TEP Academy

April 14 and 15, 2026

BOARD OF WATER AND SOIL RESOURCES

BWSR Wetland Section | www.bwsr.state.mn.us/wetlands

Minnesota Wetland Professional Certification Program

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MN Wetland Professional Certification Program

Program goal: Provide relevent, accessible and affordable technical and adminstrative training for all wetland professionals.

- Nationally recognized voluntary training program that certifies 500 individuals working in both private and public sectors from the upper midwest and beyond.
- Provide technical wetland delineation training and adminstrative training for implementing the MN Wetland Conservation Act.
- Certified individuals must pass In-training and Professional exams and complete continuing education during 3-year renewal periods.

bwsr.state.mn.us/minnesota-wetland-professional-certification-program

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2026 MWPCP Training Courses

Introduction to Wetland Delineation and Regulations

- **Introduction to Wetland Delineation and Regulations:** MNDOT Training Center, Shoreview, MN- June 8-12
- **Introduction to Wetland Delineation and Regulations:** Cloquet Forestry Center, Cloquet – August 31-September 4
- **Introduction to Wetland Delineation and Regulations:** Northland Arboretum, Baxter, MN - September 14-18

Professional Exams

MWPCP Exams will be offered at 1pm on: June 12 in Shoreview, September 4 in Cloquet & September 18 in Baxter

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2026 MWPCP Training Courses

- WCA 101 virtual training- February 3-4
- TEP Academy- St Cloud - April 16 & 17
- Hydrogeomorphic Method of Classifying Wetlands -Baxter- April 23 & 24
- Hydrogeomorphic Method of Classifying Wetlands-Rochester- April 28 & 29
- Soils on the Landscape- North Branch- May 20 & 21
- Plant ID & Rapid FQA- Cloquet & Lino Lakes- July 7 & 21
- Functional Assessment Method - Shoreview -Oct 13 & 14
- WCA Rule virtual training- November 18
- New Normal?: Emerging Topics in the Wetland World –Metro- December 8

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Registration Information

Registration for 2026 MWPCP courses will be staggered and open on the following dates:

- Registration for Introduction to Wetland Delineation & Regulation classes opened 9am on March 9
- Registration for remaining classes opened 9am on March 16
- Registration for WCA Rule Update virtual training will open in summer

Email reminders will go out to the MWPCP email contact lists for registration dates.

- Email bwsr.mwpcp@state.mn.us to be added to list

MWPCP maintains a waitlist for all full classes

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Certification Updates

- Current renewal period ends on December 31, 2026 for individuals who passed exams or renewed in 2023.
- Need 18 continuing education hours (6 online)
- **NEW- Certification Renewal Fee (**$100 professionals, $50 In-training per renewal period)
  - due January 31, 2027 (for 2026 renewal period)
- Do not need to report MWPCP classes
- Use Credit Reporting Form for others
- Notify us if you change jobs or email

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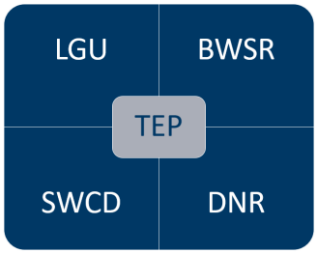
TEP Academy Agenda

- Agenda:
- Overview of a WCA TEP
- TEP Procedures:
  - Common Decisions
  - Replacement Plans
  - Wetland Banking
  - Local Road Program
- Enforcement Procedures



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WCA Forms and Guidance

- Series of forms and templates for implementation of WCA
  - Notice forms
  - TEP forms
  - WCA resolutions
- Wetland banking and easement forms are found on separate page:

  Wetland Bank Transaction Forms
- Joint application form page

WCA Forms and Templates

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Important Resources for TEP members

- National Wetland Inventory
- Web Soil Survey
- County GIS/Land Explorer
- Enviro Atlas
- MN Conservation Explorer

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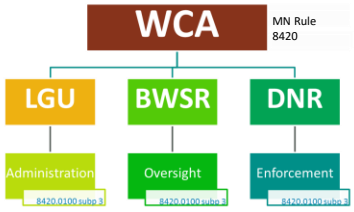
Key Roles Implementing the Wetland Conservation Act



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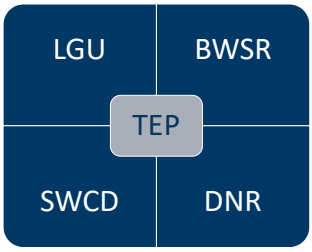
Technical Evaluation Panel

- Plays a key role in implementation.
- Representative from LGU, SWCD, BWSR and DNR (if project effects public waters and/or in shoreland zone).
- Primary role is to advise LGU on decisions. Some decisions depend on TEP recommendation.
- TEPs often advise landowners/applicants during pre and post application reviews.



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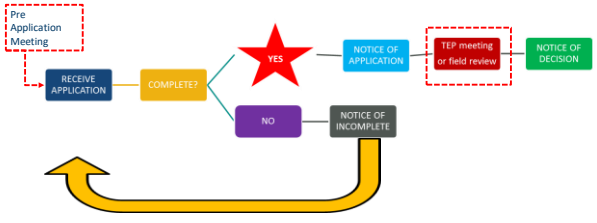
Typical WCA Application Process



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When should you hold a TEP meeting?

- Complex or difficult projects
- Visible, high-profile, or public projects
- LGU is applicant
- Enforcement cases
- Bank plan and monitoring report reviews
- Local Government Road Wetland Replacement Program projects

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When does TEP have to be involved?

- At least one member of TEP makes site visit before making findings
- Extension for temporary impacts
- "certifying" SWCD projects and wildlife exemptions
- Extending restoration orders
- Local Road projects
- Wetland Credit Deposits

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TEP Meetings

- Step 1: Define purpose of TEP discussion/review (set a formal agenda)
- Step 2: Have an open discussion (there will be disagreements)
- Step 3: Summarize and agree to conclusions (find common ground)
- Step 4: Write Findings Report (be clear and concise)

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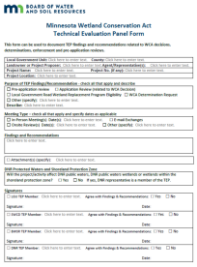
TEP findings & recommendations

- Communicate the cumulative result of field visits, report reviews & informal discussions.
- Give the applicant/landowner direction on next steps (if any).
- Often provide the LGU with the basis for their decision.

TEP Form



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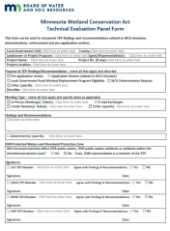
Description of each section of form

- Project Info
- Purpose of TEP Findings
- Findings
- DNR
- TEP Members Signature



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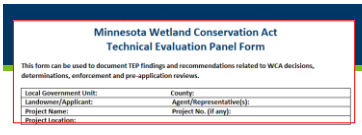
Project Info

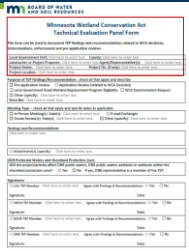


Minnesota Wetland Conservation Act
Technical Evaluation Panel Form

This form can be used to document TEP findings and recommendations related to WCA decisions, determinations, enforcement and pre-application reviews.

Local Government Unit:	County:
Landowner/Applicant:	Agent/Representative(s):
Project Name:	Project No. (if any):
Project Location:	

- Project name: Landowner & Nature of Project (i.e. Smith Driveway Exemption)
- Project number: LGU numbering (i.e. 2025- W023)
- Project location: be specific when location is important (i.e. shoreland side of Johnson residence on Round Lake)



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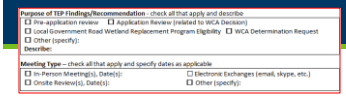
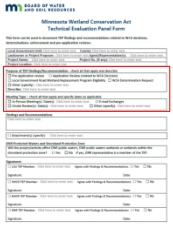
Purpose of TEP Findings


Purpose of TEP Findings/Recommendation – check all that apply and describe
☐ Pre-application review ☐ Application Review (related to WCA Decision)
☐ Local Government Road Wetland Replacement Program Eligibility ☐ WCA Determination Request
☐ Other (specify):
Describe:
Meeting Type – check all that apply and specify dates as applicable
☐ In-Person Meeting(s), Date(s): ☐ Electronic Exchanges (email, skype, etc.)
☐ Onsite Review(s), Date(s): ☐ Other (specify):

- Pre-application review- who requested?
- LGRWRP- use esp. for complex projects when not all impacts qualify
- WCA Determinations: incidental wetlands, no-loss, potential violations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Minnesota Wetland Conservation Act
Technical Evaluation Panel Form

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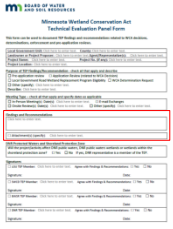
TEP Findings


Findings and Recommendations
☐ Attachment(s) (specify):

Findings:
- concise and *focused on the decision that needs to be made*.
- Should include technical findings
- Include specific Rule citations
- Stand up in court/hearings involving appeals.
- Give clear direction to applicant/landowners.

- Protect the TEP from "he said, she said" issues.
- Avoid subjective language (the LGU feels…)
- Avoid Legal Ease (i.e. herein)

Attachments:
- Include data sheets, maps, pictures, well data, etc.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Minnesota Wetland Conservation Act
Technical Evaluation Panel Form

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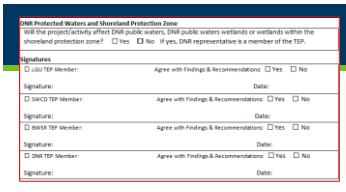
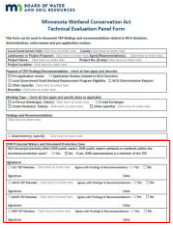
TEP Signatures


DNR Protected Waters and Shoreland Protection Zone
Will the project/activity affect DNR public waters, DNR public waters wetlands or wetlands within the shoreland protection zone? ☐ Yes ☐ No If yes, DNR representative is a member of the TEP.
Signatures
☐ LGU TEP Member: Agree with Findings & Recommendations: ☐ Yes ☐ No
Signature: Date:
☐ SWCD TEP Member: Agree with Findings & Recommendations: ☐ Yes ☐ No
Signature: Date:
☐ BWSR TEP Member: Agree with Findings & Recommendations: ☐ Yes ☐ No
Signature: Date:
☐ DNR TEP Member: Agree with Findings & Recommendations: ☐ Yes ☐ No
Signature: Date:

- DNR= official member of TEP in shoreland
  - Must be included in findings
- Try to find consensus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Minnesota Wetland Conservation Act
Technical Evaluation Panel Form

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TEP recommendations

- TEP may recommend approval, approval with conditions or denial
- LGU must consider TEP findings and recommendations
- TEP cannot make findings without having at least one member make a site visit
- Findings and recommendations must be endorsed by a majority of members

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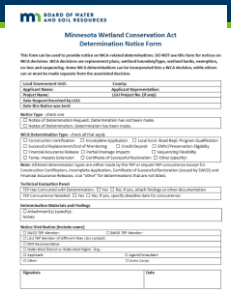
WCA Determination Form

- Used by LGUs or SWCDs to notify others of determinations
- Determinations include:
  - Construction certification
  - Local road wetland replacement program qualification
  - Certification of successful restoration
  - Sequencing flexibility

WCA Determination Form



Minnesota Wetland Conservation Act
Determination Notice Form

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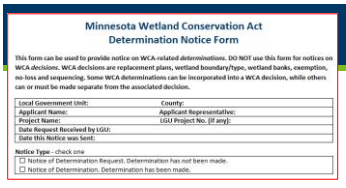

Minnesota Wetland Conservation Act
Determination Notice Form

This form can be used to provide notice on WCA-related determinations. DO NOT use this form for notices on WCA decisions. WCA decisions are replacement plans, wetland boundary/type, wetland banks, exemption, no-loss and sequencing. Some WCA determinations can be incorporated into a WCA decision, while others can or must be made separate from the associated decision.

Local Government Unit: County:
Applicant Name: Applicant Representative:
Project Name: LGU Project No. (if any):
Date Request Received by LGU:
Date this Notice was Sent:

Notice Type - check one
☐ Notice of Determination Request. Determination has not been made.
☐ Notice of Determination. Determination has been made.

- This is a "Notice"
  - Date issued matters esp. for certifications
- Can be a notice that determination has been requested
  - Or
- Notice that determination has been made

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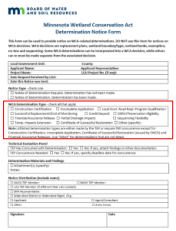
WCA Determination Type - check all that apply

☐ Construction Certification ☐ Incomplete Application ☐ Local Govt. Road Repl. Program Qualification
☐ Successful Replacement/End of Monitoring ☐ Credit Deposit ☐ ENRV/Preservation Eligibility
☐ Financial Assurance Release ☐ Partial Drainage Impacts ☐ Sequencing Flexibility
☐ Temp. Impacts Extension ☐ Certificate of Successful Restoration ☐ Other (specify):

Note: All listed determination types are either made by the TEP or require TEP concurrence except for Construction Certification, Incomplete Application, Certificate of Successful Restoration (issued by SWCD) and Financial Assurance Releases. Use "other" for determinations that are not listed.

- Common determinations:
  - Certificate of Successful Restoration, Construction Certification
- Note all determination types listed
- Determinations are not decisions



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Technical Evaluation Panel

TEP Has Concurred with Determination: ☐ Yes ☐ No; If yes, attach findings or other documentation
TEP Concurrence Needed: ☐ Yes ☐ No; If yes, specify deadline date for concurrence:

Determination Materials and Findings

☐ Attachment(s) (specify):
Notes:

Notice Distribution (include name)

☐ SWCD TEP Member: ☐ BWSR TEP Member:
☐ LGU TEP Member (if different than LGU contact):
☐ DNR Representative:
☐ Watershed District or Watershed Mgmt. Org.:
☐ Applicant: ☐ Agent/Consultant:
☐ Other: ☐ Army Corps:

Signature	Date

- TEP members: can be used as notice to request concurrence with determination
  - Date may be specified
- Attach all relevent figures, maps, emails, pictures, etc.
- Sign and Date
  - Cert of Successful Restoration

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TEP review example

Consider the following slides:

Think about what questions should be asked

What findings could TEP generate?

