TEP Academy

April 9, 2024

BOARD OF WATER AND SOIL RESOURCES

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

Minnesota Wetland Professional Certification Program

Minnesota Wetland Professional Certification Program

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2024 MWPCP Training Courses

Introduction to Wetland Delineation and Regulations

- Introduction to Wetland Delineation and Regulations: Arden Hills- June 10-14
- Introduction to Wetland Delineation and Regulations: Brainerd - September 9-13
- Introduction to Wetland Delineation and Regulations: Arden Hills- September 30-October 4

Regulatory Training

- Wetland Conservation Act (WCA) 101 Virtual Training- February 5-6 (3 online CEC per day)
- TEP Academy- St Cloud MNDOT Training Facility- April 9 (6 CEC)

Regional Training

- Redwood Falls– August 27-28 (6 CEC per day)

Professional Exams

MWPCP Exams will be offered at 1pm on:

- June 14 in Arden Hills
- September 13 in Brainerd
- October 4 in Arden Hills.

2

2024 MWPCP Training Courses

Technical Training

- Hydric Soils- Albany City Hall and Two Rivers County Park, Stearns County- April 30 & May 1 (6 CEC per day)
- Wetland Restoration-McLeod County Fairgrounds- May 15-16 (12 CEC)
- Wetland Delineation Methods- Prairie Woods Environmental Learning Center- Spicer- May 29-31 (18 CEC)
- Floristic Quality Assessment (FQA) Method- MNDOT Shoreview Training Center – June 17 or 18 (6 CEC per day)
- Wetland Plant ID- Lino Lakes (July 16) or Cloquet Forestry Center (July 18) (6 CEC per day)
- Antecedent Precipitation Tool- St Cloud MNDOT Training Center- October 22 (2 sessions) (3 CEC per session)

3

Registration Information

Staggered registration:

- April- July classes will open the week of March 11th.
- August-October classes will open the week of July 1st.

Email will go out to our contact lists a couple of weeks prior

- 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

- COVID-related continuing policies lapsed
- Need 18 continuing education hours (6 online)
- Current renewal period ends on December 31, 2024 for individuals who passed exams in 2021.
- Do not need to report MWPCP classes
- Use Credit Reporting Form
- List of approved classes on MWPCP page
- If not listed, use Credit Determination Form
- Notify us if you change jobs or email

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Definition of a Wetland

Those areas inundated or saturated by surface or ground **water** at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of **vegetation** typically adapted to life in saturated **soil** conditions.

Hydrology + Vegetation + Soil = Wetland

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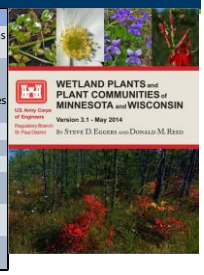
Circular 39 and Eggers & Reed Classification Systems

Circular 39	Eggers & Reed
1	Seasonally Flooded Basins
1	Floodplain Forests
2	Sedge Meadows
2	Fresh (wet) Meadows
2	Wet to Wet-Mesic Prairies
2	Calcareous Fens
3	Shallow Marsh
4	Deep Marsh
5	Shallow, Open Water
6	Shrub-Carr
6	Alder Thicket
7	Hardwood Swamp
7	Coniferous Swamp
8	Open Bog
8	Coniferous Bog



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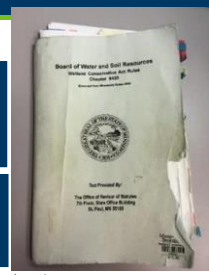
WETLAND CONSERVATION ACT (WCA)

State Law passed in 1991

MN Statute **103G** and parts of 103A,B,E,F

MN Rule Chapter 8420



https://bwsr.state.mn.us/wetlands-regulation-minnesota

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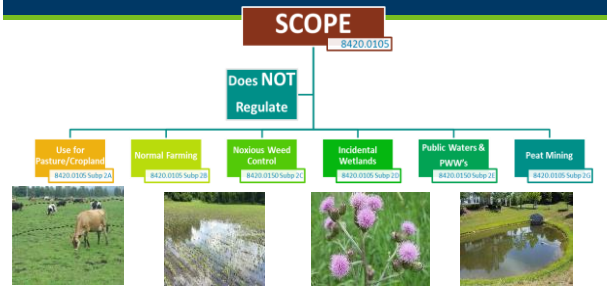
Scope of the Wetland Conservation Act



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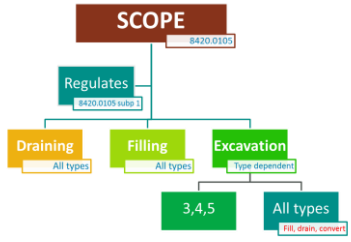
Scope of the Wetland Conservation Act



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What is an Impact?

