 3 = <u>210</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>340</u> (A) <u>650</u> (B) Prevalence Index = B/A = <u>1.91</u>
2					
3					
4					
5					
		70 = Total Cover			
Herb stratum	(Plot size: 5)	Absolute % Cover	Dominant Species	Indicator Status	Hydrophytic Vegetation Indicators:
1	<i>Sphagnum magellanicum</i>	100	Y	OBL	Rapid test for hydrophytic vegetation <input checked="" type="checkbox"/> Dominance test is >50% <input checked="" type="checkbox"/> Prevalence index is ≤3.0* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
2	<i>Poa pratensis</i>	70	Y	FAC	
3	<i>Phalaris arundinacea</i>	60	Y	FACW	
4	<i>Salix interior</i>	20	N	FACW	
5					
6					
7					
8					
9					
10					
		250 = Total Cover			
Woody vine stratum	(Plot size:)	Absolute % Cover	Dominant Species	Indicator Status	Hydrophytic vegetation present?
1					<u>Y</u>
2					
		0 = Total Cover			

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: C1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-9	10YR 2/1	100						Silt with Clay and Sand
9 +	10YR 4/1	93	10YR 7/1	7	D	M		Sandy Loam

¹Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. ²Location: PL = Pore Lining, M = Matrix

<p>Hydric Soil Indicators:</p> <p><input type="checkbox"/> Histisol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5) (LRR F)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H)</p> <p><input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)</p> <p><input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR</p> <p><input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)</p>	<p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> High Plains Depressions (F16)</p> <p>(MLRA 72 & 73 of LRR H)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR I, J)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR K, L)</p> <p><input type="checkbox"/> High Plains Depressions (F16)</p> <p>(LRR H outside of MLRA 72 & 73)</p> <p><input type="checkbox"/> Reduced Vertic (F18)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (explain in remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic</p>
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<p>Restrictive Layer (if present):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric soil present? <u> Y </u></p>
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Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	
<p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <p><input type="checkbox"/> Surface Water (A1)</p> <p><input type="checkbox"/> High Water Table (A2)</p> <p><input type="checkbox"/> Saturation (A3)</p> <p><input type="checkbox"/> Water Marks (B1)</p> <p><input type="checkbox"/> Sediment Deposits (B2)</p> <p><input type="checkbox"/> Drift Deposits (B3)</p> <p><input type="checkbox"/> Algal Mat or Crust (B4)</p> <p><input type="checkbox"/> Iron Deposits (B5)</p> <p><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</p> <p><input checked="" type="checkbox"/> Water-Stained Leaves (B9)</p>	<p><u>Secondary Indicators (minimum of two required)</u></p> <p><input type="checkbox"/> Salt Crust (B11)</p> <p><input type="checkbox"/> Aquatic Invertebrates (B13)</p> <p><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</p> <p><input type="checkbox"/> Dry-Season Water Table (C2)</p> <p><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (where not tilled)</p> <p><input type="checkbox"/> Presence of Reduced Iron (C4)</p> <p><input type="checkbox"/> Thin Muck Surface (C7)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p><input type="checkbox"/> Surface Soil Cracks (B6)</p> <p><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</p> <p><input type="checkbox"/> Drainage Patterns (B10)</p> <p><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (where tilled)</p> <p><input type="checkbox"/> Crayfish Burrows (C8)</p> <p><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</p> <p><input checked="" type="checkbox"/> Geomorphic Position (D2)</p> <p><input type="checkbox"/> FAC-Neutral Test (D5)</p> <p><input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)</p>

<p>Field Observations:</p> <p>Surface water present? Yes _____ No <u> X </u> Depth (inches): _____</p> <p>Water table present? Yes _____ No <u> X </u> Depth (inches): _____</p> <p>Saturation present? Yes _____ No <u> X </u> Depth (inches): _____</p> <p>(includes capillary fringe)</p>	<p>Wetland Hydrology Present? <u> Y </u></p>
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Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site 9815 - Pennington County Wetland Bank City/County: Pennington Sampling Date: 10/02/13
 Applicant/Owner: Pennington County State: MN Sampling Point: D1
 Investigator(s): Christopher T. Lesmeister Section, Township, Range: T153 N, R40 W, S34
 Landform (hillslope, terrace, etc.): Local relief (concave, convex, non Slope (%)
 Subregion (LRR Lat: Long: Datum:
 Soil Map Unit Name NWI Classification:

Are climatic/hydrologic conditions of the site typical for this time of the year? Yes No X¹ (If no, explain in remarks)

Are vegetation, soil, or hydrology significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation, soil, or hydrology naturally problematic? present? Yes

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>Y</u>	Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: _____
Hydric soil present? <u>Y</u>	
Indicators of wetland hydrology present? <u>Y</u>	

Remarks: (Explain alternative procedures here or in a separate report.)

¹Antecedant precipitation analysis indicates that the site location was dryer than normal
 UTM NAD 83 Zone 15N - 5323322.94m Northing, 293011.65m Easting

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet
1 <i>Populus tremuloides</i>	70	Y	FAC	
2 <i>Fraxinus pennsylvanica</i>	30	Y	FACW	Total Number of Dominant Species Across all Strata: <u>9</u> (B)
3 <i>Quercus macrocarpa</i>	25	Y	FAC	Percent of Dominant Species that are OBL, FACW, or FAC: <u>88.89%</u> (A/B)
4				
5				
	125 = Total Cover			
Sapling/Shrub stratum (Plot size: 15)	Absolute % Cover	Dominant Species	Indicator Status	Prevalence Index Worksheet
1 <i>Fraxinus pennsylvanica</i>	50	Y	FACW	
2 <i>Quercus macrocarpa</i>	50	Y	FAC	OBL species <u>45</u> x 1 = <u>45</u>
3 <i>Populus tremuloides</i>	25	Y	FAC	FACW species <u>80</u> x 2 = <u>160</u>
4				FAC species <u>220</u> x 3 = <u>660</u>
5				FACU species <u>25</u> x 4 = <u>100</u>
	125 = Total Cover			UPL species <u>0</u> x 5 = <u>0</u>
				Column totals <u>370</u> (A) <u>965</u> (B)
				Prevalence Index = B/A = <u>2.61</u>
Herb stratum (Plot size: 5)	Absolute % Cover	Dominant Species	Indicator Status	Hydrophytic Vegetation Indicators:
1 <i>Phalaris arundinacea</i>	40	Y	OBL	
2 <i>Populus tremuloides</i>	30	Y	FAC	<u>X</u> Dominance test is >50%
3 <i>Rosa arkansana</i>	25	Y	FACU	<u>X</u> Prevalence index is ≤3.0*
4 <i>Quercus macrocarpa</i>	20	N	FAC	Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
5 <i>Sphagnum magellanicum</i>	5	N	OBL	Problematic hydrophytic vegetation* (explain)
6				
7				
8				
9				
10				
	120 = Total Cover			
Woody vine stratum (Plot size:)	Absolute % Cover	Dominant Species	Indicator Status	*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1				Hydrophytic vegetation present? <u>Y</u>
2				
	0 = Total Cover			

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: D1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-11	10YR 2/1	100						Silty Loam
11 +	10YR 6/2	70	10YR 5/8	30	C	M		Silty Sand

¹Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. ²Location: PL = Pore Lining, M = Matrix

<p>Hydric Soil Indicators:</p> <p><input type="checkbox"/> Histisol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5) (LRR F)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H)</p> <p><input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)</p> <p><input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR</p> <p><input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR I, J)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR K, L)</p> <p><input type="checkbox"/> High Plains Depressions (F16) (LRR H outside of MLRA 72 & 73)</p> <p><input type="checkbox"/> Reduced Vertic (F18)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (explain in remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic</p>
<p>Restrictive Layer (if present):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric soil present? <u> Y </u></p>