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Pre-application consult

- Landowner proposes subdivision as second phase to development visible to the east
  - First subdivision was approved under de minimis
- Four proposed lots
- One road with individual driveways
- Each lot needs two septic locations
- Landowner wants to know if project is eligible for de minimis

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Findings:

- Reviewed previous de mimimis decision
  - Found no remaining de minimis
- Does not qualify for de minimis
- Project located in shoreland- DNR official TEP
- Lot A almost entirely wetland
  - 2 SSTS locations & building site?
- Can road cross at narrow spot in lot A?
- Can Lot A be reconfigured to meet zoning requirements?
- Can Landowner access lots from northwest?
- Recommend delineation & replacement plan

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TEP Procedures for Common Decisions

Items to Cover

Review Common Scenarios

TEP Forms/Resources

Documenting TEP Involvement

TEP Exercises

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Common TEP Scenario's

- Is this wetland delineation accurate?
- Is this a wetland impact?
- Does this qualify for an exemption?
- Does this replacement plan meet sequencing requirements?
- Does the site have potential for a wetland bank?
- Is this project eligible for the local road program credit use?
- Is this a violation? If so, how should it be restored?

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Scenario 1 Is this wetland delineation accurate?

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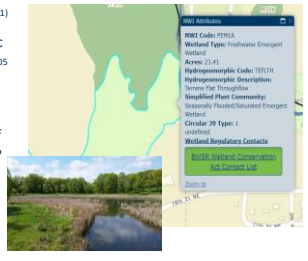
TEP Procedures and Considerations

- Boundaries must be delineated using USACE 1987 Manual and Supplements (8420.0405 subp 1)
- Types must be ID'd using Hydrogeomorphic Method (new Statute) and Eggers and Reed (8420.0405 subp 2)
- Requires NOA and NOD (LGU).
- Technical Decision- at least one member of TEP should make a site visit – often full TEP



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Wetland Delineation Review Checklist

Wetland Delineation Review Checklist for Minnesota

This document is intended to provide those reviewing wetland delineations for regulatory purposes with a checklist of basic components that should be considered when reviewing wetland delineations. It can also serve as a useful guide for those conducting delineations and preparing reports. This checklist is for most routine wetland delineations in Minnesota. Other report components and review considerations may be applicable depending on the complexity and nature of the site being evaluated. Users should consult the 1987 Corps of Engineers Wetland Delineation Manual, regional supplement, and applicable Minnesota Board of Water & Soil Resources guidance documents for more specific information and explanations.

Basic Report Components (check to make sure these are in the report)

- ☐ Site location map
- ☐ National Wetland Inventory (NWI) map
- ☐ Soil survey map (use web soil survey at http://websoilsurvey.nrcs.usda.gov/app/)
- ☐ MN Dept. of Nat. Resources Protected Waters Map
- ☐ Recent air photo with sampling point locations, site boundary, and wetland boundaries
- ☐ Survey map (optional depending on local requirements)
- ☐ Wetland delineation data forms corresponding to indicated sampling point locations

Report Contents (review report and data forms for these elements)

General

- ☐ On-site TP wetland types and Eggers & Reed plant community types identified for each wetland
- ☐ Vegetation and landscape position of all adjacent upland areas identified and described
- ☐ Wetland-upland transitions described for each wetland in terms of vegetation, soils, and hydrology
- ☐ Methodology for identifying potential wetland areas described
- ☐ All potential wetlands from hydric soil, NWI, and other mapping sources adequately investigated and described in the report

Wetland Delineation Data Form Review

- ☐ "Normal circumstances", "disturbed" and "problematic" designations properly identified
- ☐ Vegetation classified into appropriate layers (herb, shrub, tree, vine)
- ☐ Scientific name and indicator status identified
- ☐ 50/20 dominance rule applied properly for each vegetation layer
- ☐ Soil described to at least 20 inches from the soil surface
- ☐ Soil textures and Munsell colors given for each soil layer in sample

Field Review (conduct a field review and verify the following elements)

- ☐ Appropriate number of sampling transects (see notes on page 2)
- ☐ Sample points representative of the plant community and landscape position being sampled (see notes on page 2)
- ☐ Adequate vegetation sample plot sizes used (see notes on page 2)
- ☐ Vegetation properly identified and quantified
- ☐ Soil pits deep enough to document presence/absence of all potential hydric soil indicators
- ☐ Soil layers properly described in terms of texture, color, and redox features
- ☐ Hydric soil indicators properly applied
- ☐ Soil and vegetation boundaries appropriate (see notes on page 2)
- ☐ Delineation flag spacing appropriate (see notes on page 2)

Other Items

Offsite Hydrology

Scheduling and Access Approval

Flagged or GPS

Consultant attendance

Antecedent Conditions

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Scenario 1- Is this wetland delineation accurate?

TEP Findings:

- Noted hydric soils in DP 1 correlating with hydrophytic plant community/mow line;
- Saturation observed (Primary hydrology indicator)
- Lacking primary or secondary hydrology indicators at DP 2
- DP 2 reflects upland soil conditions – no hydric indicator
- Original boundary to far up landform
- Recommend moving boundary to dashed line

DP 2

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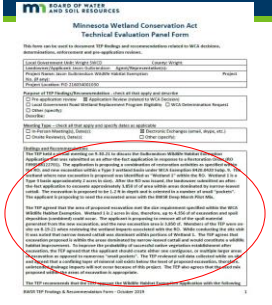
Scenario 1 – Documentation



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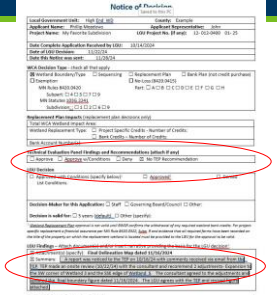
Minnesota Wetland Conservation Act
Technical Evaluation Panel Form

OR



Notice of Decision

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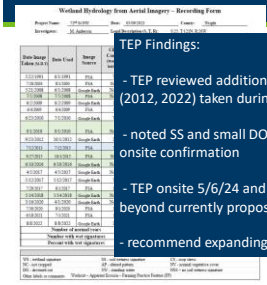
Scenario 2- Offsite Hydrology in Ag Areas


Wetland Hydrology from Aerial Imagery – Recording Form

TEP Findings:

- TEP reviewed additional aerial photography from County (2012, 2022) taken during normal antecendent cond.

- noted SS and small DO in Wetland 2 resulting in need for onsite confirmation

- TEP onsite 5/6/24 and confirmed geomorphic setting beyond currently proposed boundary

- recommend expanding boundary 50-75 ft to north

Followed

est more

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Procedure for wetland determination w/o delineation

- Review offsite materials
  - Websoil survey, NWI, topo, imagery, APT, etc.
- Review on site
  - Start with the obvious: topo breaks or veg changes.
  - Always fall back to the science! Are you meeting indicators?

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Wetland determination w/o delineation

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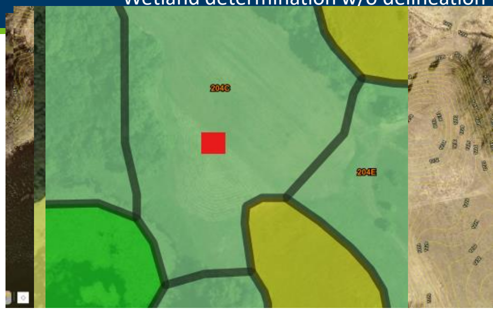
Wetland determination w/o delineation



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Scenario 3 – Solar Panels/Arrays

<u>Impacts</u> - a loss in quantity, quality, or biological diversity of a wetland *caused* by <u>draining</u> or <u>filling</u> in all types or by <u>excavation</u> in semi/perm. Flooded wetland areas

Wetland <u>fill</u> - *does not* include posts and pilings <u>unless</u> it turns wetland into a *nonaquatic use or significantly alters its functions and value*.

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Scenario 3 – Solar Panels/Arrays


BOARD OF WATER AND SOIL RESOURCES

Guidance on Reviewing Solar Panel Projects for Wetland Conservation Act (WCA) Compliance

Solar Projects vs Other Project Types

Outline of TEP Evaluation of Potential Impacts of Solar Panels on Posts/Pilings

TEP Involvement/Resources

- Review Project/ID potential Impacts
- Review Available Guidance

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Scenario 3 – Solar Panels/Arrays

TEP Considerations?

- Evaluate Current Conditions
- Determine Current Function/Value
  - 8420.0522 Subp1
- Evaluate Effect of Project on Condition/Function
- Discuss Project Modifications
- Develop Findings/Recommendation

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Scenario 3 – Solar Panels/Arrays

TEP Findings:

- Sloped, Wet Meadow
- Cultivated/row crop & sparse Yellow Nutsedge
- Typical/Reasonable size/layout with posts not resulting in fill
- Wetland functions as recharge to downslope resource 1500 ft away and marginal wildlife use;
- Proposed design allows natural hydrology movement
- Vegetation enhancement/management was added
- Maintains primary wetland functions and cont. aquatic use.
- Not an impact based on layout/design/operation

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Scenario 4 - De minimis

Table 1: Maximum de minimis exemption amounts for per MS 103G.2241 (Aug. 1, 2024)

Impacts to wetlands, **excluding** permanent and semipermanently flooded areas of wetland	Presettlement area of state	Impact area up to (acres):	Impact area up to: (square feet):
Outside of Shoreland Wetland Protection Zone	Greater than 80 percent area	One-quarter (1/4)	10,890
	50 to 80 percent area	One-tenth (1/10)	4,356
	Less than 50 percent area	One-twentieth (1/20)	2,178
Within Shoreland Protection Zone, but beyond structure setback	Statewide	N/A	100
Within Shoreland Protection Zone and structure setback	Statewide	N/A	20 ▲ (100)
Impacts to permanent and semipermanently flooded areas of wetlands	Statewide	N/A	400

▲ Increased amount shown in parenthesis my be allowed if wetland is isolated from the public water, or if permanent water runoff retention or infiltration measures are established in proximity to the impact and approved by the shoreland management authority.

45

Scenario 4- De minimis

De minimis Reminders

- Covers small impacts (driveways, roads, small projects, etc.)
- Once exceeded on a project, must replace all.
- Impacts do not require a decision **
- Cannot be combined on a project
- Very specific (i.e. location in state/pre-settlement area, shoreland/setback distance, hydro regime, etc.)
- *Does not apply* to calcareous fens, banks or replacement wetlands

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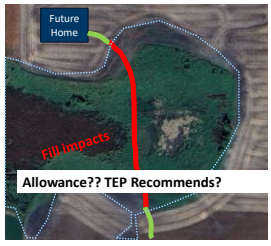
Scenario 4 – De minimis

TEP Considerations/Findings



Purpose- Helpful but may not affect outcome

Community/Hydro Regime - Seasonally Flooded/Shallow/Deep Marsh Area(s)with Impacts outside semi/perm flooded

Location in State - SW County, <50% pre-settlement area

Proximity to Shoreland -900 ft to public water basin w/shoreland classification

Net Impacts

- 5250 sq ft of fill impacts to wetlands

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Scenario 5 – Regulated Wetland under WCA?

48

Regulated Wetland?

49

Regulated Wetland?

1938

1981

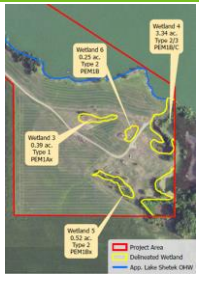
2003

50

Regulated Wetland?

TEP Review and Findings…

- Wetland Indicators met; Approved delineation
- Proposed to ……
- Soil/NWI…..
- Aerial photo review….
- Wetlands 3 and 6 meets def. of Incidental; out of scope (8420.0105 Scope)
- Wetlands 4 & 5 need more information; or replacement



51

Exercise

TEP Charge

Review Submittal

Request Additional Info?

Develop Findings

Make Recommendation

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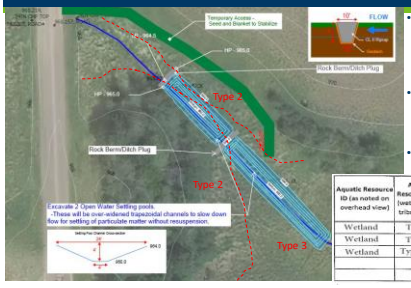
Exercise



- SWCD applying to implement Water Qality/TP reduction project for public waters basin 75' to west
- Excavate and Fill in FWM/SM along ditch prior to outlet into lake
- Rock berms approx 1 ft above adjacent grade

Aquatic Resource ID (as noted on overhead view)	Aquatic Resource Type (wetland, lake, tributary etc.)	Type of Impact (fill, excavate, drain, or remove vegetation)	Duration of Impact Permanent (P) or Temporary (T)[1]	Size of Impact[2]
Wetland	Type 2	Fill/Excavate	Permanent	2,000
Wetland	Type 3	Fill/Excavate	Permanent	5,000
Wetland	Type 2/3	Fill/Grading	Temporary	6,000

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Exercise: Regulated? No Loss/Exe/Repl?

TEP Findings/Recommendation

- Fresh Wet Meadow/Shallow Marsh Wetland Impacts occurring (fill for rock berms and excavate for settling areas)
- Regulated activity
- Primary purpose is improvement to lake basin water quality by reducing TP input from incoming ag ditch
- SWCD acting as applicant (public agency)
- Ag Exemption, Item C

Recommend approval via Ag Exemp Subp. 2, C. & Require Certification statement submittal by SWCD (post TEP review)

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SWCD or TEP "certifying" projects for exemptions

- SWCD projects (Subp. 2C)
- Wildlife habitat (Subp.9)
- Options: determination form, email, letter,

BOARD OF WATER AND SOIL RESOURCES

Minnesota Wetland Conservation Act Determination Notice Form

This form can be used to provide notice on WCA-related determinations. DO NOT use this form for notices on WCA decisions. WCA decisions are replacement plans, wetland boundary/type, wetland banks, exemption, no-loss and sequencing. Some WCA determinations can be incorporated into a WCA decision, while others can or must be made separate from the associated decision.

Local Government Unit:	Isanti SWCD	County:	Isanti
Applicant Name:	Isanti SWCD	Applicant Representative:	TK
Project Name:	Blue Lake TP reduction PH	LGU Project No: (if any)	039-22
Date Request Received by LGU:	2/3/2022		
Date EBA Notice was Sent:	4/4/22		

Notice Type - check one

☐ Notice of Determination Request. Determination has not been made.

☒ Notice of Determination. Determination has been made.

WCA Determination Type - check all that apply

☐ Construction Certification ☐ Incomplete Application ☐ Local Govt. Road Rest. Program Qualification
☐ Successful Replacement/End of Monitoring ☐ Credit Deposit ☐ LNAN/Preservation Eligibility
☐ Financial Assurance Release ☐ Partial Drainage Impacts ☐ Sequencing Flexibility
☐ Temp. Impacts Extension ☐ Certificate of Successful Restoration ☒ Other (specify): **Ag Subp 2C.**

Note: All listed determination types are either made by the TEP or require TEP concurrence except for Construction Certification, Incomplete Application, Certificate of Successful Restoration (issued by SWCD) and Financial Assurance Releases. Use "other" for determinations that are not listed.