A loss in quantity, quality, or biological diversity of a wetland *caused* by draining or filling in all types or by excavation in types 3, 4, or 5.

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What is Fill?

Any solid material added or redeposited in a wetland

- Alters cross-section or hydrological characteristics,
- Obstructs flow patterns,
- Changes Boundary, or
- Converts to non-wetland.

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Wetland Fill

- Does <u>not</u> include posts for walkways, bridges, powerline poles, etc.

- Does <u>not</u> include slash or woody vegetation as long as it originated from vegetation growing in the wetland and does not impair flow or circulation of water.

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What is Excavation?

Removal of soil by any method if it results in an impact*.

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What is Drainage?

Any method for removing or diverting waters from a wetland

- Excavation of a ditch
- Tile Installation
- Filling
- Diking
- Pumping
- Diverted water
- Etc.

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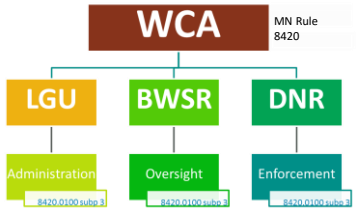
Key Roles Implementing the Wetland Conservation Act



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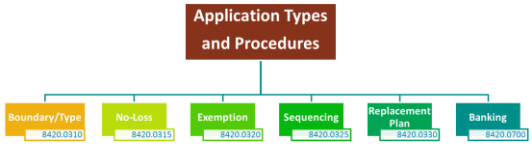
WCA Decision and Application Types



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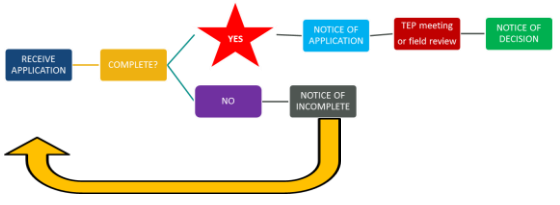
Typical WCA Application Process



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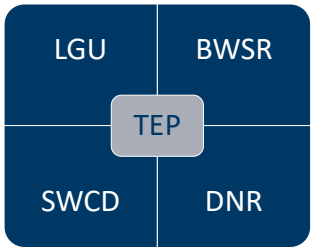
Technical Evaluation Panel

- 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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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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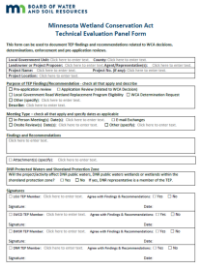
TEP findings & recommendations

- 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


BOARD OF WATER AND SOIL RESOURCES

Minnesota Wetland Conservation Act
Technical Evaluation Panel Form

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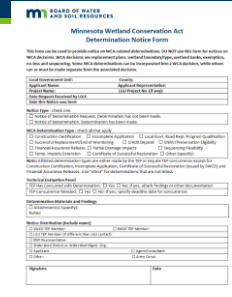
WCA Determination Form

- 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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Minnesota Wetland Conservation Act
Determination Notice Form

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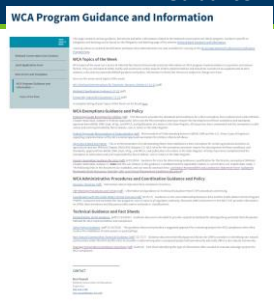
Guidance

Formal Agency Guidance

including interagency guidance

WCA Topics of the Week

Technical Guidance and Fact Sheet



WCA Program Guidance and Information

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Topics of the Week

- Series of informal fact sheets providing practical information about implementing WCA

WCA Topics of the Week

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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 forr are found on separate page:

  Wetland Bank Transaction Forr
- Joint application form page

WCA Forms and Templates

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Well-written TEP findings:

- **Stand up in court/hearings involving appeals.**
- **Give clear direction to applicant/landowners.**
- **Protect the TEP from "he said, she said" issues.**
- **Are concise and *focused on the decision that needs to be made*.**

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Purpose & Audience

Know purpose and your audience. Answer the following questions before writing findings (or before even convening a TEP):

- **Who is the primary audience for the findings? (applicant, LGU, both?)**
- **What is the decision that needs to be made? (complete application, exemption determination, delineation approval, sequencing, bank plan, etc.)**

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Timing

Only write findings when they will be useful for the intended audience. Think about:

- **Is there enough information to say anything meaningful?**
- **Can I convey the information informally without composing formal TEP findings?**
- **Is the project controversial or contentious? (consider the landowner you are dealing with?)**

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Avoid Subjective/Emotional Lingo

~~"The TEP feels….."~~

~~"The TEP believes ……"~~

The TEP is supposed to use judgment, no need to soften it with "feel" and "think" and other words that indicate a subjective opinion based on emotions.