Remarks:

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <p><input type="checkbox"/> Surface Water (A1)</p> <p><input type="checkbox"/> High Water Table (A2)</p> <p><input type="checkbox"/> Saturation (A3)</p> <p><input type="checkbox"/> Water Marks (B1)</p> <p><input type="checkbox"/> Sediment Deposits (B2)</p> <p><input type="checkbox"/> Drift Deposits (B3)</p> <p><input type="checkbox"/> Algal Mat or Crust (B4)</p> <p><input type="checkbox"/> Iron Deposits (B5)</p> <p><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</p> <p><input checked="" type="checkbox"/> Water-Stained Leaves (B9)</p>	<p><u>Secondary Indicators (minimum of two required)</u></p> <p><input type="checkbox"/> Salt Crust (B11)</p> <p><input type="checkbox"/> Aquatic Invertebrates (B13)</p> <p><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</p> <p><input type="checkbox"/> Dry-Season Water Table (C2)</p> <p><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (where not tilled)</p> <p><input type="checkbox"/> Presence of Reduced Iron (C4)</p> <p><input type="checkbox"/> Thin Muck Surface (C7)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>	<p><input type="checkbox"/> Surface Soil Cracks (B6)</p> <p><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</p> <p><input type="checkbox"/> Drainage Patterns (B10)</p> <p><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (where tilled)</p> <p><input type="checkbox"/> Crayfish Burrows (C8)</p> <p><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</p> <p><input checked="" type="checkbox"/> Geomorphic Position (D2)</p> <p><input checked="" type="checkbox"/> FAC-Neutral Test (D5)</p> <p><input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)</p>
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<p>Field Observations:</p> <p>Surface water present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X Depth (inches): _____</p> <p>Water table present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X Depth (inches): _____</p> <p>Saturation present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X Depth (inches): _____</p> <p>(includes capillary fringe)</p>	<p>Wetland Hydrology Present? <u> Y </u></p>
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Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site 9815 - Pennington County Wetland Bank City/County: Pennington Sampling Date: 10/02/13
 Applicant/Owner: Pennington County State: MN Sampling Point: E1
 Investigator(s): Christopher T. Lesmeister Section, Township, Range: T153 N, R40 W, S34
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, non _____ Slope (%) _____
 Subregion (LRR _____) Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name _____ NWI Classification: _____

Are climatic/hydrologic conditions of the site typical for this time of the year? Yes _____ No X¹ (If no, explain in remarks)

Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes

Are vegetation _____, soil _____, or hydrology _____ naturally problematic? present? Yes
 (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u>	Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: _____
Hydric soil present? <u>Y</u>	
Indicators of wetland hydrology present? <u>Y</u>	

Remarks: (Explain alternative procedures here or in a separate report.)

¹Antecedant precipitation analysis indicates that the site location was dryer than normal
 UTM NAD 83 Zone 15N - 5323588.65m Northing, 292992.88m Easting

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet	
1					Number of Dominant Species that are OBL, FACW, or FAC: <u>2</u> (A)	
2					Total Number of Dominant Species Across all Strata: <u>2</u> (B)	
3					Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)	
4						
5						
		<u>0</u>	= Total Cover			
Sapling/Shrub stratum	(Plot size: <u>15</u>)	Absolute % Cover	Dominant Species	Indicator Status	Prevalence Index Worksheet	
1	<u>Salix interior</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>	Total % Cover of:	
2					OBL species <u>95</u> x 1 = <u>95</u>	
3					FACW species <u>30</u> x 2 = <u>60</u>	
4					FAC species <u>20</u> x 3 = <u>60</u>	
5					FACU species <u>20</u> x 4 = <u>80</u>	
		<u>10</u>	= Total Cover		UPL species <u>0</u> x 5 = <u>0</u>	
					Column totals <u>165</u> (A) <u>295</u> (B)	
					Prevalence Index = B/A = <u>1.79</u>	
Herb stratum	(Plot size: <u>5</u>)	Absolute % Cover	Dominant Species	Indicator Status	Hydrophytic Vegetation Indicators:	
1	<u>Carex stricta</u>	<u>95</u>	<u>Y</u>	<u>OBL</u>	Rapid test for hydrophytic vegetation	
2	<u>Andropogon gerardii</u>	<u>20</u>	<u>N</u>	<u>FAC</u>	<u>X</u> Dominance test is >50%	
3	<u>Salix interior</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	<u>X</u> Prevalence index is ≤3.0*	
4	<u>Solidago gigantea</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)	
5	<u>Schizachyrium scoparium</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	Problematic hydrophytic vegetation* (explain)	
6	<u>Rosa blanda</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
7						
8						
9						
10						
		<u>155</u>	= Total Cover			
Woody vine stratum	(Plot size: _____)	Absolute % Cover	Dominant Species	Indicator Status	Hydrophytic vegetation present? <u>Y</u>	
1						
2						
		<u>0</u>	= Total Cover			

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: E1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 2/1	85	10YR 6/2	14	D		Sandy Silt	
			10YR 6/8	1	C			
11 +	10YR 7/2	80	10YR 7/8	10	C		Sandy Silt	

¹Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. ²Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- Histisol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR F)
- 1 cm Muck (A9) (LRR F, G, H)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- 2.5 cm Mucky Peat or Peat (S2) (LRR)
- 5 cm Mucky Peat or Peat (S3)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- High Plains Depressions (F16) (MLRA 72 & 73 of LRR H)

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) (LRR I, J)
 - Coast Prairie Redox (A16) (LRR K, L, R)
 - Dark Surface (S7) (LRR K, L)
 - High Plains Depressions (F16) (LRR H outside of MLRA 72 & 73)
 - Reduced Vertic (F18)
 - Red Parent Material (TF2)
 - Very Shallow Dark Surface (TF12)
 - Other (explain in remarks)
- ³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if present):

Type: _____
 Depth (inches): _____

Hydric soil present? Y

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Dry-Season Water Table (C2)
- Oxidized Rhizospheres on Living Roots (where not tilled)
- Presence of Reduced Iron (C4)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Sparsely Vegetated Concave Surface (B8)
- Drainage Patterns (B10)
- Oxidized Rhizospheres on Living Roots (where tilled)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- FAC-Neutral Test (D5)
- Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface water present? Yes No _____ Depth (inches): _____
 Water table present? Yes No _____ Depth (inches): _____
 Saturation present? Yes No _____ Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site 9815 - Pennington County Wetland Bank City/County: Pennington Sampling Date: 10/02/13
 Applicant/Owner: Pennington County State: MN Sampling Point: F1
 Investigator(s): Christopher T. Lesmeister Section, Township, Range: T153 N, R40 W, S34
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, non Concave Slope (%) _____
 Subregion (LRR _____) Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name _____ NWI Classification: _____

Are climatic/hydrologic conditions of the site typical for this time of the year? Yes _____ No X¹ (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.)
¹Antecedant precipitation analysis indicates that the site location was dryer than normal
 UTM NAD 83 Zone 15N - 5323857.96m Northing, 292531.70m Easting

VEGETATION -- Use scientific names of plants.