Technical Evaluation Panel

TEP Has Concurred with Determination: ☒ Yes ☐ No. If yes, attach findings or other documentation

TEP Concurrence Needed: ☐ Yes ☐ No. If yes, specify deadline date for concurrence:

Determination Materials and Findings

☒ Attachment(s) (specify): Application and TEP PDF

Notes: The SWCD certifies that this project represents a net improvement to water quality within adjacent Blue Lake by reducing TP 14-26 lbs/yr from the incoming trib. The excavation and rock berm height (+1 ft above adjacent elevation) will limit hydrologic impacts on the adjacent wetlands by allowing flood stages to pass thru/around the berm and result in a Type 3/4 in the excavated portion. The SWCD is the authorized agent/applicant and grant administrator for this project.

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The Agricultural Exemption

Replacement plan is not required for:

- impacts to wetlands on agricultural land labeled prior converted (PC) cropland and "PC"
- impacts to wetlands resulting from drainage maintenance activities authorized by the Natural Resources Conservation Service, on areas labeled farmed wetland, farmed-wetland pasture, and wetland. "Maintenance"

Applicable to both

The prior converted cropland, farmed wetland, farmed-wetland pasture, or wetland must be labeled on a valid final certified wetland determination issued by the Natural Resources Conservation Service.

Landowner is responsible to provide a copy of the final certified wetland determination (026 and CWD map) to, and allow the Natural Resources Conservation Service to share related information with, the local government unit and the board for purposes of verification;

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Ag Exercise

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Memo for Record

[redacted]

Operator/Landowner: [redacted]

County: [redacted]

Township, Range, Section: [redacted]

Farm Number: 18904

Tract Number: 13720

9/3/2025 – 569 Issued. Potential ditch violation.

9/11/2025 – File review completed. Wetland Determination issued for T13720 on 12/22/2020. According to the Wetland Determination map, the 569 area of concern includes Field 2-W-10.30 acres.

9/12/2025 - Cursory slide review completed. Field 2-W-10.30 acres appears to be a large depression with a pre-Act ditch traversing through it. Cursory review of available imagery indicates ditch maintenance occurred around 2021. Maintenance of Pre-Act ditches is allowed (NPSAM 514.60) = NO VIOLATION. 569 returned to FSA.

Left: 1938 Photo

Right: 2024 Photo

BWSR Wetland Section | www.bwsr.state.mn.us/wetlands

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Utility Exemption

- **Utilities** MS 103G.2241

A replacement plan for wetlands is not required for wetland impacts resulting from:

- new placement or maintenance, repair, enhancement, realignment, or replacement of existing utility or utility-type service, including pipelines, when wetland impacts are authorized under and conducted in accordance with a permit issued by the United States Army Corps of Engineers under section 404 of the federal Clean Water Act
- Repair and updating existing septic systems to comply with local, state and federal regulations

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Utility Exercise

- Does this meet the utility exemption? Why or why not?
- What else could it qualify for?

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TEP & Replacement Plan Applications

BOARD OF WATER AND SOIL RESOURCES

Minnesota Wetland Professional Certification Program

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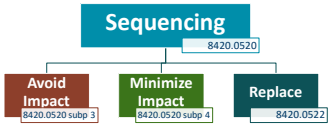
Replacement Topics to Cover

- Basic Requirements
- Project Definition
- Sequencing (Avoidance Emphasis)
- Special Considerations
- Replacement Siting
- TEP Roles and Support at each



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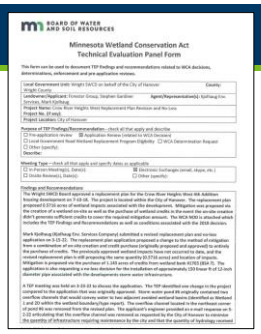
Replacement Plan Basics

- Required if impact is not exempt/no loss
- Must apply/notice/approve prior to impacts
- Signature of owner/have property rights
- Specific Procedures/Review Criteria (Sequencing; Bulk of Review)
- Includes Special Considerations Review & Adequate replacement
- Normal/often TEP input


BOARD OF WATER AND SOIL RESOURCES

Minnesota Wetland Conservation Act
Technical Evaluation Panel Form

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Preapplication Encouraged

- Prior to Completed application
- Meet with the LGU/TEP, provide basic/concept level information
- LGU/TEP
  - Initial Sequencing feedback/issues
  - Avoidance Alternatives to explore & include in final app
  - Evaluate replacement siting


PART ONE: Applicant Information

PART TWO: Site Location Information

PART THREE: General Project/Site Information

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Project Definition

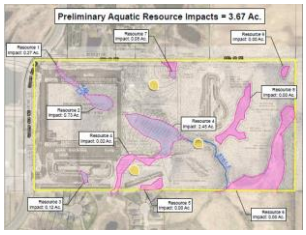
A Specific plan or design to accomplish a goal.

- Purpose and Need in JPA

Can be Critical for sequencing review

Ultimately defined by LGU (8420.0111, Subp. 54)

- Seek TEP input/recommendation - particularly LGU defines differently
- Document in Findings



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Example Project Definitions

Applicant Defined - To develop parcel 14-007-1200 (120 acre) with 107, single family residential lots, 3 acre park space and associated stormwater ponds in the City of Elk River within 2 miles of downtown and access to major collector/state Hwy within 10 minutes.

- Narrowly defined
- Signficantly limits on or off site alternatives to meet the purpose and need

LGU Defined - To develop a single family residental plat with access to improved roads in Elk River meeting all city ordinances.

- More Broadly defined
- Allows for more avoidance/minimization (on site changes/off site alternatives)
- Sequencing is then based on this definition, not applicants

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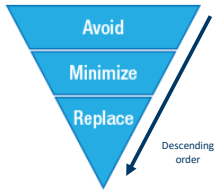
Sequencing Basics

- Nuts and Bolts of WCA and Bulk of Review
- Recommend TEP input
- LGU accept that its met or deny application
- Can be subjective
- Avoid, Minimize, Rectify, Reduce then replace lost functions



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Sequencing- Avoidance

A review of Alternatives that avoids ALL impacts to wetlands.

- *Minimum* of 2
  - No Build & Second
- Must be 'good faith' alternatives that avoid NOT alternatives that still impact
- Avoid ≠ minimize
- Consider On and/or off-site alternatives
- Any feasible and prudent alternatives can/should be considered

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Alternatives Analysis – 'Feasible and Prudent'

WCA rule tells us (8420.0520 subp 3C(2)):

- Can be done from an engineering perspective
- Is in accordance with accepted engineering standards and practices
- Is consistent with public health, safety, and welfare requirements
- Is environmentally preferable based on social, economic, and environmental impacts
- Would not create any truly unusual problems

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Avoidance Alternatives

TEP/LGU to Consider a wide range of issues to determine if an Alternative is 'applicable'

- Purpose
- Offsite options (obtainable?)
- Safety
- Public Need
- Economics, physical conditions, demographic requirements.
- Engineering Standards
- Access
- Reasonable Modifications (zoning, constraints, etc.)

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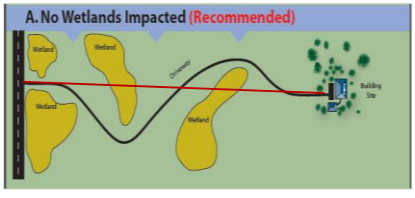
Impact Avoidance

- If LGU finds that a Feasible and Prudent Alternative exists that avoids impacts, the application must be denied.



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Example Offsite Alternatives

Table 2 – Offsite Alternatives Comparison

Category	Factor	Offsite Alternative 1	Offsite Alternative 2	Offsite Alternative 3	Offsite Alternative 4	Offsite Alternative 5	Offsite Alternative 6	Preferred Alternative 7
Available	Available for Acquisition	No - Purchased by MnDOT.	N/A – did not pursue due to slope constraints	N/A – did not pursue due to safety concerns	N/A – did not pursue due to access	Yes - Available for acquisition.	Yes - Owned by MP.	Yes - Owned by DAA. DAA willing to lease.
Logistics	Sufficient Parcel/s Size	Yes 117 acres.	Yes 166 acres.	Yes 139 acres.	Yes 55 acres.	Yes 158 acres.	No - Would require compromises in facility sizes.	Yes 111 acres.
	Availability for Access	Yes - Highway on north boundary and road on east boundary.	Yes - Highway on north boundary.	Yes - Roadway on north boundary.	No - Roadway on eastern border requires crossing Miller Creek.	Yes - Roadway on eastern and northern borders.	Yes- Existing facility.	Yes – Roadway on western border.
Engineering /Design	Topography and Site Conditions Feasible for Construction	Feasible	No - Slope constraints.	Safety concerns with entering roadway	Would require adequate bridge/culvert loading over Miller Creek	Feasible	Existing infrastructure not suitable for needs	Feasible, although typical site surveys and geotech evaluation would be needed to confirm.
Recreation Resources	Public Access - Trails	None in site.	None in site.	Yes - Boulder Trail	None in site.	None in site.	None in site.	None in site.
Aquatic Resources	Potential Impacts	Roughly 10 acres of wetland impacts	Extensive wetlands in 3 of four faces	Keene Creek	New crossing of Miller Creek	Roughly 15 acres of wetland impacts	West Branch Chester Creek	6.6430 acres of wetland impact
Conclusion		Rejected, not available	Rejected, not feasible due to slope	Rejected, not feasible due to safety	Rejected, not feasible due to access	Rejected, does not minimize wetland impacts	Rejected, does not meet needs of project	Preferred, meets the needs of the project

- Ties back to project purpose

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Evaluating Alternatives

- LGU must consider (8420.0520 subp 3C(3)):
  - Could the size, configuration, or density of the project be modified to avoid wetlands?
  - Has the applicant made efforts to remove constraints (zoning restrictions, ordinance requirements, etc.) that are causing wetland impacts (i.e. request for variances, PUD, conditional use permit, etc.)?

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What if an avoidance alternative DOES exist?

- If the LGU determines that a feasible and prudent alternative exist that avoids wetland impacts and accomplishes the project, it MUST DENY the replacement plan.

** Develop TEP FOF **

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Minimization

- Generally Easier to Review and Ask for More information
- Includes information on
  - Spatial needs of project to meet purpose
  - Modification to layout/configuration/density
  - Sensitivity of other natural features (topo, hydro, veg,)
  - Value, function and distribution of wetland on the site (quality/condition)
  - Confine impact to degraded or fringe areas
  - Etc.

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How does applicant *demonstrate* sequencing?

- Clearly define the **purpose** of the project.
- Identify the physical, economic, and/or demographic **requirements** of the project.
- **Justify** why this project should or must go on this site.
- Show (concept plans, discarded grading plans, etc.) and describe other *reasonable*, good faith avoidance **alternatives** that were considered or could be considered.

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Sequencing – Replacement

Final Sequencing Step

LGU must evaluate if unavoidable impacts will be adequately replaced AND if correctly sited.

Adequate Replacement

- Must replace the functions and values at an equal or greater level than that which was lost.
- Uses wetland area as the unit of measurement (acreage or sq. ft.)

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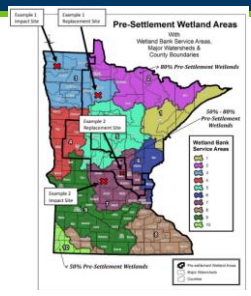
Replacement Siting

- Must follow a priority order:
  - Minor watershed
  - Major watershed
  - Same BSA
  - Another BSA



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What are WCA Special Considerations?

Scope: Factors that must be considered when preparing/reviewing a replacement plan.

- WCA 8420.0515 (Subp. 2-10)
- Applies to impact/replacement
- Does not apply to exemptions/no loss
- Responsibility lies with Applicant and LGU

"must be considered" & "in the review of"

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Special Considerations (8420.0515)

1. Endangered and threatened species (DNR natural heritage/nongame)
2. Rare natural communities (DNR natural heritage)
3. Special fish and wildlife resources (fish spawning, water birds, waterfowl, deer wintering/wildlife corridor)
4. Archaeological, historic, or cultural resource sites (National Register of Historic Places, State Historical Preservation Office, Tribal Coordination)
5. Groundwater sensitivity (Decorah edge, Geologic Sensitivity)

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Special Considerations Continued…

6. Sensitive surface waters (trout stream)
7. Education or research use (Cedar Creek, Anoka Co)
8. Waste disposal site (former dump, superfund, TCAAP/AHATS)
9. Consistency with other plans (watershed management, land use, planning and zoning)

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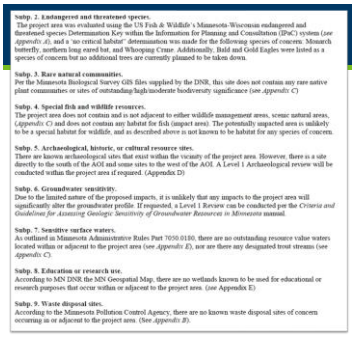

Subp. 2. Endangered and threatened species.
The project area was evaluated using the US Fish & Wildlife's Minnesota-Wisconsin endangered and threatened species Determination Key within the Information for Planning and Consultation (IPaC) system (*see Appendix A*), and a 'no critical habitat' determination was made for the following species of concern: Monarch butterfly, northern long eared bat, and Whooping Crane. Additionally, Bald and Gold Eagles were listed as a species of concern but no additional trees are currently planned to be taken down.

Subp. 3. Rare natural communities.
Per the Minnesota Biological Survey GIS files supplied by the DNR, this site does not contain any rare native plant communities or sites of outstanding/high/moderate biodiversity significance (*see Appendix C*)

Subp. 4. Special fish and wildlife resources.
The project area does not contain and is not adjacent to either wildlife management areas, scenic natural areas, (*Appendix C*) and does not contain any habitat for fish (impact area). The potentially impacted area is unlikely to be a special habitat for wildlife, and as described above is not known to be habitat for any species of concern.

Subp. 5. Archaeological, historic, or cultural resource sites.
There are known archaeological sites that exist within the vicinity of the project area. However, there is a site directly to the south of the AOI and some sites to the west of the AOI. A Level 1 Archaeological review will be conducted within the project area if required. (Appendix D)

Subp. 6. Groundwater sensitivity.
Due to the limited nature of the proposed impacts, it is unlikely that any impacts to the project area will significantly alter the groundwater profile. If requested, a Level 1 Review can be conducted per the *Criteria and Guidelines for Assessing Geologic Sensitivity of Groundwater Resources in Minnesota* manual.