Use alternative language like "determined" or "in our opinion based on Rule reference …"

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Avoid Legal- Ease

~~"herein"~~ ~~"hereby"~~

~~"thereto"~~ ~~"let the record show"~~

This is not a legal agreement and it is not being prepared as a court document.

Leave the legal-ease to the lawyers.

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Findings should be *Relevant to the Decision*

For example, don't talk about the loss of wildlife habitat due to a project if you are reviewing cropping history for an ag exemption.

Individual TEP members can provide their own comments, but they do not all have to be *part of the findings*.

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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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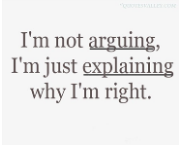
What if the LGU doesn't agree with TEP?

- The LGU must provide detailed reasons for rejecting the [TEP] finding of fact or recommendation in its record of decision; otherwise, the LGU has not sufficiently considered the TEP report.



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Detailed reasons for not following TEP recommendation?

"The Board felt that the TEP's recommendation to deny the application was unreasonable and therefore we approve the application."

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Reasons for not following TEP recommendation

"The Board finds that the TEP's recommendation to reject the application based on the availability of a reasonable and prudent alternative alignment to the proposed road (impacting less wetland) did not give due consideration to the decreased public safety associated with alternative alignments. The alternative alignments mentioned in the TEP's recommendation result in unsafe sighting distances at road intersections according to national safety standards. Therefore, the Board finds that there are no feasible and prudent alternatives and approves the application."

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TEP review example

Review the next slide.

What questions should be asked.

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What TEP findings <u>should</u> include:

- Landowner needs to find out DNR jurisdiction first.
- Include TEP's assessment of delineation and need for adjustments to line and type before approval.
- Inform landowner of potential applicable *de minimis* amount.
- Inform landowner that he/she must be able to explain why the access road cannot be built on the adjacent parcel (seemingly in the same ownership) in order to minimize wetland impacts.

What TEP findings <u>should *not*</u> include:

- Historic cropping conditions from the 1980s.
- Landowner's warehouse 1 mile west.

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Typical TEP Scenarios

- 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?

1. Is it a *Wetland*?
2. Is the activity *Regulated*?
3. Is the activity an *Impact*?

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<u>Scenario 1</u> Is this wetland delineation accurate?

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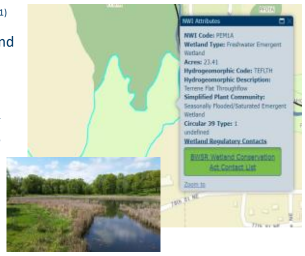
TEP Procedures and Considerations

- Boundaries must be delineated using USACE 1987 Manual and Supplements (8420.0405 subp 1)
- Types must be ID'd using FWS Circular 39 and Eggers and Reed (8420.0405 subp 2)
- Requires NOA and NOD.
- Technical Decision- at least one member of TEP should make a site visit – often full TEP



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3 Parameters of a Wetland

- 3 Parameters of a wetland
  - Hydrology- frequency and duration of movement of water through a landscape
  - Soil- organic and mineral surfaces which often exhibit characteristics that it has been in saturated conditions
  - Vegetation- plant community and prevalence of species that have made adaptations to live in saturated conditions

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Wetland Delineation Review Checklist


Wetland Delineation Review Checklist for Minnesota

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

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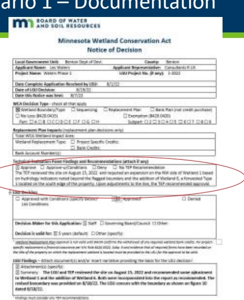
Scenario 1 – Documentation


Board of Water and Soil Resources
Minnesota Wetland Conservation Act
Technical Evaluation Panel Form

OR


Board of Water and Soil Resources
Minnesota Wetland Conservation Act
Notice of Decision

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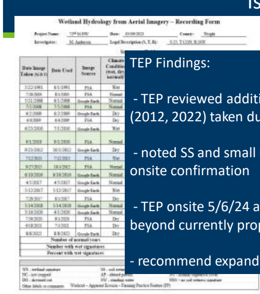
Is it a Wetland?– Offsite Hydrology


Wetland Hydrology from Aerial Imagery – Recording Form

TEP Findings:

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

...llowed

...t more

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Common TEP Scenario - Is it Regulated?