Tree Stratum	Plot size: <u>30</u>	Absolute % Cover	Dominant Species	Indicator Status	
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		
Sapling/Shrub stratum	Plot size: <u>15</u>				
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		
Herb stratum	Plot size: <u>5</u>				
1	<i>Phragmites australis</i>	95	Y	FACW	
2	<i>Lemna minor</i>	70	Y	OBL	
3					
4					
5					
6					
7					
8					
9					
10					
		<u>165</u>	= Total Cover		
Woody vine stratum	Plot size: _____				
1					
2					
		<u>0</u>	= Total Cover		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)
 Total Number of Dominant Species Across all Strata: 2 (B)
 Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:
 OBL species 70 x 1 = 70
 FACW species 95 x 2 = 190
 FAC species 0 x 3 = 0
 FACU species 0 x 4 = 0
 UPL species 0 x 5 = 0
 Column totals 165 (A) 260 (B)
 Prevalence Index = B/A = 1.58

Hydrophytic Vegetation Indicators:

_____ Rapid test for hydrophytic vegetation
 Dominance test is >50%
 Prevalence index is ≤3.0*
 _____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
 _____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present?

Y

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: F1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 2/1	100						Mucky Peat
12 +	10YR 4/1	90	10YR 6/1	5	D	M		Very fine sand with silt and some clay
			5YR 3/4	5	C	M		

¹Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. ²Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histisol (A1)	<input type="checkbox"/> 1 cm Muck (A9) (LRR I, J)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)
<input checked="" type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> High Plains Depressions (F16)
<input type="checkbox"/> Stratified Layers (A5) (LRR F)	<input type="checkbox"/> (LRR H outside of MLRA 72 & 73)
<input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Other (explain in remarks)
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR	<input type="checkbox"/> ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric soil present? <u>Y</u>
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) (where tilled)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (where not tilled)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)
<input type="checkbox"/> Salt Crust (B11)	
<input checked="" type="checkbox"/> Aquatic Invertebrates (B13)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:	
Surface water present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	Wetland Hydrology Present? <u>Y</u>
Water table present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>11</u>	
Saturation present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2</u> (includes capillary fringe)	

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

APPENDIX C

Antecedent Precipitation

Minnesota Climatology Working Group

State Climatology Office - DNR Division of Ecological and Water Resources [University of Minnesota](#)

[home](#) | [current conditions](#) | [journal](#) | [past data](#) | [summaries](#) | [agriculture](#) | [other sites](#) | [contact us](#) | [search](#) | 

Precipitation Worksheet Using Gridded Database

Precipitation data for target wetland location:

county: **Pennington** township number: **153N**
 township name: **Highlanding** range number: **40W**
 nearest community: **River Valley** section number: **34**

Aerial photograph or site visit date:

Wednesday, October 02, 2013

Score using 1971-2000 normal period

(values are in inches)	first prior month: September 2013	second prior month: August 2013	third prior month: July 2013
estimated precipitation total for this location:	0.00	0.00	3.85
there is a 30% chance this location will have less than: *	1.49	2.34	2.53
there is a 30% chance this location will have more than: *	3.24	4.32	4.21
type of month: dry normal wet	dry	dry	normal
monthly score	3 * 1 = 3	2 * 1 = 2	1 * 2 = 2
multi-month score: 6 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet)		7 (Dry)	

Score using 1981-2010 normal period

(values are in inches)	first prior month: September 2013	second prior month: August 2013	third prior month: July 2013
estimated precipitation total for this location:	0.00	0.00	3.85
there is a 30% chance this location will have less than: *	1.79	2.25	2.18
there is a 30% chance this location will have more than: *	3.34	4.02	3.88
type of month: dry normal wet	dry	dry	normal
monthly score	3 * 1 = 3	2 * 1 = 2	1 * 2 = 2
multi-month score: 6 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet)		7 (Dry)	

[view USDA-NRCS WETS data for Pennington County](#)

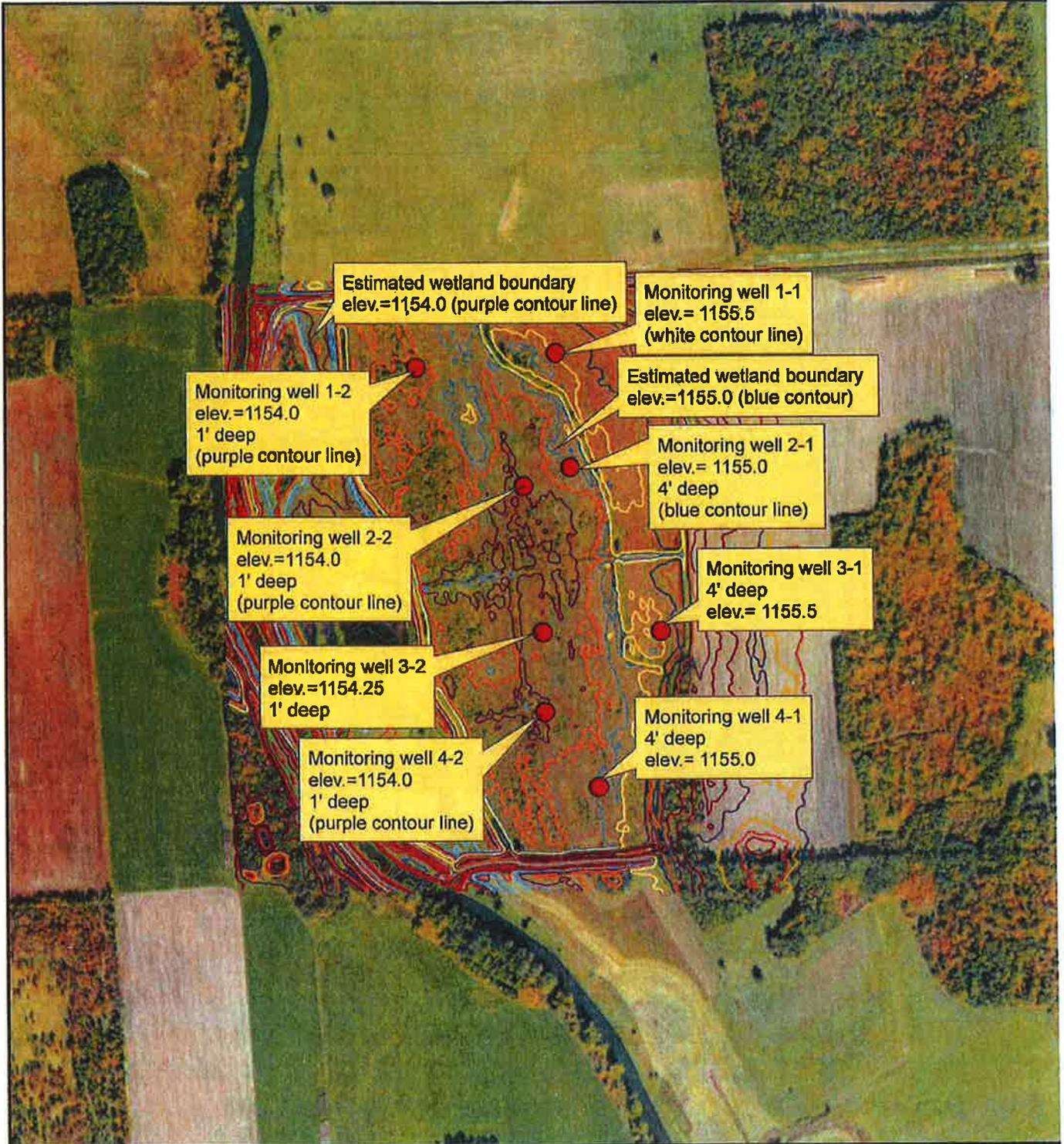
Other Resources:

- retrieve daily precipitation data
- view radar-based precipitation estimates
- view weekly precipitation maps
- *Hydrology Tools for Wetland Determination*, USDA-NRCS