Subp. 7. Sensitive surface waters.
As outlined in Minnesota Administrative Rules Part 7050.0180, there are no outstanding resource value waters located within or adjacent to the project area (*see Appendix E*), nor are there any designated trout streams (*see Appendix C*).

Subp. 8. Education or research use.
According to MN DNR the MN Geospatial Map, there are no wetlands known to be used for educational or research purposes that occur within or adjacent to the project area. (*see Appendix E*)

Subp. 9. Waste disposal sites.
According to the Minnesota Pollution Control Agency, there are no known waste disposal sites of concern occurring in or adjacent to the project area. (*See Appendix B*).

Special Considerations

- Evaluate each item/Determine if near or within activity
- Frequently requires outside assistance to ID
  - Consultant and/or Agency/Staff resource
- If ID, determine how/if adversely impact (direct or indirect)
- Work to modify project scope/extent or other mitigate the impact

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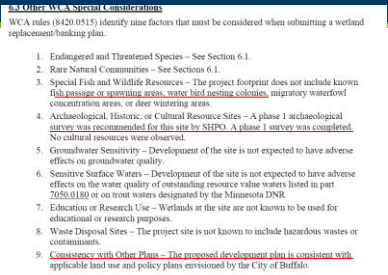
Examples



6.3 Other WCA Special Considerations

WCA rules (8420.0515) identify nine factors that must be considered when submitting a wetland replacement/banking plan.

1. Endangered and Threatened Species – See Section 6.1.
2. Rare Natural Communities – See Sections 6.1.
3. Special Fish and Wildlife Resources – The project footprint does not include known fish passage or spawning areas, water bird nesting colonies, migratory waterfowl concentration areas, or deer wintering areas.
4. Archaeological, Historic, or Cultural Resource Sites – A phase 1 archaeological survey was recommended for this site by SHPO. A phase 1 survey was completed. No cultural resources were observed.
5. Groundwater Sensitivity – Development of the site is not expected to have adverse effects on groundwater quality.
6. Sensitive Surface Waters – Development of the site is not expected to have adverse effects on the water quality of outstanding resource value waters listed in part 7050.0180 or on trout waters designated by the Minnesota DNR.
7. Education or Research Use – Wetlands at the site are not known to be used for educational or research purposes.
8. Waste Disposal Sites – The project site is not known to include hazardous wastes or contaminants.
9. Consistency with Other Plans – The proposed development plan is consistent with applicable land use and policy plans envisioned by the City of Buffalo.

**Included Map & letters from SHPO/DNR

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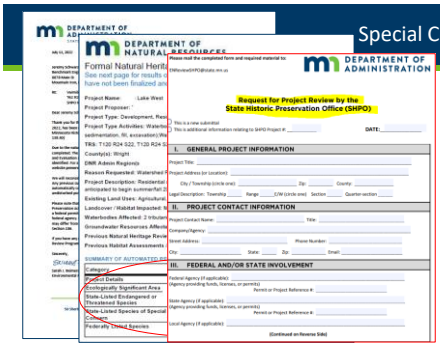
Special Considerations



DEPARTMENT OF ADMINISTRATION

Request for Project Review by the State Historic Preservation Office (SHPO)

I. GENERAL PROJECT INFORMATION

II. PROJECT CONTACT INFORMATION

III. FEDERAL AND/OR STATE INVOLVEMENT

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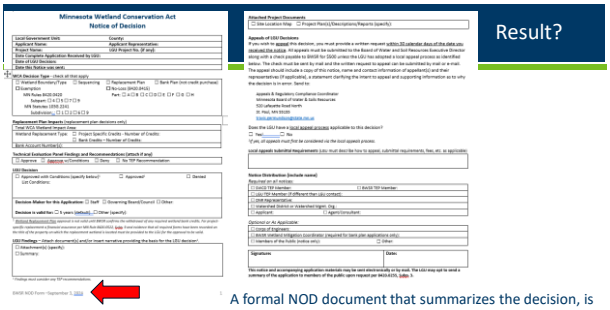
Result?


Minnesota Wetland Conservation Act
Notice of Decision

A formal NOD document that summarizes the decision, is supported by technical findings and is valid for 5 years.

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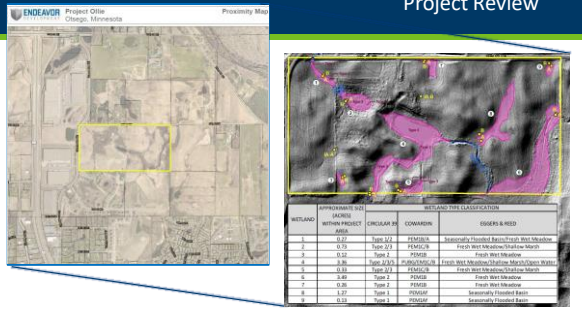
Project Review



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Sequencing Review

Applicant vs LGU Project Definition

The project has been defined as a 744,744-sf contiguous industrial warehouse that is rectangular in shape with specific parking requirements and within 8 miles of I-94.

Per 8420.0111 Subp. 54, the project is defined by the LGU to accomplish a goal. In this situation, the TEP recommends the LGU define the project goal as the construction of a large industrial warehouse within close proximity to the current BluDot facility and access to major transportation corridors.

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Alternatives Onsite

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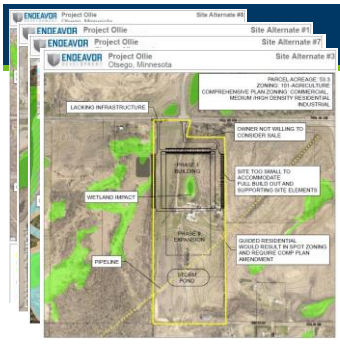
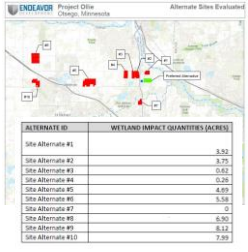
Alternatives Offsite





ALTERNATE ID	WETLAND IMPACT QUANTITIES (ACRES)
Site Alternate #1	3.92
Site Alternate #2	3.75
Site Alternate #3	0.62
Site Alternate #4	0.26
Site Alternate #5	4.69
Site Alternate #6	5.58
Site Alternate #7	0
Site Alternate #8	6.90
Site Alternate #9	8.12
Site Alternate #10	7.99

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Minimization, Rectify/Reduce, Replace

- Decrease Building Size (down from >1,000,000 sq ft)
- Move to NW corner as much as possible
- Reduce employee parking with City approval
- Access Alignment shifts
- Retaining wall along East (large)
- Setbacks to remaining wetlands
- Preserve and Restore Remaining
- Replace onsite and credit purchase

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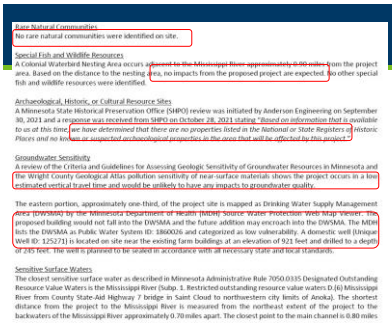
Sp. Considerations



Rare Natural Communities
No rare natural communities were identified on site.

Special Fish and Wildlife Resources
A Colonial Waterbird Nesting Area occurs adjacent to the Mississippi River approximately 0.90 miles from the project area. Based on the distance to the nesting area, no impacts from the proposed project are expected. No other special fish and wildlife resources were identified.

Archaeological, Historic, or Cultural Resource Sites
A Minnesota State Historical Preservation Office (SHPO) review was initiated by Anderson Engineering on September 30, 2021 and a response was received from SHPO on October 28, 2021 stating "*Based on information that is available to us at this time, we have determined that there are no properties listed in the National or State Registers of Historic Places and no known or suspected archeological properties in the area that will be affected by this project.*"

Groundwater Sensitivity
A review of the Criteria and Guidelines for Assessing Geologic Sensitivity of Groundwater Resources in Minnesota and the Wright County Geological Atlas pollution sensitivity of near-surface materials shows the project occurs in a low estimated vertical travel time and would be unlikely to have any impacts to groundwater quality.

The eastern portion, approximately one-third, of the project site is mapped as Drinking Water Supply Management Area (DWSMA) by the Minnesota Department of Health (MDH) Source Water Protection Web Map Viewer. The proposed building would not fall into the DWSMA and the future addition may encroach into the DWSMA. The MDH lists the DWSMA as Public Water System ID: 1860026 and categorized as low vulnerability. A domestic well (Unique Well ID: 125271) is located on site near the existing farm buildings at an elevation of 921 feet and drilled to a depth of 265 feet. The well is planned to be sealed in accordance with all necessary state and local standards.

Sensitive Surface Waters
The closest sensitive surface water as described in Minnesota Administrative Rule 7050.0335 Designated Outstanding Resource Value Waters is the Mississippi River (Subp. 1. Restricted outstanding resource value waters: D.(6) Mississippi River from County State-Aid Highway 7 bridge in Saint Cloud to northwestern city limits of Anoka). The shortest distance from the project to the Mississippi River is measured from the northeast extent of the project to the backwaters of the Mississippi River approximately 0.70 miles apart. The closest point to the main channel is 0.80 miles

Minnesota Wetland Conservation Act
Notice of Decision

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Replacement Plan

King Rail,
endangered, shallow freshwater wetlands
© Jim Rathert, USFWS

Questions?

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Wetland Banking Overview

BOARD OF WATER AND SOIL RESOURCES

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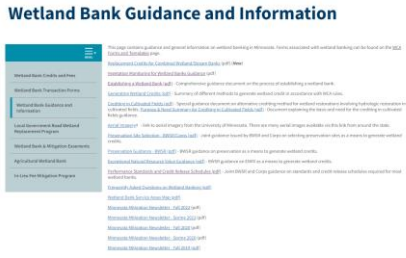
Guidance

- Wetland Bank Guidance and Information



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Wetland Bank

Market-based commodity system (***Price not determined by BWSR***)

Wetlands are restored, enhanced, created, or preserved to generate wetland "credits"

Credits deposited into account

Credits sold to others to offset wetland losses somewhere else

Goal is no-net-loss

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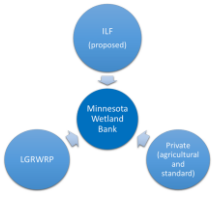
Bank types

- Private
  - Standard- Landowners establish bank on private land to mitigate impacts on non-ag or transportation projects
  - Agriculture- Credits can only be used for Ag projects
- In-lieu Fee (proposed)
  - Mitigation NOT completed in advance
  - Open to only government and NGOs, mitigation completed in advance, requires compensation planning framework
- Local Government Road Wetland Replacement Program (LGRWRP)
  - Replaces impacts resulting from local transportation projects



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Why Wetland Banks

2008 Federal Rule – wetland banks are preferred replacement type

- Larger more ecologically valuable sites (> 5 ac)
- Bank instrument/plan approved using rigorous scientific and technical analysis, planning, and implementation
- Entire site is permanently protected by a conservation held by BWSR (State)
- Success must be demonstrated BEFORE credits are released
- No temporal loss of wetland function or area
- Reduced risk and uncertainty

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Why Wetland Banks

Bank sponsor's plan is approved

⇩

Project is built and protected (certified)

⇩

Demonstrate success (monitoring)

⇩

Credits are released/deposited.

⇩

Credits can be sold to offset impacts

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Why Wetland Banks

Bank sponsor's plan is approved

⇩

Project is built and protected

⇩

Demonstrate success (monitoring reveals no bueno)

⊘

Credits are released/deposited.

⇩

Credits can be sold to offset impacts

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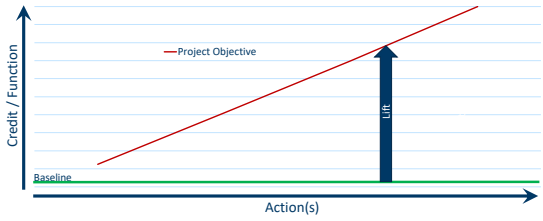
How are Credits Generated



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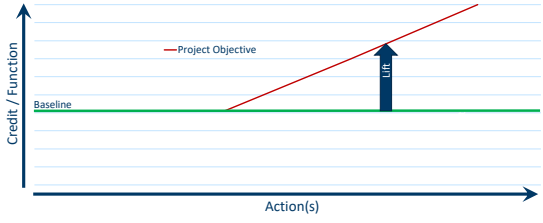
How are Credits Generated



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How are Credits Generated

WCA Credit Actions	Corps Credit Actions
Subp. 2 – Buffer	Buffer
Subp. 3 – Restoration, completely drained	Re-Establishment
Subp. 4 – Restoration, partially drained	Rehabilitation
Subp. 5 – Vegetation on farmed wetland	Enhancement
Subp. 6 – Protection, previously restored	Extended Restoration
Subp. 7 – Creation	Establishment
Subp. 8 – ENRV	Any or None
Subp. 9 – Preservation	Preservation

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What about the new Cultivated Field Credit (CFC)?

WCA Credit Actions	Corps Credit Actions
Subp. 2 – Buffer	Buffer
Subp. 3 – Restoration, completely drained	Re-Establishment
Subp. 4 – Restoration, partially drained	Rehabilitation
Subp. 5 – Vegetation on farmed wetland	Enhancement
Subp. 6 – Protection, previously restored	Extended Restoration
Subp. 7 – Creation	Establishment
Subp. 8 – ENRV	Any or None
Subp. 9 – Preservation	Preservation

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Wetland Bank Review Phases

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Review Teams

WCA Technical Evaluation Panel (TEP)

- LGU
- SWCD
- BWSR
- DNR

Corps Interagency Review Team (IRT)

- Corps
- EPA
- BWSR
- DNR
- FAA
- Others

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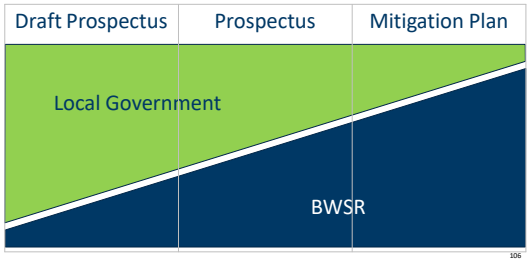
Establishing a Wetland Bank



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Draft Prospectus


Wetland Mitigation Proposal
Draft Prospectus

- Optional
- No decisions required
- Complex or difficult projects
- Minimal investment

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Draft Prospectus

BWSR Role:

- Staff review and comments
- Identify easement issues
- Identify opportunities and constraints
- Evaluate general feasibility

TEP/LGU Role:

- **Provide and compile comments**
- **Site visit**
- **TEP meeting to discuss and review comments**
- **Provide local input**
- **TEP writes Findings and recommendation for bank sponsor (within 30 days)**

*Comments commensurate with information provided**

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Could this site be a wetland bank?