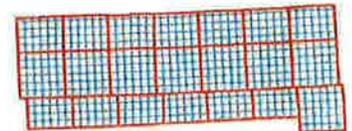
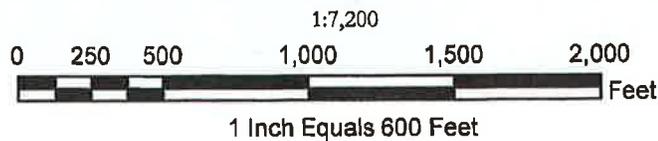
* from USDA-NRCS two-parameter gamma distribution fit

APPENDIX D

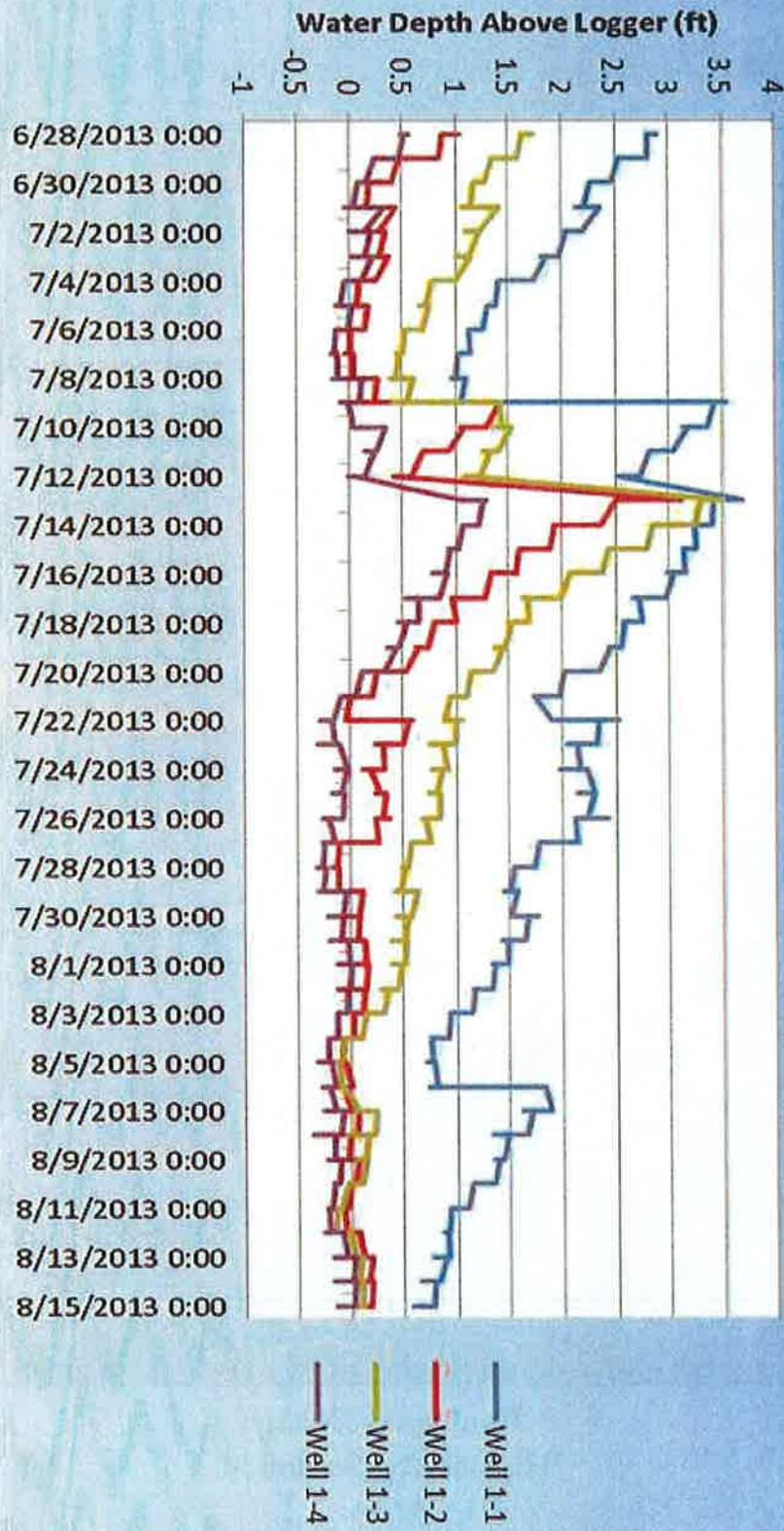
Groundwater Monitoring Data from Pennington County NRCS



Pennington County Highlanding Section 34



County Wetland Bank Ground Water Levels



APPENDIX E

Photographs



Photo 1: Type 6 Wetland sample location



Photo 2: Site looking northeast



Photo 3: Site looking southeast

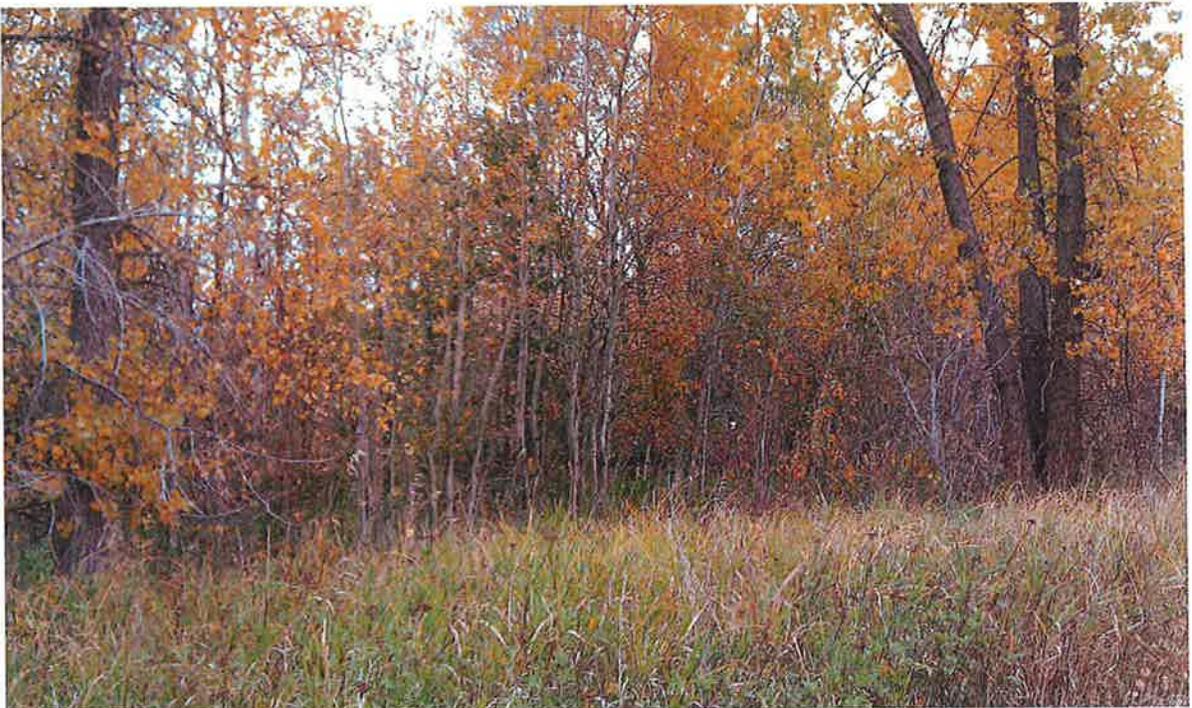


Photo 4: Type 7 Wetland



Photo 5: Site looking west



Photo 6: Site looking northwest



Photo 7: Site looking west



Photo 8: Soil profile for sample location E1

Minnesota Wetland Conservation Act Application for Approval of Wetland Type and Boundary

1. Project/Site Information

Project/Site Name: Pennington County Wetland Bank Local Government Unit: Pennington County
Location (address and/or T, R, Sec.): T153N R40N Section 34 NW1/4

2. Applicant Information

Applicant Name: Pennington County Address: P.O. Box 616
City, State, Zip: Thief River Falls, MN 56701
E-mail: ktolson@co.pennington.mn.us Phone: 218-683-7000

3. Agent/Consultant Information

Company Name (if applicable): West Central Environmental Consultants, Inc.
Contact Person: Christopher Lesmeister
Address: P.O. Box 594 City, State, Zip: Morris, MN 56267
E-mail: chrisl@wcec.com Phone: 320-589-2039

4. Description of Request

Check all that apply: Wetland Boundary (must attach wetland delineation report)
 Wetland Type (Eggers & Reed and/or Circular 39 type)

5. Signature

By signature below, the applicant requests a determination from the Local Government Unit under Minnesota Rules 8420.0225 on the submitted wetland boundary and type information in this application. The applicant also affirms that they are the owner of the subject property or have permission from the landowner to pursue this determination.

Applicant or Authorized Agent Signature

Date

Important Notes:

- The applicant may be required to submit multiple copies of the report/information to the LGU. The LGU may require the applicant to submit copies directly to Technical Evaluation Panel Members. **Check with your LGU regarding their submittal requirements.**
- The LGU decision must be made in compliance with Minnesota Statutes, section 15.99.

For LGU use only

Date Received:

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Pennington County Financial System



Audit List for Board COMMISSIONER'S VOUCHERS ENTRIES

Print List in Order By: 1
1 - Fund (Page Break by Fund)
2 - Department (Totals by Dept)
3 - Vendor Number
4 - Vendor Name

Explode Dist. Formulas Y

Paid on Behalf Of Name
on Audit List?: N

Type of Audit List: D
D - Detailed Audit List
S - Condensed Audit List

Save Report Options?: N

Pennington County Financial System



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Audit List for Board COMMISSIONER'S VOUCHERS ENTRIES

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Vendor No.	Name Account/Formula	Accr	Rpt Amount	Warrant Description Service Dates	Invoice # Paid On Bhf #	Account/Formula Description On Behalf of Name
80	1380 A'VIANDS LLC 01-251-000-0000-6427	AP	2,818.85	JAIL MEALS 12-1 TO 12-7	67830	JAIL MEALS
81	01-251-000-0000-6427	AP	2,853.68	JAIL MEALS 12-8 TO 12-14	67929	JAIL MEALS
82	01-251-000-0000-6427	AP	2,756.75	JAIL MEALS 12-15 TO 12-21	67978	JAIL MEALS
	1380 A'VIANDS LLC		8,429.28	3 Transactions		
8	1011 ACE HARDWARE 01-800-000-0000-6403	AP	10.63	5 KEYS	189225	JANITORIAL SUPPLIES
7	01-111-000-0000-6300	AP	8.44	BOLTS, HITCH, PIN, NUT, PADLOC	191048	REPAIRS & MAINTENANCE
83	01-251-000-0000-6300	AP	13.88	HANDLE	191294	REPAIRS & MAINTENANCE
	1011 ACE HARDWARE		32.95	3 Transactions		
9	1308 ASSOCIATION MINNESOTA COUNTIES 01-003-000-0000-6241		6,255.00	2014 MEMBERSHIP DUES	38522	DUES - BOARD
	1308 ASSOCIATION MINNESOTA COUNTIES		6,255.00	1 Transactions		
85	2304 BNJ PLUMBING 01-251-000-0000-6300	AP	466.33	REPAIR LEAK IN KITCHEN SINK	1122	REPAIRS & MAINTENANCE
84	01-251-000-0000-6300	AP	202.50	AUGER PLUGGED DRAIN	1127	REPAIRS & MAINTENANCE
	2304 BNJ PLUMBING		668.83	2 Transactions		
73	2370 BREMER BANK 01-255-000-0000-6300	AP	97.02	AUTO VALUE BATTERY AND FITTING		REPAIRS & MAINTENANCE
75	01-255-000-0000-6300	AP	278.37	HUBERTS SNOWBLOWER REPAIR		REPAIRS & MAINTENANCE
76	01-255-000-0000-6300	AP	235.32	GCR TIRES TRAILER		REPAIRS & MAINTENANCE
58	01-255-000-0000-6330	AP	32.82	PETRO GAS		TRAVEL & EXPENSE
59	01-255-000-0000-6330	AP	40.36	CENEX GAS		TRAVEL & EXPENSE
60	01-255-000-0000-6330	AP	35.75	PETRO GAS		TRAVEL & EXPENSE
61	01-255-000-0000-6330	AP	35.97	HANK SHOVELS		TRAVEL & EXPENSE
62	01-255-000-0000-6330	AP	34.55	PETRO GAS		TRAVEL & EXPENSE
63	01-255-000-0000-6330	AP	40.03	PETRO GAS		TRAVEL & EXPENSE
64	01-255-000-0000-6330	AP	29.76	CENEX GAS		TRAVEL & EXPENSE
65	01-255-000-0000-6330	AP	32.47	PETRO GAS		TRAVEL & EXPENSE
66	01-255-000-0000-6330	AP	35.48	CENEX GAS		TRAVEL & EXPENSE
67	01-255-000-0000-6330	AP	30.92	PETRO GAS		TRAVEL & EXPENSE
68	01-255-000-0000-6330	AP	40.80	CENEX GAS		TRAVEL & EXPENSE
69	01-255-000-0000-6330	AP	41.95	PETRO GAS		TRAVEL & EXPENSE
70	01-255-000-0000-6330	AP	18.62	AUTO VALUE FILTERS		TRAVEL & EXPENSE
71	01-255-000-0000-6330	AP	36.64	PETRO GAS		TRAVEL & EXPENSE
72	01-255-000-0000-6330	AP	35.22	PETRO GAS		TRAVEL & EXPENSE

Pennington County Financial System



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Audit List for Board COMMISSIONER'S VOUCHERS ENTRIES

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Vendor No.	Name	Account/Formula	Accr	Rpt Amount	Warrant Description	Service Dates	Invoice #	Account/Formula Description
							Paid On Bhf #	On Behalf of Name
74		01-255-000-0000-6405	AP	98.29	FLEET SHOVELS			GENERAL SUPPLIES - S.T.S.
77		01-255-000-0000-6631	AP	46.97	AUTO VALUE CIRCUIT TESTER,SUPP			SUPPLIES & EQUIPMENT - S.T.S.
78		01-255-000-0000-6801		39.00	LATE FEE			MISCELLANEOUS EXPENSE
79		01-255-000-0000-6801	AP	14.87	INTEREST			MISCELLANEOUS EXPENSE
2370	BREMER BANK			1,331.18		22 Transactions		
2322	BRUZEK/CARL							
10		01-106-000-0000-6330	AP	353.71	DECEMBER ASSESING MILEAGE			TRAVEL & EXPENSE
2322	BRUZEK/CARL			353.71		1 Transactions		
4313	DEPARTMENT OF MOTOR VEHICLES							
88		01-201-000-0000-6304		16.00	REG - #2 06 FORD			REPAIR & MAINTENANCE - SQUADS
87		01-255-000-0000-6330		16.00	REGISTRATION H & H TRAILER			TRAVEL & EXPENSE
89		01-255-000-0000-6330		16.00	REG - STS 96 DODGE			TRAVEL & EXPENSE
90		01-255-000-0000-6330		16.00	REG - STS 93 SUBURBAN			TRAVEL & EXPENSE
91		01-255-000-0000-6330		16.00	REG - STS 98 FORD			TRAVEL & EXPENSE
4313	DEPARTMENT OF MOTOR VEHICLES			80.00		5 Transactions		
4054	DIGI-KEY CORPORATION							
86		01-201-000-0000-6405	AP	42.12	AA & AAA BATTERIES		38267731	GENERAL SUPPLIES
4054	DIGI-KEY CORPORATION			42.12		1 Transactions		
8385	HEARTLAND PAPER CO							
93		01-220-000-0000-6403	AP	570.12	PAPER PRODUCTS		295130600	JANITORIAL SUPPLIES-LEC SHARE
13		01-800-000-0000-6403	AP	524.42	PAPER TWL, CLNR, SOAP, TISSUE		G362924-1	JANITORIAL SUPPLIES
14		01-800-000-0000-6403	AP	115.75	GARBAGE BAGS		G362926-1	JANITORIAL SUPPLIES
8385	HEARTLAND PAPER CO			1,210.29		3 Transactions		
8125	HEPPNER CONSULTING							
15		01-070-000-0000-6263	AP	150.00	PDF PRINTER ISSUES		2244	COMPUTER SERVICES - DP
16		01-070-000-0000-6263	AP	75.00	WEB UPDATES		2244	COMPUTER SERVICES - DP
8125	HEPPNER CONSULTING			225.00		2 Transactions		
8014	HUGOS #7							
17		01-003-000-0000-6330		16.12	FOOD FOR MEETING			TRAVEL & EXPENSE
8014	HUGOS #7			16.12		1 Transactions		
9017	INSIGHT TECHNOLOGIES							
92		01-201-000-0000-6801	AP	15.13	TAX PREVIOUS INVOICE		755222	MISCELLANEOUS EXPENSE