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Prospectus

- Not required by WCA*
- Required by Corps
- Baseline Information
- Concept Plans
  - Justify Credit Actions
  - Justify Credit Allocation

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Prospectus

General Considerations

- Use the form, read the headings, and provide the requested information
- Focus on Baseline Information to justify credit actions and allocations (objectives)
- Some credit actions require more or specific information
- Concept considered but detailed plans not required

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Prospectus

BWSR Role:

- Evaluate easement issues
- Staff comments now include engineering
- Statewide consistency
- Technical answers and interpretations
- Coordination with Corps

TEP/LGU Roles:

- **Verify previous comments addressed**
- **Verify sponsor adequately described the site**
- **Review wetland delineation or determination & ag history (if necessary)**
- **Provide local perspective**
- **TEP findings within 60 days**

*Comments commensurate with information provided**

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Wetland Mitigation Proposal
Mitigation Plan (Full Application) BWSR

Mitigation Plan

- Required (WCA Notices)
- LGU Decision Required*
- Section 15.99 time-limits!
- Detailed vegetation, construction and monitoring plans
- Final Crediting and performance standards

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Mitigation Plan

General Considerations

- Button-up baseline information
- Accurate credit calculations
- Credit release schedule
- Performance standards
- Detailed vegetation establishment and management plans
- Detailed construction plans
- Detailed monitoring plans

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Mitigation Plan

BWSR Role

- Evaluate easement Issues
- Verify all components are acceptable and meet WCA requirements
- Engineering review of final plans

TEP/LGU Roles

- **Follow WCA notification and decision procedures**
- **Track 15.99 time-limit and extend as needed (*it will be needed*)**
- **Coordinate TEP meeting and site visit**
- **Compile and evaluate all comments**
- **TEP findings and recommendation**

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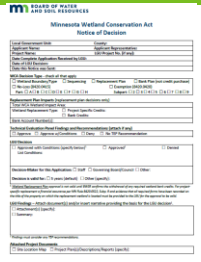
Mitigation Plan Decision

- Track 15.99 time limits, extensions needed
- Most Mitigation Plans will require some revision
- Make final decision in accordance with section 15.99
- Clearly identify and retain approved Mitigation Plan
- When possible the WCA and Corps approved plans should be the same


BOARD OF WATER AND SOIL RESOURCES

Minnesota Wetland Conservation Act
Notice of Decision

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Your plan is approved….now what?

- Easement Acceptance
  - Held by the State of MN
- Site Certification
  - As-Built Survey
  - Seed Tags
  - Monumentation
- Monitoring Process
  - Duration of monitoring
  - Performance Standards
  - Deposit of Credits
- Maintenance Responsibilities/Corrective Actions
  - Vegetation Issues
  - Hydrology Issues
  - Encroachment
- Close Out
  - Delineation
  - Final Deposit

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BOARD OF WATER AND SOIL RESOURCES

Certification and Credit Releases

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Easement Acquisition

BWSR Easement staff will lead this process

Typically initiated after Mitigation Plan approval

Often takes 6 months or more

No easement = no bank = no credits

No credits can be deposited until a perpetual conservation easement is granted to and accepted by the state

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Construction Certification

Construction as-built documentation provided to LGU:

- Surveyed elevations of slopes, contours, outlets, and embankments
- Seed tags and contractor receipts
- Site preparation activities described
- Surveyed construction and seeding maps
- Construction photos showing relevant work
- Evidence engineered features were designed, overseen, and certified by licensed PE
- Comparison of as-built vs. design specifications and rationale for significant changes

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Construction Certification

Once as-built documentation is received the LGU must:

- Complete an on-site inspection
- Determine whether as-built conditions comply with construction specifications in the approved plan
- Ensure an engineer has certified the construction
- If not in compliance, notify the bank sponsor what is needed to gain compliance
- If in compliance, the initial credit release can be authorized

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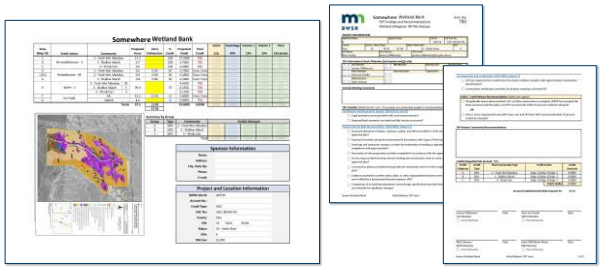
Deposits



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Deposits

- Up to 15% of credits can be deposited after construction certification and easement is accepted
- Remaining credits released based on schedule and performance standards in the approved Mitigation Plan
- Releases reviewed by the TEP and LGU
- Deposit form and fee is sent to BWSR banking administrator for entry into the state wetland bank
- Subject to MS 15.99!!!


Transaction Form to Deposit Credits
Minnesota Wetland Bank Program

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Credit Release Schedule

Determines "when" credits can be released and in what proportion

Typical release schedule*

- Initial (≤15%)
- Hydrology (0 - 45%)
- Interim 1 (variable)
- Interim 2 (variable)
- Final (≥ 20%)
- Performance standards and credit release guidance

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Performance Standards

Performance standards determine "if" credits can be released

- Observable or measurable physical, chemical, and/or biological attributes confirming project objectives are met
- Demonstrate improvement beyond baseline condition
- Show progression to the Final release
- All credit areas and actions need to achieve their standard(s) for credits to be released

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Performance Standards

Common hydrology metrics

- Meet standard for 2 full growing seasons
- Must be met before veg credits can be released
- Reference site (± 20%) - critical for drought conditions
- Water table/inundation timing and duration measurements
- Expect wells with daily readings

A. Success Criteria Summary

Summary of Success Criteria Standards and Current Metrics for 2017.

Metric	Success Criteria	Measured Criteria	Success Criteria Met?	Comments
Hydrology – *Standards used for 2011 - 2016*				
Elevation	Water between 6 inches above and one foot below ground surface	Measured hydrology is between 6 inches above and one foot below ground surface	Yes	*Formal hydrology monitoring not required for 2017. Success based on direct site observations*
Duration	Majority of the growing season	Hydrology was within the desired range for the majority of the growing season.	Yes	
Vegetation				
Diversity	Minimum of five native species	79 native species have been observed	Yes	Species diversity increased from 2016 to 2017
Composition	minimum two sedges and two grasses	Eight sedges and eight grasses have been identified	Yes	Species composition stable
Invasive species coverage	No more than 10% total cover	Total cover of invasive species is less than 10%, and has been effectively controlled.	Yes	Reed canary grass is less than 5% coverage.
Invasive species concentration	No single areas greater than one-quarter acre in size	Invasive species remain under control with no single area greater than one-quarter acre in size	Yes	Slight increase of along ditches, but sprayed again in fall 2017 to control

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Class Exercise 1: Is this hydrology performance standard met?

Community Type and Performance Standard	Well	Observed	Standard Met
Wet Meadow: Water table within 12" of the surface for 28 consecutive days	1	2022: 40 days (4/28-6/7) 2023: 46 days (4/25-6/10)	?

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Class Exercise 1: Is this hydrology performance standard met?

Community Type and Performance Standard	Well	Observed	Standard Met
Wet Meadow: Water table within 12" of the surface for 28 consecutive days	1	2022: 40 days (4/28-6/7) 2023: 46 days (4/25-6/10)	YES

YES!!!

Example Statement: Data from well 1 indicates hydrology performance standards were met in 2022 and 2023.

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Class Exercise 2: Is this hydrology performance standard met?

Community Type and Performance Standard	Well	Observed	Standard Met
Wet Meadow: Water table within 12" of the surface for 28 consecutive days	1	2022: 27 days (4/28-5/25) 2023: 46 days (4/25-6/10)	?

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Class Exercise 2: Is this hydrology performance standard met?

Community Type and Performance Standard	Well	Observed	Standard Met
Wet Meadow: Water table within 12" of the surface for 28 consecutive days	1	2022: 27 days (4/28-5/25) 2023: 46 days (4/25-6/10)	NO

No!!!

Example Statement: Data from well 1 indicates hydrology performance standard was met in 2023 but missed the hydrology performance standards in 2022 by one day.

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Performance Standards

A. Success Criteria Summary

Summary of Success Criteria Standards and Current Metrics for 2017.

Metric	Success Criteria	Measured Criteria	Success Criteria Met?	Comments
Hydrology – Standards used for 2011 - 2016				
Elevation	Water between 6 inches above and one foot below ground surface	Measured hydrology is between 6 inches above and one foot below ground surface	Yes	*Formal hydrology monitoring not required for 2017. Success based on direct site observations*
Duration	Majority of the growing season	Hydrology was within the desired range for the majority of the growing season	Yes	
Vegetation				
Diversity	Minimum of five native species	79 native species have been observed	Yes	Species diversity increased from 2016 to 2017
Composition	minimum two sedges and two grasses	Eight sedges and eight grasses have been identified	Yes	Species composition stable
Invasive species coverage	No more than 10% total cover	Total cover of invasive species is less than 10%, and has been effectively controlled.	Yes	Reed canary grass is less than 5% coverage.
Invasive species concentration	No single areas greater than one-quarter acre in size	Invasive species remain under control with no single area greater than one-quarter acre in size	Yes	Slight increase of along ditches, but sprayed again in fall 2017 to control

Common vegetation metrics

- Interim 1 met for 2 consecutive seasons
- Interim 1 NNI relative cover ≥ 50%
- Final NNI relative cover ≥ 70% - 90%
- Species richness of 5, 10, and 15 NNI species for most communities
- > 50% hydrophytes for wetland communities
- Maximum bare ground/open water area

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Class Exercise

Interpreting Hydrology & Vegetation Performance Standards

- 10 minute practical exercise
- Read the performance standards on the left and compare to the monitoring data on the right
- Decide whether the performance standards are met or not (yes or no) and be prepared to explain why or why not

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		Performance Standard (PS)	PS Met (Y/N)	Comparison of Monitoring Data to Performance Standards
		Each performance standard met for two growing seasons		
Hydrology Performance Standards (30% Release of Credits)	Wet Meadow	Hydrology shall consist of a water table at or within 12 inches of the surface for the required duration (28 consecutive days or two periods of 14 or more consecutive days) during the growing season. Inundation shall not occur (unless there are site-specific conditions) except at the start of the growing season and following the 10-year, 24-hour (or greater) precipitation events. An exception can be made for sites with hummocky microtopography – hollows between hummocks can have standing water depths of up to 6 inches for extended duration.	Y	Monitoring of water levels conducted from April-October 2020 and 2021 demonstrates that wetland hydrology performance standard has been met on the site during normal conditions. All wet meadow areas had water within 12 inches of the surface from early April when monitoring began to mid-June. Well 1: 65 days (April 12-June 17) in 2021 and 63 days (April 10 - June 13) in 2022. Well 2: 70 days (April 12-June 22) in 2021 and 65 days (April 10 - June 15) in 2022.
	Shallow Marsh/Deep Marsh	Hydrology shall consist of a water table at the surface, to inundation to the outlet elevation (1134 ft) for a minimum of 56 consecutive days (or two periods of 28 days, or four periods of 14 consecutive days), during the growing season.	Y	Shallow marsh areas (bottom elevation 1132.5-1133)were inundated from the beginning of monitoring early April to late June in 2021 and 2022. Well 3: 70 Days (April 12 - June 22) in 2021 and 75 days (April 10 - June 25) in 2022. Well 4: 73 Days (April 12 - June 25) in 2021 and 78 days (April 10 - June 28) in 2022.

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		Each performance standard met for a minimum of two consecutive growing seasons		
Vegetation Interim Standard 1(IS1) (20% release credits)	Wet Meadow	50% or more relative cover by natives composed of at least 5 species	N	Did not meet in 2021, but met in 2022: 15 native species making up 40% relative cover in 2021 and 23 native species observed making up 70% of relative cover in 2021.
		Invasive, non-native species not to exceed 50% relative cover	N	Did not meet in 2021, but met in 2022. Non-native species was 60% in 2021 and and 30% in 2022.
		50% or more relative cover by hydrophytes	Y	Hydrophytic species comprise >75% relative cover of community in 2021 and >80% 2022.
		Bare ground not to exceed 20% absolute cover	Y	Bare ground was 5% of absolute cover in 2021 and 2022.
	Shallow Marsh/Deep Marsh	40% relative cover by nativescomposed of at least 3 species	N	Did not meet in 2021, but met in 2022: 10 native species observed making up 30% of relative cover in 2021. 18 native species making up 60% of relative cover in 2022.
		Invasive, exotic species not to exceed 60% relative cover	N	Did not meet in 2021, but met in 2022: Invasive species make up 70% of relative cover in 2021, and 40% in 2022.
		50% or more relative cover by hydrophytes	Y	Hydrophytic species comprise >90% relative cover of community in 2021 and 2022.
		Open water not to exceed 40% absolute cover	Y	Open water was 40% absolute cover in 2021 and 35% in 2022.
	Upland Buffer (Prairie)	50% relative cover by natives composed of at least 6 species	N	Did not meet in 2021, but met in 2022. 5 native species observed making up 40% relative cover in 2021 and 17 native species making up 60% relative cover in 2022.
		Invasive, exotic species not to exceed 50% relative cover	N	Did not meet in 2021, but met in 2022. Non-native species making up 60% relative cover in 2021 and less than 40% in 2022.
		Bare ground not to exceed 30% absolute cover	Y	Bare ground less than 20% of absolute cover in both 2021 and less than 10% in 2022.

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Monitoring Reports

WCA reference: 8420.0810, subpart 4

- WCA requires monitoring reports annually – December 31 deadline to LGU
- First report due the first full growing season after construction certification
- Monitoring period is typically 5 growing seasons (minimum of 3)

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TEP Roles

WCA reference: 8420.0800, subpart 3

The LGU (TEP) "must inspect and certify" as-built documentation

WCA reference: 8420.0820, subpart 1, Item A

The LGU (TEP) "must evaluate all monitoring reports received …" to determine if the goals of the approved plan are being met

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Monitoring Schedule

- Monitoring must begin no later than first full growing season after construction certification
- Typically continue for 5 full growing seasons
- If unsuccessful, the LGU may extend the monitoring period (<5 additional years)
- Actual monitoring schedule may vary for different bank types (restoration vs preservation)

Credit Release Schedule

Area	WCA Credit Actions and Corps Type of Compensation	Acres	Type of Wetland Credit	Credit Ratio	Final Projected Credits	Initial Release (15%)	Hydrology Performance Standards (release of additional 20% of total projected credits)	Interim 1 Vegetation Performance Standards (release of additional 20% of total projected credits)	Interim 2 Vegetation Performance Standards (release of additional 20% of total projected credits)	Final Vegetation Performance Standards & Approval of Final Wetland Delineation Report (25% final release)
1	Rehabilitation - CFC	16.0	2 - Fresh Wet Meadow	100%	16.0000	2.4000	3.2000	3.2000	3.2000	4.0000
2	Reduced Wetland Credit - CFC	0.9	2 - Fresh Wet Meadow	50%	0.4500	0.0675	0.0900	0.0900	0.0900	0.1125
3	Rehabilitation - CFC	14.9	3 - Shallow Marsh	100%	14.9000	2.2350	2.9800	2.9800	2.9800	3.7250
4	Reduced Wetland Credit - CFC	0.5	3 - Shallow Marsh	50%	0.2500	0.0375	0.0500	0.0500	0.0500	0.0625
5	Rehabilitation - CFC	15.7	4 - Deep Marsh	100%	15.7000	2.3550	3.1400	3.1400	3.1400	3.9250
6	Buffer - 2	48.0	2 - Fresh Wet Meadow	25%	4.2000	0.6300	0.8400	0.8400	0.8400	1.0500
			3 - Shallow Marsh	25%	3.8400	0.5760	0.7680	0.7680	0.7680	0.9600
			4 - Deep Marsh	25%	3.9600	0.5940	0.7920	0.7920	0.7920	0.9900
NA	Non Credit (Excess Upland Buffer)	20.8	NA	0%	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NA	Non Credit (Fill)	0.10	NA	0%	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NA	Non Credit Existing Wetland	0.70	NA	0%	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total Easement Acres		117.6	-	-	59.3000	8.8950	11.8600	11.8600	11.8600	14.8250

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Monitoring Reports

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Bank Plan – Monitoring

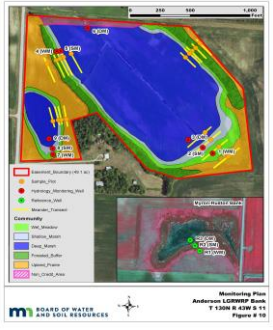
Monitoring (Duration typically 5-years):

Vegetation Monitoring Techniques/Plan

a) Timed Meander
b) Step-Point
c) Sample-Plot
d) FQA

Hydrology Monitoring Techniques/Plan

a) Monitoring Wells / Stilling wells / staff gauge
b) Reference Site



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Monitoring Report

Report Contents:

- **Project location map**
- **Description of performance standards**
- **Activities completed and planned**
- **Hydrology measurements & graphs**
- **Veg assessments & communities map**
- **Comparison of results to performance standards**
- **Color photographs (same points year to year)**
- **Other information specified from approved plan**

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US Army Corps Monitoring Report Template

Mitigation Monitoring Report Template
USACE St. Paul District
April 2024 Version 1

Sponsors for compensatory mitigation banks and in-lieu fee sites are required to demonstrate in their monitoring reports whether sites are meeting performance standards or on a trajectory to meeting performance standards. Sponsors must collect accurate and complete data and report that data in their monitoring reports to support their assessment of site conditions relative to the required performance standards.

While sponsors do not have to follow this outline precisely, or present data in tables exactly as illustrated here, the U.S. Army Corps of Engineers St Paul District (Corps) has developed these suggestions in coordination with agencies on the Interagency Review Team (IRT) to aid sponsors in preparing and submitting complete monitoring reports. IRT members will be able to effectively review reports that are prepared by sponsors who implement these suggestions. Efficient agency review of monitoring reports will result in more timely decisions on credit release requests, to include decisions to release credits when warranted or decisions to not release credits and instead provide direction on measures that sponsors should take before submitting another request for a credit release. The Corps will update this template as needed in coordination with IRT members and based on any feedback we receive from sponsors.

The Corps Project Manager (PM) will conduct site inspections, typically during the growing season, to field verify the monitoring and performance documentation before making a decision on credit releases. If sponsors expect to request a credit release following monitoring during the growing season, they should consider submitting as much data as possible before the growing season ends and they should request the Corps complete a site inspection before end of the growing season. then, they must submit complete monitoring reports by the due date (usually December 31st or January 31st).

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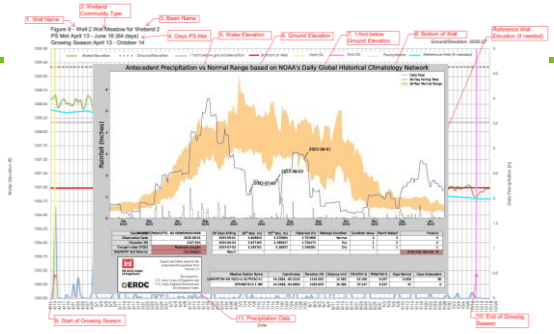

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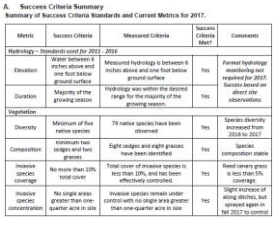
Reviewing Monitoring Reports



A. Success Criteria Summary
Summary of Success Criteria Standards and Current Metrics for 2017.

Metric	Success Criteria	Measured Criteria	Success Criteria Met?	Comments
Hydrology – Standards used for 2011 – 2016				
Elevation	Water between 6 inches above and one foot below ground surface	Measured hydrology is between 6 inches above and one foot below ground surface	Yes	*Formal hydrology monitoring not required for 2017. Success based on direct site observations*
Duration	Majority of the growing season	Hydrology was within the desired range for the majority of the growing season.	Yes	
Vegetation				
Diversity	Minimum of five native species	79 native species have been observed	Yes	Species diversity increased from 2016 to 2017
Composition	minimum two sedges and two grasses	Eight sedges and eight grasses have been identified	Yes	Species composition stable
Invasive species coverage	No more than 10% total cover	Total cover of invasive species is less than 10%, and has been effectively controlled.	Yes	Reed canary grass is less than 5% coverage.
Invasive species concentration	No single areas greater than one-quarter acre in size	Invasive species remain under control with no single area greater than one-quarter acre in size	Yes	Slight increase of along ditches, but sprayed again in fall 2017 to control

- **Know performance standards (from MP)**
- **Interpret data to determine whether the site meets those standards**
- **If not, document with data what is not meeting standard**
- **Consult with TEP & Corps**
- **Recommend corrective actions**

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Common Issues in Monitoring Reports

- Insufficient figures/graphs
- Data logger problems
- Performance standards not matching bank plan
- Incorrect monitoring techniques
- Data interpretation concerns

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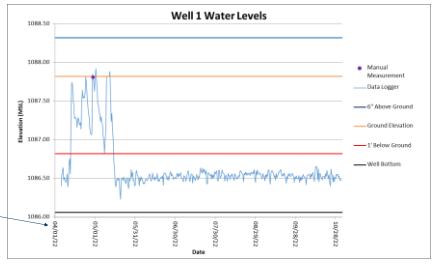
Hydrograph Issues

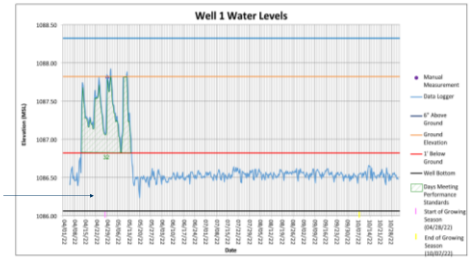


How do we verify that 28 consecutive days are met?

When does the growing season start?

146

Hydrograph Issues



Lines depicting daily intervals

Now includes Start/End of the growing season

147

Summary

- Understand your role in reviewing bank applications and monitoring reports
- Understand performance standards
- Understand how to review a monitoring report
- Once the monitoring report is reviewed and is accurate, process deposit form
- Be cognizant of MS 15.99 timelines for the Mitigation Plan and credit deposit forms

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Questions?

BOARD OF WATER AND SOIL RESOURCES

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Local Government Road Wetland Replacement Program

- BWSR is required to replace the associated wetland impacts, so the local governments don't have to
- WCA does not require replacement plans for impacts resulting from qualifying local road projects
- These wetland credits also satisfy Corps of Engineers' Section 404 permit requirements

150

What projects Qualify?

- **Repair, rehabilitation, reconstruction** or **replacement** of ***currently serviceable*** existing State, City, County or Town public road.
  - Provided that:
    - Project **minimizes impacts**
    - **Plans are provided** to the LGU
- What doesn't qualify?
  - New roads
  - Roads expanded solely for additional capacity lanes

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Local Road Program - Eligibility

- Cannot involve new roads or roads expansion for additional traffic capacity lanes in **anticipation** of future demand
- The project must involve repair, rehabilitation, reconstruction or replacement of a **currently serviceable road** to meet state/federal design safety standards/requirements
- Project must **minimize** wetland impacts

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What is a serviceable road?

153

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Roles/Responsibilities

Road Authority (RA)
- Develops project plans
- Provides application to LGU and USACE concurrently for review within required timelines
- Submits all documentation to BWSR

LGU Administrator/TEP
- Reviews delineation and plans for accuracy and eligibility
- Signs Attachment E if concurs with RA Information

Corps
- Separate review process
- Coordinates credit reservations w/ BWSR

DNR
- Reviews materials and signs Attachment E if within the shoreland zone of a Public Water

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Application Requirements

Local Road Authority must provide the TEP the following:

- Project plans depicting wetland boundaries
- Description of wetland impacts by type
- Information demonstrating wetland impact minimization

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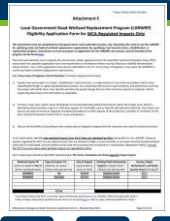
Reviewing Local Road Projects



Annual meeting with Local Road Authority → Review & approve delineation → Receive joint application with completed Attachment E → TEP determines whether impacts are eligible for program → TEP signs Attachment E → LGU returns signed Attachment E to Road Authority → Road Authority sends signed Attachment E with project plans to BWSR Central → BWSR & Corps determine mitigation requirements per Federal Mitigation Rule

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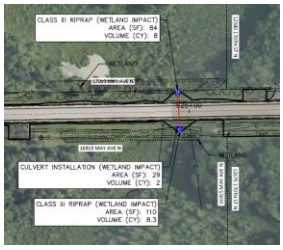
BWSR – Corps coordination

Key point with State/Federal Coordination

- If Corps authorized and does not require mitigation, the BWSR is not required to mitigate.
- These would include non-reporting thresholds for the Corps.
- If not WOTUS, then should be reviewed by Road Program.
- Can WCA Exemption be used instead: de minimis?
- Notice Requirements.

- BWSR is focusing on these details as Road Program may not have funding in the coming years and/or run out of credits in certain BSAs.



157

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Common Errors

Project Name and/or Number:

PART FOUR: Aquatic Resource Impact[1] Summary

If your proposed project involves a direct or indirect impact to an aquatic resource (wetland, lake, tributary, etc.) identify each impact in the table below. Include all anticipated impacts, including those expected to be temporary. Attach an overhead view map, aerial photo, and/or drawing showing all of the aquatic resources in the project area and the location(s) of the proposed impacts. Label each aquatic resource on the map with a reference number or letter and identify the impacts in the following table.

Aquatic Resource ID (as noted on overhead view)	Aquatic Resource Type (wetland, lake, tributary etc.)	Type of Impact (fill, excavate, drain, or remove vegetation)	Duration of Impact Permanent (P) or Temporary (T)[2]	Size of Impact[3]	Overall Size of Aquatic Resource [3]	Existing Plant Community Type(s) in Impact Area[4]	County, Major Watershed #, and Bank Service Area # of Impact Area[5]
W-1	Wetland	Fill	P	0.37	N/A	Type 3	County, 3
W-2	Wetland	Cut	T	0.02	N/A	Type 2	County, 3
W-3/Spring Creek	Wetland/Trib	Fill	P	0.003	N/A	Type 1	County, 3
W-4	Wetland	Cut/Fill	P	0.26	N/A	Type 2	County, 3

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Errors

Project Name and/or Number:

PART FOUR: Aquatic Resource Impact[1] Summary

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W-2	Wetland	Cut	T	0.02	N/A	Type 2	County, 3
W-3/Spring Creek	Wetland/Trib	Fill	P	0.003	N/A	Type 1	County, 3
W-4	Wetland	Cut/Fill	P	0.26	N/A	Type 2	County, 3

Include the project name and SAP, CP, SP number if applicable

Duration

Single ID and Resource Type per line

Make sure to include the County, Watershed, and BSA

Only one type of impact per line

Use correct area

Incorrect typing

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Qualifying Project - Guidance

BOARD OF WATER AND SOIL RESOURCES

Wetland Conservation Act (WCA) Topic of the Week

The Local Government Road Wetland Replacement Program (LGRWRP)

May 27, 2020

Guidance doc: LGRWRP Topic of the Week

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Qualifying Project - deficiency of current conditions

CSAH 18 is currently listed as a 2-lane rural A Minor Arterial Expander Highway, with an east-west orientation. CSAH 18 has a posted speed limit of 55 mph and an Average Daily Traffic (ADT) count of approximately 5,300 (2017). Currently CSAH 18 has a poor pavement condition and a lack of sufficient shoulders and turn lanes. This has contributed to crashes along the corridor. Specifically, the Anoka County Roadway Safety Plan (July 2013) revealed that over a five-year period there were seventeen crashes, of which five were determined to be lane departure crashes, often associates with inadequate roadway shoulders. Based on this analysis Anoka County has determined a need to create a safer roadway.

CSAH 18 Crash Data 2013-2015

	ADT	Crash Rate*	Severity rate*	Difference
MnDOT state wide Average for Rural 2-lane roadway with 5,000 to 8,000 ADT	5,000 – 8,000	0.35	0.55	63% higher
Crash Rates for CSAH 18 between CR 19 and CR 62 (2013 – 2015)	5,300	0.57	0.86	56% higher

* Per million entering vehicle miles

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Qualifying Project – deficiency of current conditions

Currently, the roadway structure has deteriorated, the width is narrower than Standards, slopes within clear zones are steeper than Standards, and the current bridge does not allow for crash-tested guardrail and guardrail end treatments. The purpose of the project is to reconstruct this segment of County Hwy 4 to meet State Aid Standards (Minn. Rule 8820.9920) in order to meet the transportation needs of the public. Attached is a set of plans for the area of impact.