Pennington County Financial System



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Vendor No.	Name Account/Formula	Accr	Rpt Amount	Warrant Description Service Dates	Invoice # Paid On Bhf #	Account/Formula Description On Behalf of Name
9017	INSIGHT TECHNOLOGIES		15.13		1 Transactions	
94	13483 MCF - LINO LAKES 01-251-000-0000-6801	AP	1,114.00	STS NOV INMATE WAGES		MISCELLANEOUS EXPENSE - JAIL
	13483 MCF - LINO LAKES		1,114.00		1 Transactions	
19	13400 MN ASSOCIATION OF COUNTY OFFICERS 01-041-000-0000-6241		720.00	2014 MACO DUES		DUES - AUDITOR
18	01-101-000-0000-6241		360.00	2014 MACO DUES		DUES - RECORDER
	13400 MN ASSOCIATION OF COUNTY OFFICERS		1,080.00		2 Transactions	
21	13355 MN COUNTIES COMPUTER COOP 01-070-000-0000-6263		8,371.00	14 1ST QTR - TAX SUPPORT	2Y1401188	COMPUTER SERVICES - DP
22	01-070-000-0000-6263		412.50	14 1ST QTR - BETA TESTING	2Y1401188	COMPUTER SERVICES - DP
23	01-070-000-0000-6263		600.00	14 1ST QTR - ENHANCEMENT FUND	2Y1401188	COMPUTER SERVICES - DP
24	01-070-000-0000-6263		1,000.00	14 1ST QTR - DATA FILE CHANGES	2Y1401188	COMPUTER SERVICES - DP
25	01-070-000-0000-6263		400.00	14 CAMA ENHANCEMENT FUND	2Y1401188	COMPUTER SERVICES - DP
26	01-070-000-0000-6263		100.00	14 CAMA BETA TESTING	2Y1401188	COMPUTER SERVICES - DP
27	01-070-000-0000-6263		175.00	14 CAMA DATA FILE CHANGES	2Y1401188	COMPUTER SERVICES - DP
28	01-070-000-0000-6263		3,011.00	14 1ST QTR - CAMA MAINT & SUPP	2Y1401188	COMPUTER SERVICES - DP
29	01-070-000-0000-6263		200.00	14 ISSG ENHANCEMENT FEE	2Y1401188	COMPUTER SERVICES - DP
30	01-070-000-0000-6263		452.03	14 1ST QTR - IFS GENERAL	2Y1401188	COMPUTER SERVICES - DP
31	01-070-000-0000-6263		360.00	14 IFS GOLDEN MAINT & SUPPORT	2Y1401188	COMPUTER SERVICES - DP
32	01-070-000-0000-6263		305.00	14 IFS BETA TESTING	2Y1401188	COMPUTER SERVICES - DP
33	01-070-000-0000-6263		250.00	14 IFS ENHANCEMENT FEE	2Y1401188	COMPUTER SERVICES - DP
34	01-070-000-0000-6263		1,068.55	14 1ST QTR - PAYMATE	2Y1401188	COMPUTER SERVICES - DP
35	01-070-000-0000-6263		381.48	14 1ST QTR - FINANCE/GENERAL	2Y1401188	COMPUTER SERVICES - DP
36	01-070-000-0000-6263		1,250.00	14 TAX USER GROUP DUES	2Y1401188	COMPUTER SERVICES - DP
37	01-070-000-0000-6263		225.00	14 ISSG DUES	2Y1401188	COMPUTER SERVICES - DP
38	01-070-000-0000-6263		1,250.00	14 CAMA USER GROUP DUES	2Y1401188	COMPUTER SERVICES - DP
39	01-070-000-0000-6263		1,250.00	14 FINANCE/GENERAL DUES	2Y1401188	COMPUTER SERVICES - DP
20	01-070-000-0000-6241		1,250.00	14 LEC DUES	2Y1401189	DUES - DP
4	01-070-000-0000-6801	AP	76.29	13 4TH QTR TAX USER SHARED MTG	NY131279	MISCELLANEOUS EXPENSE - DP
5	01-070-000-0000-6801	AP	30.05	13 4TH QTR SHARED MTG CAMA	NY131279	MISCELLANEOUS EXPENSE - DP
6	01-070-000-0000-6801	AP	4.54	13 4TH QTR SHARED MTG FINANCE	NY131279	MISCELLANEOUS EXPENSE - DP
	13355 MN COUNTIES COMPUTER COOP		22,422.44		23 Transactions	
	13033 MN COUNTIES INTERGOVERNMENTAL TF					
95	01-201-000-0000-6354		31,819.00	2014 WORKERS COMP		INSURANCE - WORKMAN'S COMP
96	01-201-000-0000-6355		24,540.00	2014 PROPERTY/CASUALTY		INSURANCE - PROPERTY CASUALTY

Pennington County Financial System



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Audit List for Board COMMISSIONER'S VOUCHERS ENTRIES