The project's purpose is to improve the safety of the intersection of TH 95 (MnDOT) and CSAH 26 (County). Vehicle safety is the primary need of this project. Chisago County contacted MnDOT seeking help for the TH 95 and CSAH 26 safety issues. The observed crash rate [the number of crashes per million entering vehicles (MEV)] at this intersection is 2.58. The critical rate (a statistical comparison based on similar intersections statewide) for this intersection is 0.76. The observed crash rate at the project intersection exceeds the critical crash rate by over three times. An observed crash rate greater than the critical rate indicates that the intersection operates outside the expected, normal range and indicates safety issues. The critical crash rate index, which reports the weight of this difference, is 3.39 for this intersection. Part of the issue is poor site lines at the existing intersection due to elevated topography (hill) and absence of dedicated turning lanes, which will both be improved by the proposed project.

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Qualifying Project - deficiency of current conditions

MnDOT's Road Design Manual (2000) also recommends turn and/or bypass lanes for rural undivided roadways with traffic volumes over 1,500 ADT and speed limits above 45 mph. Current road condition compared with required and proposed are laid out in the table below.

	Existing	Required	Proposed
Lane Width (ft)	12	11-12	12
Shoulder Width (ft)	0-6	8	8
In-Slope	1:4	1:4	1:4

This project is proposed to improve CSAH 18 to meet today's State Aid Standards and improve safety along the corridor.

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Qualifying Project – proposed standard

The fatal and suspected serious injury crash rate (FAR) index is a key metric in identifying locations where strategies can be implemented to reduce or eliminate the number of severe crashes within a highway segment (i.e., Towards Zero Deaths). **Table 2** tabulates the TH 8 segment FAR crash rates for the five-year period from 2019 to 2023. Segment FAR crash rates for TH 8 varies from 0.97 fatal and suspected serious injury crashes per one million vehicle miles traveled to 4.29 fatal and suspected serious injury crashes per one million vehicle miles traveled. The FAR crash rate for the TH 8 segment from Pioneer Road to East Viking Boulevard is 4.29, which is higher than the expected FAR crash rate of 1.26. The critical FAR index for TH 8 from Pioneer Road to East Viking Boulevard is greater than one, indicating that this segment deviates from statewide trends for similar facilities.

Table 2. TH 8 Segment FAR Crash Rates, 2019 to 2023

Location	TH 8 Observed FAR Crash Rates	Statewide Average FAR Crash Rate	Critical FAR Crash Rate	Critical FAR Index
East of TH 61 to Pioneer Rd	0.97	1.26	3.17	0.31
Pioneer Rd to E Viking Blvd	4.29	1.26	3.70	1.16
E Viking Blvd to Karmel Ave	0.00	1.26	4.37	0.00

FAR segment crash rates are in fatal and suspected serious injury crashes per one million VMT.

Statewide average FAR crash rates for rural, two-lane highways, five years of crash data, from MnDOT 2018-2022 Section Toolkit.

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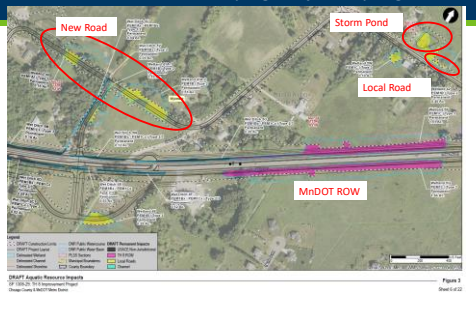
Qualifying Project – program differences



DRAFT Aquatic Resource Impacts

Figure 3

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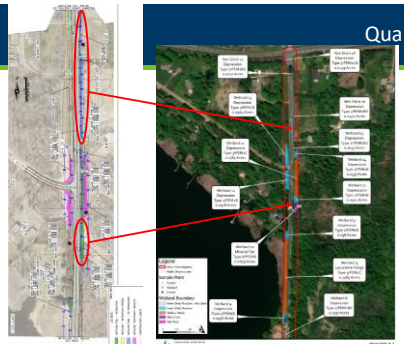
Qualifying Project



CSAH 65 Chisago

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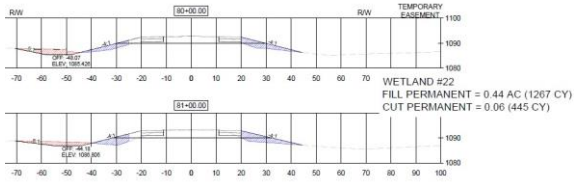
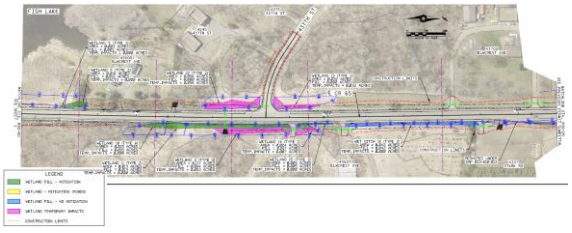
Interpreting construction plans



167

Interpreting construction plans



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WCA & PW impacts

- Currently Serviceable Road
- Does not meet safety standards
- LRA proposing to raise road, extend shoulders, flatten slopes to meet safety and design standards
- Add "multi-use" trails on both sides of existing roadway
- Does this qualify?
- Who has jurisdiction? Can jurisdiction be waived?

Aquatic Resource ID	Aquatic Resource Type	Type of Impact	Duration of Impact	Size of Impact	Existing Plant Community Type in Impact Area	Roadway Impacts	Trail Impacts
1	Wetland	Fill	P	654 ft2	Seasonally Flooded Basin	0 ft2	654 ft2
2	Wetland	Fill	P	610 ft2	Shallow Marsh	392 ft2	218 ft2
3	Wetland	Fill	P	392 ft2	Shallow Marsh	88 ft2	305 ft2
4	Wetland	Fill	P	1133 ft2	Shallow Marsh	1133 ft2	0 ft2
5	Wetland	Fill	P	2440 ft2	Shallow Marsh	1482 ft2	958 ft2
					Total	3094 ft2	2135 ft2
OW-1	Lake	Fill	P	0.413 ac	Shallow Open Water	0.252	0.161
OW-2	Lake	Fill	P	2.045 ac	Shallow Open Water	1.748	0.297
					Total	2.000	0.758

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WCA & PW Impacts

- Summary
  - WCA
    - Road impacts - eligible
    - Trail impacts – not eligible
  - Public Waters
    - Public interest credits
  - USACE
    - Concurrence with LGRWRP on road impact
    - Required credit purchase for public waters impacts

Each impact type should be identified separately **(i.e. Fill, Drain, Excavation are three separate impact types).**

Wetland Impact ID (same as noted in **Part 4** and on overhead view)	Type of Impact (fill, excavate, or drain) – *Choose only one per line*	Size of Impact (square feet or acres to 0.01)	Existing Plant Community Type(s) in Impact Area[1] – *Choose only one per line*	County, Major Watershed 8, and Bank Service Area # of Impact[2]
2	Fill	392ft2	Seasonally Flooded Basin	Murray, 51, 8
3	Fill	88ft2	Shallow marsh	Murray, 51, 8
4	Fill	1133ft2	Shallow marsh	Murray, 51, 8
5	Fill	1482ft2	Shallow Marsh	Murray, 51, 8

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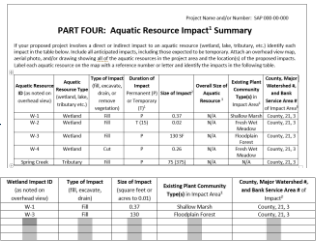
Attachment E – Joint Application

All impacts to aquatic resources

Only impacts from Part Four **that meet the LGRWRP criteria**



Project Name and/or Number: SAP 000-00-000

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W-1	Wetland	fill	P	0.37	N/A	Shallow Marsh	County, 21, 3
W-2	Wetland	fill	T (15)	0.02	N/A	Fresh Wet Meadow	County, 21, 3
W-3	Wetland	fill	P	130 SF	N/A	Floodplain Forest	County, 21, 3
W-4	Wetland	Cut	P	0.26	N/A	Fresh Wet Meadow	County, 21, 3
Spring Creek	Tributary	fill	P	75 (375)	N/A	N/A	County, 21, 3

Wetland Impact ID (as noted on overhead view)	Type of Impact (fill, excavate, drain)	Size of Impact (square feet or acres to 0.01)	Existing Plant Community Type(s) in Impact Area[1]	County, Major Watershed 8, and Bank Service Area # of Impact[2]
W-1	Fill	0.37	Shallow Marsh	County, 21, 3
W-3	Fill	130	Floodplain Forest	County, 21, 3

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Attachment E – SIGN IT

Project Name and/or Number:

Road Authority Signature: By signature below, the road authority attests that they have followed the process in MN Rules 8420.0544 and have determined that the wetland impacts identified in Attachment E are regulated by the MN WCA and eligible for the MN Local Government Road Wetland Replacement Program.

Local Road Authority Representative Name: Employer:

Signature: Date:

Technical Evaluation Panel Concurrence:

By signing below, TEP members attest that such wetland impact listed in Attachment E is regulated by WCA and meets eligibility requirements for replacement by the LGWRMP.

LGU TEP Member Name: LGU Name:

Signature: Date:

Check here ☐ if LGU and SWCD TEP member are one in the same and leave SWCD TEP member blank.

SWCD TEP Member Name: SWCD Name:

Signature: Date:

BWSR TEP Member Name:

Signature: Date:

DNR TEP Member Name:

Signature: Date:

Minnesota Interagency Water Resource Application Form – Revised May 2021 Page 11 of 12

A majority of the TEP must sign for BWSR to process the application and certify state and federal wetland replacement/mitigation requirements. The road authority must send the TEP-signed Attachment E and all other application materials to:

Wetland Bank Administration
Minnesota Board of Water & Soil Resources
520 Lafayette Road North
Saint Paul, MN 55155

Materials can be submitted electronically to: LGWRMP.BWSR@state.mn.us

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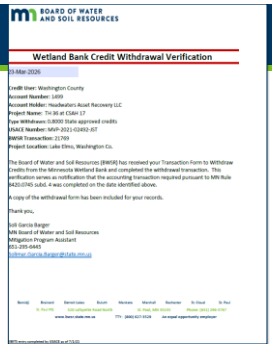
LGWRP Verification



BOARD OF WATER AND SOIL RESOURCES

Wetland Bank Credit Withdrawal Verification

13-Mar-2026

Credit User: Washington County
Account Number: 1499
Account Holder: Headwaters Asset Recovery LLC
Project Name: TH 96 at CSAH 17
Type WRAPS code: 5.8000 State approved credits
USACE Number: MVP-2021-02492-JST
BWSR Transaction: 21769
Project Location: Lake Elmo, Washington Co.

The Board of Water and Soil Resources (BWSR) has received your Transaction Form to Withdraw Credits from the Minnesota Wetland Bank and completed the withdrawal transaction. This verification serves as notification that the accounting transaction required pursuant to MN Rule 8420.0745 subd. 4 was completed on the date identified above.

A copy of the withdrawal form has been included for your records.

Thank you,

Soli Garcia Barger
MN Board of Water and Soil Resources
Mitigation Program Assistant
651-285-6443
Solimar.Garcia.Barger@state.mn.us

Bemidji Brainerd Detroit Lakes Duluth Mankato Marshall Rochester St Cloud St Paul
St. Paul Office 520 Lafayette Road North St. Paul, MN 55155 Phone: (651) 296-0787
www.bwsr.state.mn.us TTY: (800) 627-3529 An equal opportunity employer

WETS entry completed by SWCD as of 7/1/21

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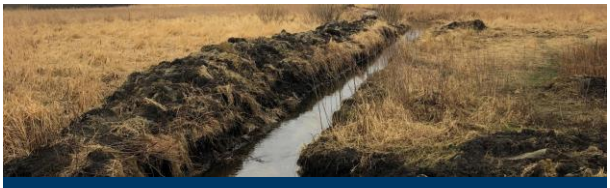

WCA Enforcement

BOARD OF WATER AND SOIL RESOURCES

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Enforcement Procedure Overview

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Assessing Wetland Impacts

4/13/2026 176

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SWCD Role in a violation

- Landowner contact for ROs
- Site visit- gather information/evidence
- Prepare Restoration/Replacement Order
- Monitor restoration/ replacement site.
- Certificate of Satisfactory Completion

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LGU Role in a violation

- Help Determine if site has permit for work or prior work done
- Landowner contact for CDO or RPN
- Set up site visits
- Assist SWCD with RO findings
- Assist with gathering evidence
- Receive ATF applications from landowner
- Track the cases

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BWSR's Role in a violation

- Rule interpretation
- Bounce ideas back and forth
- May contact more specialist BWSR staff to assist in difficult projects
- Assist SWCD/LGU in developing RO's
- Assist in technical findings

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DNR Role

As a member of TEP

- Provide technical assistance in case which require DNR as a member of TEP
- Provide information on instances where a public waters permit is needed
- Minnesota's endangered, threatened, and special concern species
- Bounce ideas back and forth

As an enforcement role

- Issue Cease and Desist(CDO)/Resource Protection Notice(RPN)
- Serve CDO/RPN
- Grant extensions
- Serve citations
- Liens

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Resource Protection Notices

Minnesota Department of Natural Resources
Wetland (WCA)
RESOURCE PROTECTION NOTIFICATION

Used as a notice when activity is complete and no sign it will continue

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Cease & Desist Orders

Minnesota Department of Natural Resources
Wetland
CEASE AND DESIST ORDER

ANY VIOLATION OF THIS ORDER IS A MISDEMEANOR

Used when equipment is onsite and it appears the activity will continue to impact wetlands.

182

Off-Site Review

Review available data prior to site visit

- NWI
- FSA/Google Earth/Pictometry
- Web Soil Survey
- Topo
- LiDAR

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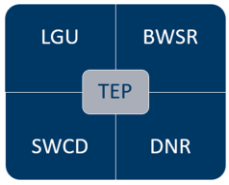
On-Site Investigation

Who

- Landowner/responsible party
- SWCD & LGU
- Conservation Officer when needed



What to bring

- Soil Auger
- Munsell
- Data collection app (ArcCollector/Trimble)
- Useful off-site information collected

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On-site Investigation

Soft Skills

- Talk to landowner/responsible party to determine what happened and why
- Avoid putting the landowner/responsible party immediately on the defensive
- Do not apologize for doing your job

185

On-site Investigation

What to collect

- Map out the nature of the activity (areas of fill, excavation, etc.)
- Soil borings within areas of impact and adjacent
  - Take note of wetland indicators
  - Fill out data sheets
- Pictures, pictures, pictures
- You may only have one chance to be on-site

After the on-site

- Write up findings right after the site visit
  - **Findings should include all information that was found on-site. Assume every RO will be appealed or end up in court**
- Disagreement between landowner/responsible party? Require a delineation

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Soil borings

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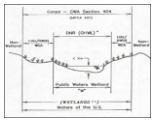
Public Waters & WCA Violations

- DNR present during initial site visit to make jurisdiction determination
- Define WCA and Public Waters Impacts
- Work with Area Hydrologist to issue Restoration Orders for both programs



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Exercise - Drainage Offsite/Onsite

Small Group Exercise

- What offsite resources would be helpful?
- When onsite, what data needs to be collected?
- What requirements should the RO include?