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43		01-801-000-0000-6355		10,073.00	2014 WORKMANS COMP		167104	INSURANCE - PROPERTY CASUALTY		
45		01-605-000-0000-6354		1,260.00	2014 WORKMANS COMP		278104	INSURANCE - WORKMAN'S COMP		
42		01-801-000-0000-6355		28,770.00	2014 PROPERTY/CASUALTY		531104	INSURANCE - PROPERTY CASUALTY		
46		01-605-000-0000-6355		4,014.00	2014 PROPERTY/CASUALTY		700104	INSURANCE - PROPERTY CASUALTY		
13033	MN COUNTIES INTERGOVERNMENTAL TF			100,476.00		6 Transactions				
13347	MN RED RIVER VALLEY									
47		01-003-000-0000-6813		800.00	2014 APPROPRIATION			RED RIVER VALLEY DEVELOPEMENT ASSC		
13347	MN RED RIVER VALLEY			800.00		1 Transactions				
13324	MN STATE SHERIFFS ASSOCIATION									
98		01-201-000-0000-6241		1,402.00	2014 ANNUAL SHERIFF DUES		14-0057	DUES		
97		01-252-000-0000-6330		1,680.00	LEXIPOL 2014		14-0144	TRAVEL & EXPENSE		
13324	MN STATE SHERIFFS ASSOCIATION			3,082.00		2 Transactions				
14301	NELSON/MICHELLE									
50		01-106-000-0000-6330	AP	316.42	MILEAGE DECEMBER ASSESSING			TRAVEL & EXPENSE		
14301	NELSON/MICHELLE			316.42		1 Transactions				
14123	NORTHWEST BEVERAGE INC									
48		01-801-000-0000-6801	AP	35.50	WATER			MISCELLANEOUS EXPENSE		
14123	NORTHWEST BEVERAGE INC			35.50		1 Transactions				
15323	OFFICE DEPOT									
55		01-201-000-0000-6405	AP	18.99	PLANNER - BZ		486001	GENERAL SUPPLIES		
57		01-251-000-0000-6405	AP	48.99	INK - PRINTER - JAIL		578001	GENERAL SUPPLIES - JAIL		
56		01-251-000-0000-6631	AP	49.99	PRINTER - JAIL		SY6001	FURNITURE & EQUIPMENT - JAIL		
15323	OFFICE DEPOT			117.97		3 Transactions				
15302	OLSON/ADELINE									
51		01-106-000-0000-6330	AP	88.45	MILEAGE DECEMBER ASSESSING			TRAVEL & EXPENSE		
15302	OLSON/ADELINE			88.45		1 Transactions				
15305	OLSON/KENNETH									
49		01-003-000-0000-6330	AP	288.62	LODGING - AMC - D. JENSEN			TRAVEL & EXPENSE		
15305	OLSON/KENNETH			288.62		1 Transactions				
15328	OTIS ELEVATOR COMPANY									
52		01-111-000-0000-6300		879.52	2014 MAINTENANCE		CLG67064X114	REPAIRS & MAINTENANCE		

Pennington County Financial System



Jennifer
1/3/14 4:38PM
1 County Revenue

Audit List for Board COMMISSIONER'S VOUCHERS ENTRIES

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Vendor No.	Name Account/Formula	Accr	Rpt Amount	Warrant Description Service Dates	Invoice # Paid On Bhf #	Account/Formula Description On Behalf of Name
15328	OTIS ELEVATOR COMPANY		879.52		1 Transactions	
53	18327 REIERSON EXCAVATING 01-800-000-0000-6262	AP	470.00	SNOW REMOVAL - DEC		OTHER SERVICES-WELFARE BUILDING
	18327 REIERSON EXCAVATING		470.00		1 Transactions	
99	19378 SANFORD HEALTH ACCESSORIES LLC 01-251-000-0000-6255	AP	41.80	CRUCHES 13-423	3052202	MEDICAL - LOCAL
	19378 SANFORD HEALTH ACCESSORIES LLC		41.80		1 Transactions	
101	19375 SANFORD MEDICAL CENTER TRF 01-251-000-0000-6255	AP	69.95	DR-13-275	2104611	MEDICAL - LOCAL
102	01-251-000-0000-6255	AP	49.91	DR-13-303	2104621	MEDICAL - LOCAL
103	01-251-000-0000-6255	AP	23.02	DR-13-191	2106135	MEDICAL - LOCAL
104	01-251-000-0000-6255	AP	58.48	DR-13-244	2109671	MEDICAL - LOCAL
106	01-251-000-0000-6255	AP	329.65	DR-12-249	3017870	MEDICAL - LOCAL
105	01-251-000-0000-6255	AP	295.71	DR-13-411	3024210	MEDICAL - LOCAL
	19375 SANFORD MEDICAL CENTER TRF		826.72		6 Transactions	
54	20027 THE TIMES 01-003-000-0000-6231	AP	367.69	LINE PROCEEDINGS -SEPT		PUBLISHING - BOARD
	20027 THE TIMES		367.69		1 Transactions	
100	20379 THIEF RIVER FORD 01-201-000-0000-6304	AP	119.91	#8 REPLACE SENSOR AIR FILTERS	96560	REPAIR & MAINTENANCE - SQUADS
	20379 THIEF RIVER FORD		119.91		1 Transactions	
107	20357 TURNKEY CORRECTIONS 01-259-000-0000-6405	AP	215.71	VENDING & CANTEEN 12/1 TO 12/1	30110	GENERAL SUPPLIES - CANTEEN
108	01-259-000-0000-6405	AP	341.04	48 \$5 & 8 \$10 PHONE CARDS	30111	GENERAL SUPPLIES - CANTEEN
	20357 TURNKEY CORRECTIONS		556.75		2 Transactions	
109	23309 WHOLESALE SUPPLY CO INC 01-259-000-0000-6405	AP	480.46	HUSKY & BURRITOS	1344268	GENERAL SUPPLIES - CANTEEN
	23309 WHOLESALE SUPPLY CO INC		480.46		1 Transactions	
110	26302 ZEE MEDICAL SERVICE 01-220-000-0000-6801	AP	58.08	FIRST AID KIT REFILL	110668983	MISCELLANEOUS EXPENSE
	26302 ZEE MEDICAL SERVICE		58.08		1 Transactions	

Pennington County Financial System



Jennifer
1/3/14 4:38PM
1 County Revenue

Audit List for Board COMMISSIONER'S VOUCHERS ENTRIES

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<u>Vendor Name</u>	<u>Rpt</u>	<u>Warrant Description</u>	<u>Invoice #</u>	<u>Account/Formula Description</u>
<u>No. Account/Formula</u>	<u>Accr</u>	<u>Amount</u>	<u>Service Dates</u>	<u>Paid On Bhf #</u> <u>On Behalf of Name</u>
1 Fund Total:		152,281.94	County Revenue	32 Vendors 102 Transactions

Pennington County Financial System



Jennifer
1/3/14 4:38PM

3 Road & Bridge

Audit List for Board COMMISSIONER'S VOUCHERS ENTRIES

Page 8

Vendor No.	Name Account/Formula	Accr	Rpt Amount	Warrant Description Service Dates	Invoice # Paid On Bhf #	Account/Formula Description On Behalf of Name
2	1011 ACE HARDWARE 03-350-000-0000-6556	AP	133.58	DRILL SHOP 213		SHOP SUPPLIES
3	03-350-000-0000-6556	AP	6.94	CORD SHOP 500		SHOP SUPPLIES
1	03-350-000-0000-6564	AP	12.83	PLEXI GLASS UNIT 204		EQUIPMENT REPAIR PARTS
	1011 ACE HARDWARE		153.35		3 Transactions	
11	6011 FED EX 03-320-000-0000-6209	AP	19.33	MAIL PLANS & PROPOSAL		POSTAGE
	6011 FED EX		19.33		1 Transactions	
12	6350 FLAAGAN/MIKE 03-320-000-0000-6401	AP	23.32	MEALS MTG ST CLOUD 12/15-16		SUPPLIES
	6350 FLAAGAN/MIKE		23.32		1 Transactions	
40	13033 MN COUNTIES INTERGOVERNMENTAL TF 03-803-000-0000-6354		42,178.00	2014 WORKERS COMP		INSURANCE - WORKMAN'S COMP
41	03-803-000-0000-6355		29,632.00	2014 PROPERTY/CASUALTY		INSURANCE - PROPERTY CASUALTY
	13033 MN COUNTIES INTERGOVERNMENTAL TF		71,810.00		2 Transactions	
3 Fund Total:			72,006.00	Road & Bridge	4 Vendors	7 Transactions