Context

- 6-10' depth, 6' bottom width, 10' Top width
- Landowner purpose was to create a drainageway to dewater gravel pit to the West
- 760' from Public Watercourse

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Offsite



190

Onsite



191


Writing an RO

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Restoration/Replacement Order

Restoration Order

- An order that prioritizes the restoration of the impacted wetland
- This order will provide guidance to the landowner/responsible party on how to achieve successful restoration and a timeline

Replacement Order

- An order that requires replacement for wetland impacts
- This is used in situations where restoration is not possible or prudent

A combination of both orders can be used in certain situations

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Voluntary Restoration

Voluntary or Formal?

- Benefits to a voluntary restoration
  - Faster timeline when the landowner/responsible party is willing to cooperate
  - Less heavy handed of an approach
  - Possibly easier restoration standards
- Downsides to voluntary restoration
  - Could delay overall restoration if the landowner/responsible party is unwilling
  - Good communication with DNR enforcement is needed

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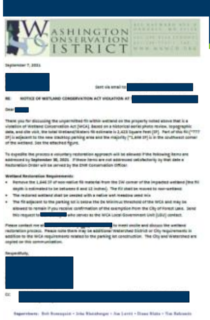
Voluntary Restoration


Washington Conservation District

September 7, 2021

[redacted] Sent via email to [redacted]

RE: NOTICE OF WETLAND CONSERVATION ACT VIOLATION AT [redacted]

Dear [redacted]

Thank you for discussing the unpermitted fill within wetland on the property noted above that is a violation of Wetland Conservation Act (WCA). Based on a historical aerial photo review, topographic data, and site visit, the total Wetland/Waters fill estimate is 2,423 Square Feet (SF). Part of this fill (~777 SF) is adjacent to the new blacktop parking area and the majority (~1,646 SF) is in the southwest corner of the wetland. See the attached figure.

To expedite the process a voluntary restoration approach will be allowed if the following items are addressed by **September 30, 2021**. If these items are not addressed satisfactorily by that date a Restoration Order will be served by the DNR Conservation Officer.

Wetland Restoration Requirements:

- Remove the 1,646 SF of non-native fill material from the SW corner of the impacted wetland (the fill depth is estimated to be between 6 and 12 inches). The fill shall be moved to non-wetland.
- The restored wetland shall be seeded with a native wet meadow seed mix.
- The fill adjacent to the parking lot is below the De Minimus threshold of the WCA and may be allowed to remain if you receive confirmation of the exemption from the City of Forest Lake. Send this request to [redacted] who serves as the WCA Local Government Unit (LGU) contact.

Please contact me at [redacted] to meet onsite and discuss the wetland restoration process. Please note there may be additional Watershed District or City requirements in addition to the WCA requirements related to the parking lot construction. The City and Watershed are copied on this communication.

Respectfully,

[redacted]

CC: [redacted]

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The RO

Restoration Order Gives the Landowner Options

- Restoration is priority
- Apply for replacement, exemption, no-loss
- Appeal- w/in 30 days + $500 fee
- Court/Deed Restriction if no action is taken by landowner


Minnesota Wetland Conservation Act
Restoration Order

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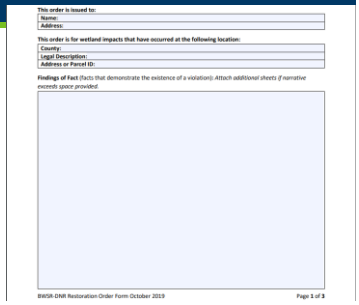
The RO

What goes into a RO?

- LGU should help SWCD with findings
- The findings should bring the reader up to speed on all the important history of the violation and **how it was determined** to be a violation
- Include as much detail as possible incase of appeal/court
- Data sheets, maps, pictures, and off-site review items can all be added as supporting documents


This order is issued to:
Name:
Address:
This order is for wetland impacts that have occurred at the following location:
County:
Legal Description:
Address or Parcel ID:
Findings of Fact (Facts that demonstrate the existence of a violation): Attach additional sheets if narrative exceeds space provided.
BWSR-DNR Restoration Order Form October 2019 Page 1 of 3

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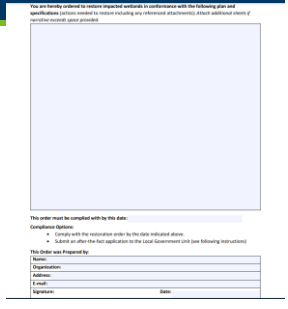
The RO

What goes into a RO?

- SWCD should provide the technical aspects of the restoration
- **Be specific (sometimes)**
  - How much fill needs to be removed (6" or 5')?
  - What type of seed mix should be used?
  - What BMPs are needed?
  - Where should the fill material go once removed?
  - Where should the tile be broken?
  - More details and clear guidance = faster restoration
- Don't forget the compliance date


This order must be complied with by this date:
Compliance Options:
Comply with the restoration order by the date indicated above.
Submit an after-the-fact application to the Local Government Unit (see following instructions)
This Order was Prepared by:
Name:
Organization:
Address:
E-mail:
Signature: Date:

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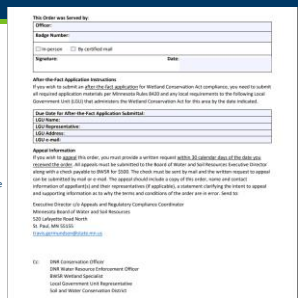
The RO

What goes into a RO?

- Be sure to include a due date for ATF applications
- Once the RO material is completed, SWCD should sign it and send it to the CO/WREO
- Make sure the CO/WREO sends you a signed copy when served
- Extensions are issued only by enforcement and if:
  - The landowner has a good reason for not getting it done
  - Has made some progress
  - Maybe weather related (heavy rains, early freeze)
  - Submitted application
  - Filed an Appeal



This Order was Served by:
Officer:
Badge Number:
☐ In-person ☐ By certified mail
Signature: Date:

After-the-Fact Application Instructions
If you wish to submit an after-the-fact application for Wetland Conservation Act compliance, you need to submit all required application materials per Minnesota Rules 8420 and any local requirements to the following Local Government Unit (LGU) that administers the Wetland Conservation Act for this area by the date indicated.

Due Date for After-the-Fact Application Submittal:
LGU Name:
LGU Representative:
LGU Address:
LGU e-mail:

Appeal Information
If you wish to appeal this order, you must provide a written request within 30 calendar days of the date you received the order. All appeals must be submitted to the Board of Water and Soil Resources Executive Director along with a check payable to BWSR for $500. The check must be sent by mail and the written request to appeal can be submitted by mail or e-mail. The appeal should include a copy of this order, name and contact information of appellant(s) and their representatives (if applicable), a statement clarifying the intent to appeal and supporting information as to why the terms and conditions of the order are in error. Send to:

Executive Director c/o Appeals and Regulatory Compliance Coordinator
Minnesota Board of Water and Soil Resources
520 Lafayette Road North
St. Paul, MN 55155
[redacted]

cc: DNR Conservation Officer
DNR Water Resource Enforcement Officer
BWSR Wetland Specialist
Local Government Unit Representative
Soil and Water Conservation District

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Bad RO. What would you change?

Findings of Fact (facts that demonstrate the existence of a violation): *Attach additional sheets if narrative exceeds space provided.*

On September 6 2019 [redacted] recived a RPN Notice from the DNR about a potential wetland violation. This is involving a tiling activity on a 4 ac. parcel and a lift pump installation. This activitity didn't have a WCA application at this time. [redacted] SWCD tried to set up several meetings with [redacted] but he was having some medical procedure done. On 10/ 17/2019 I talked to [redacted] and we agreeded to meet on site on 10/21/2019. When I arrived at the site I was meet by [redacted] a friend of [redacted], he told me [redacted] had been hurt seriously in a farming accident. I told [redacted] that I would fill out a Wetland Application for him for a No Loss and submit the application for him. The application was denied. There is no cropping history on these acers and acers impacted exceed the exemption standard. (8420.0420) Part B, Subp. 2.

200

Bad RO. What would you change?

You are hereby ordered to restore impacted wetlands in conformance with the following plan and specifications (actions needed to restore including any referenced attachments): *Attach additional sheets if narrative exceeds space provided.*

1) [redacted] will either have to remove all tile and the lift pump from the impacted wetland acers or buy wetland credits from the Wetland Bank System from (BWSR) Board of Water Soil Resources.

201

Good RO

Findings of Fact (facts that demonstrate the existence of a violation): *Attach additional sheets if narrative exceeds space provided.*

5/15/20- SWCD received 2 complaint calls regarding excavation within wetland areas of the field.
5/21/20- SWCD investigated the complaint from the county road and determined that new drainage ditches were created within the wetland areas, and across the field.
5/22/20- SWCD Mailed letter to the landowner regarding the potential violation.
5/28/20- Landowner contacted SWCD by phone. The completed work was discussed, as well as the rules of the Minnesota Wetland Conservation Act
6/9/20- SWCD and BWSR staff reviewed the recent excavation within the wetland portions of the described parcel. It was found that the new ditches drain 3 separate wetlands in the field and share the same outlet into the fringes of Horseshoe Lake. Wetlands impacted include a 1.4 acre Type 2 Wet Meadow, 0.80 acre Type 2 Wet Meadow, and a 0.95 acre Type 3 Shallow Marsh. There is no evidence of any preexisting drainage features within any of the wetland basins. The impacted wetland areas have been reviewed for No-Loss and Exemption Standards within WCA. Specifically, Exemptions under Agricultural Activities. An aerial slide review and an onsite review of the field was completed. It is determined that the impacted wetlands do not meet any of the No-Loss or Exemption criteria. It is agreed that the completed work is a violation of the Wetland Conservation Act.

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Good RO

You are hereby ordered to restore impacted wetlands in conformance with the following plan and specifications (actions needed to restore including any referenced attachments): *Attach additional sheets if narrative exceeds space provided.*

All ditches dug must be restored back to pre-altered conditions. Ditches to be filled back to pre-altered conditions are identified on the attached "New Ditch Location" Map
- Ditches are to be filled level to land immediately adjacent to the ditch.
- Ditch fill will be compacted with the tracks of machine used to replace the fill.
- Oats will be spread over the disturbed ditch area to temporarily control erosion until the next cropping season.
-Contact Meeker SWCD 48 hours before restoration work will be completed.

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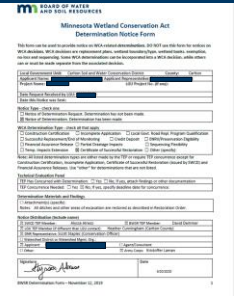
Certificate of Successful Restoration

- Completed after restoration has been verified by SWCD
- Form should be completed by SWCD
- A certificate of satisfactory restoration or replacement may be issued with conditions that must be met in the future, such as for issues with wetland vegetation, weed control, inspections, monitoring, or hydrology.
- Failure to fully comply with any conditions that have been specified may result in the issuance of a new restoration or replacement order.
- Be sure to send a signed copy to the CO/WREO


BOARD OF WATER AND SOIL RESOURCES

Minnesota Wetland Conservation Act
Determination Notice Form

204

RO Non-Compliance

The landowner does not comply with the RO. Now what?

- Enforcement will work with you!
  - CO sends a letter
  - CO makes a phone call
  - Deed restriction in some cases
  - Landowner served a criminal citation
  - Court


Division of Enforcement
Region 2

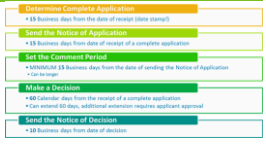
205

After the Fact Applications

206

AFT Applications

- Review the application like any other
- 21 days per rule to submit an ATF but there is flexibility
- Keep track of your timelines (15.99)
- What is the application requesting?
  - No Loss, Exemption, Replacement
- Keep an eye out for
  - Poor exhibits/figures – show what is needed
  - Second avoidance alternative
  - No loss/exemption specifics
  - Purpose and need not well defined… or not at all



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AFT Applications

Poor Exhibits

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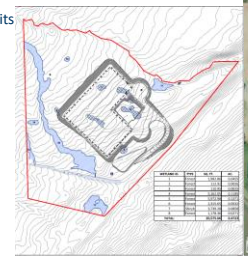
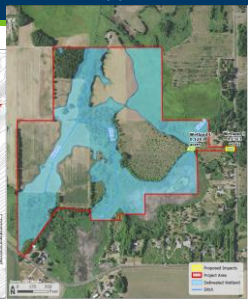
AFT Applications

Good Exhibits





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AFT Applications

Replacement

- Sequencing still applies
- The LGU must require the landowner/responsible party to replace impacted wetlands at twice the normal ratio

Minimum Replacement Ratios: Banking

Location of impact	Replacement	Minimum replacement ratio
>80% area or agricultural land	Outside bank service area	1.5:1
	Within bank service area	1:1
<50% area, 50-80% area, and nonagricultural land	Outside bank service area	2.5:1
	Within bank service area	2:1

X 2
ATF

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Violation Exercise

- Context
  - Neighbor called in potential violation
  - Drainage and fill were installed prior to getting WCA approval
  - Landowner provided valid CWD and tile map
  - TEP met onsite. Surveyed tile signatures and confirmed the placement of fill in the areas indicated on map.
- Exercise
  - Determine which activities or portions of activities are in violation of the WCA
  - Provide recommendations for restoration
    - Does any tile need to be removed? To what extent?
    - Does any fill need to be removed? To what extent?
    - Are there other jurisdictions involved?
    - Is restoration the only option?

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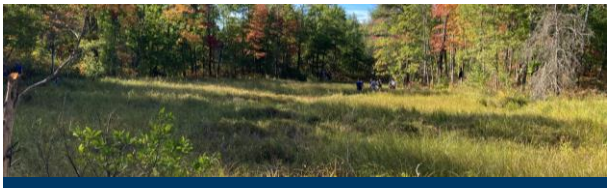

Questions?

BOARD OF WATER AND SOIL RESOURCES

Minnesota Wetland Professional Certification Program

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