Pennington County Financial System



Jennifer
1/3/14 4:38PM
32 Solid Waste Facility

Audit List for Board COMMISSIONER'S VOUCHERS ENTRIES

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<u>Vendor No.</u>	<u>Name Account/Formula</u>	<u>Accr</u>	<u>Rpt Amount</u>	<u>Warrant Description Service Dates</u>	<u>Invoice # Paid On Bhf #</u>	<u>Account/Formula Description On Behalf of Name</u>
44	13033 MN COUNTIES INTERGOVERNMENTAL TF 32-391-000-0000-6355		2,848.00	2014 PROPERTY/CASUALTY	531104	INSURANCE - PROPERTY CASUALTY
	13033 MN COUNTIES INTERGOVERNMENTAL TF		2,848.00	1 Transactions		
32 Fund Total:			2,848.00	Solid Waste Facility	1 Vendors	1 Transactions
Final Total:			227,135.94	37 Vendors	110 Transactions	

Pennington County Financial System



Audit List for Board COMMISSIONER'S VOUCHERS ENTRIES

Recap by Fund	<u>Fund</u>	<u>AMOUNT</u>	<u>Name</u>	
	1	152,281.94	County Revenue	
	3	72,006.00	Road & Bridge	
	32	2,848.00	Solid Waste Facility	
	All Funds	227,135.94	Total	Approved by,
			
			

**OFFICIAL PROCEEDINGS
PENNINGTON COUNTY BOARD OF COMMISSIONERS
MONDAY, DECEMBER 30, 2013, 5:00 P.M.**

Pursuant to adjournment, the Pennington County Board of Commissioners met in the Pennington County Board Room in Thief River Falls, MN, on Monday, December 30th, 2013 at 5:00 p.m. Members present: Donald Jensen, Neil Peterson, Darryl Tveitbakk, Cody Hempel and Oliver “Skip” Swanson. Members absent: None.

The Pledge of Allegiance was recited.

Ken Yutzenka, Human Services Director presented the Human Service Committee consent agenda from the December 17th, 2013 committee meeting. On a motion by Commissioner Tveitbakk and seconded by Commissioner Jensen, the following recommendations of the Pennington County Human Service Committee for December 17th, 2013 are hereby adopted. Motion unanimously carried.

SECTION A

- I. To approve the November 19, 2013 Human Service Committee meeting minutes as presented.
- II. To approve the Agency’s personnel actions
- III. A. To Approve the CY2014-2013 Pennington County IV-D Cooperative Agreement as agreed to between County Human Services, County Attorney and County Sheriff
- B. To approve the CY2014 Guardian and Conservator Purchase of Service Agreement with Lutheran Social Services of Minnesota, as presented.
- C. To approve the CY2014 Northern Lights IRST/Crisis Stabilization Services contract with Sanford Medical Center, Thief River Falls, as presented.
- D. To approve the CY2014 MFIP/DWP/FSS Employment and Training Services Contract with Minnesota Workforce Center, as presented.

SECTION B

- I. To approve payment of the Agency’s bills.

Dean Philipp met with the County Board regarding the bridge over CD #35 Section 10 Smiley Township. County Engineer Mike Flaagan gave information on the bridge which is presently a double rail car bridge. The County has been replacing these bridges on as needed basis and there are four left in the County. Since this bridge is part of the legal ditch system the ditch system will pay for any replacement. Moved by Commissioner

Tveitbakk, seconded by Commissioner Peterson, that the Highway Committee work with the County Engineer to present a recommendation for replacement of the rail car bridge. Motion unanimously carried.

Mr. Philipp then presented a newspaper article on an abatement done by the Thief River Falls City Council on three new homes under the economic abatement policy.

County Sheriff Ray Kuznia made a recommendation that part-time Deputy Sheriff Dave Olson be hired to fill the vacant full-time Deputy Sheriff position. Moved by Commissioner Tveitbakk, seconded by Commissioner Jensen to approve hire Dave Olson as a full-time Deputy Sheriff as recommended effective January 6th, 2014. Motion carried.

Moved by Commissioner Jensen, seconded by Commissioner Peterson to authorize the County Sheriff to advertise for a part-time Deputy Sheriff. Motion carried.

The Sheriff also reported on the progress of the 911 updates and Code Red emergency notification system.

County Engineer Mike Flaagan asked to set a hearing on removing railroad crossings in selected areas. Moved by Commissioner Peterson, seconded by Commissioner Jensen to set February 6th, 2014 11:00 a.m. as the date and time to hold a hearing on closing the railroad crossing on County Roads. Motion carried.

Moved by Commissioner Peterson, seconded by Commissioner Jensen to hold a County Ditch #36 meeting on February 6th, 2014 at 1:00 p.m. to discuss a possible redetermination of benefits and description of ditch. Motion carried.

Moved by Commissioner Jensen, seconded by Commissioner Peterson to transfer \$33,777.97 from various ditch maintenance funds to the Road & Bridge fund for work done by the Highway Department in 2013. Motion unanimously carried.

The County Board then reviewed the individual ditch levies as recommended by the Committee. Moved by Commissioner Peterson, seconded by Commissioner Jensen, that a levy be made for ditch maintenance purposes and property assessed to various ditches in 2013, payable 2014 in the following amounts. Motion was unanimously carried.

CD#1 R/S-0%	CD#16-25%	CD#21-25%	JD#13P/RL-2.0%
CD#32-5%	CD#33-25%	CD#35-30%	CD#36-20%
CD#37-40%	CD#38-30%	CD#39-20%	CD#41-1.5%
CD#42-40%	CD#43-25%	CD#44-5%	CD#45-10%
CD#46-10%	CD#47-20%	CD#53-20%	CD#55-80%
CD#57-30%	CD#58-10%	CD#59-20%	CD#62-30%
CD#70-4%	CD#71-20%	CD#73-10%	CD#74-15%
CD#75-30%	CD#77-5%	CD#96-3%	JD#1-25%
JD#11-10%	JD#13-30%	JD#15-20%	JD#18-2%

JD#25-3-1%
JD#30BrA-2%

JD#30-5%

JD#31-2%

JD#60-1%

Moved by Commissioner Peterson, seconded by Commissioner Jensen, to authorize the County Auditor-Treasurer to make temporary transfers as outlined by the County Auditor-Treasurer to bring ditch balances to a positive balance at the end of 2013. Motion unanimously carried.

Commissioner Peterson moved, seconded by Commissioner Tveitbakk to approve the following licenses for 2014. Motion unanimously carried.

Carpenters Corner	-	Liquor and Sunday Sales
Falls Stay & Play	-	3.2 On Sale

The County Board then discussed the changes being proposed to the Northwest Minnesota Regional Radio Board Joint Powers Agreement. The name would be changed to the Northwest Minnesota Regional Emergency Communications Board. After review of the other changes Commissioner Tveitbakk moved, seconded by Commissioner Swanson to approve the Northwest Minnesota Regional Emergency Communications Board Joint Powers Agreement as presented. Motion unanimously carried.

The County Board then reviewed the RTVision proposal to provide a computerized time card and pay stub system for the County Employees. The Highway Department has implemented this system earlier this year. Commissioner Tveitbakk moved, seconded by Commissioner Jensen to approve the RTVision proposal for computerized time cards and pay stubs for the remainder of the County Employees. Motion unanimously carried.

The County Board then discussed whether the County Coroner position should be an appointed position in the future. Commissioner Tveitbakk will meet with the current County Coroner Sanjay Patel about his possibility.

Commissioner Peterson moved, seconded by Commissioner Tveitbakk to approve payment of the Human Service warrants totaling \$65,112.91 and the following Commissioner warrants. Motion carried.

WARRANTS

County Revenue	\$83,952.43
Road & Bridge	\$14,259.47
Capital Improvement	\$ 662.75

Per diems and meal reimbursements in the amount of \$3,542.76 were also approved.

Commissioner Jensen moved, seconded by Commissioner Peterson to approve the minutes of December 17th, 2013 as written. Motion carried.

Commissioner Peterson moved, seconded by Commissioner Tveitbakk to adjourn.
Motion carried.