1. Is it a *Wetland*?
2. Is the activity *Regulated*?
3. Is the activity an *Impact*?

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Scope Summary

Not Regulated

- Wetlands used for Pasture/Crop
- Normal Farming Practices
- Noxious Weed Control
- Incidental
- Public Waters
- Peat Mining

Regulated

- Fill
- Drainage
- Excavation in some cases

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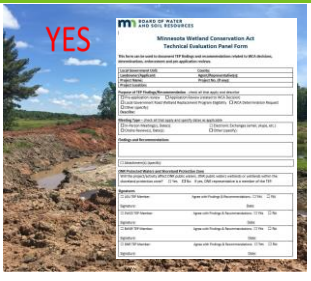
Within the Scope of regulated activities?

TEP Findings:

- Type 2/3 wetland
- Partial Drainage of wetland by connecting to existing ditch in adjacent field
- Ditch measured 145 ft at 3 ft depth thru wetland
- Approx. 5000 sq ft Excavated type 3 wetland
- Redeposited spoils as fill in attempt to build new road



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Is it Regulated?

Proposal

To construct single family residential homes throughout this area.

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Is it Regulated?

TEP Review and Findings

- Wetland Indicators met; 5.29 ac Type 2/3 Marsh/FWM
- Proposed to fill entire basin
- Soil/NWI do not indicate wetland feature
- Aerial photo indicates some saturation indicators
- Mining occurring before 1991 - 16-20 ft in depth
- Any wetland that may have occurred was converted to non-wetland pre-WCA
- Meets def. of Incidental; not regulated

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Exercise

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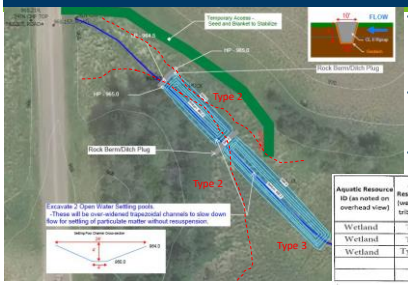
Exercise



- SWCD applying to implement Water Qality/TP reduction project for public waters basin 75' to west
- Excavate and Fill in Type 2/3 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

- Type 2 and 3 Wetland Impacts occurring (fill for rock berms and excavate for settling areas)
- Regulated acivity
- 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, actual form

BOARD OF WATER AND SOIL RESOURCES

Minnesota Wetland Conservation Act Determination Notice Form

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Common TEP Scenario - Impact

1. Is it a *Wetland*?
2. Is the activity *Regulated*?
3. Is the activity an *Impact*?

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What is an Impact?

A loss in quantity, quality, or biological diversity of a wetland *caused* by draining or filling in all types or by excavation in types 3, 4, or 5.

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Is this considered an Impact?

- TEP Findings:
  - Type 2, Wet Meadow
  - Typical/Reasonable size/layout with posts not resulting in fill
  - Design allows natural hydrology and vegetation
  - Maintains primary wetland functionsand cont. aquatic use.
  - Not regulated/Not an impact by definition

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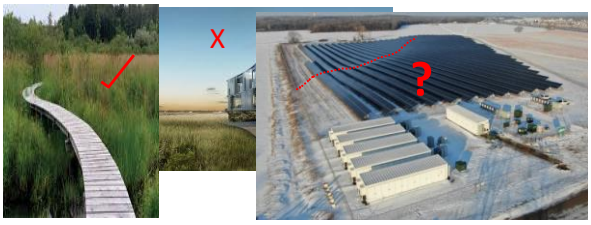
Wetland Fill

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



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Common TEP Scenario - Impact

1. Is it a *Wetland*?
2. Is the activity *Regulated*?
3. Is the activity an *Impact*?
4. Is it No Loss, Exempt or Require Replacement?

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No Loss Activity Basics

Defined:

No permanent loss of, or impact to, wetlands from an activity.

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No-Loss Criteria

"No-loss" means no permanent loss of, or impact to, wetlands from an activity according to the criteria in this part.

- **Will not impact a wetland (**8420.0415 Subp A.)
- **Excavation limited to removal of sediment or debris** Trees, logs, beaver dams, trash, blockage of culverts (8420.0415 Subp B.)
- **Water level management (**8420.0415 Subp C.)
- **Excavation limited to removal of sediment** in wetlands utilized as storm water basins. (8420.0415 Subp E.)
- **Operation, Maintenance or Emergency Repair**. (culverts) (8420.0415 Subp F.)
- **Temporary impact** if: Returned to previous conditions. Activity completed within 6 months (8420.0415 Subp H.)

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No-Loss

- **Temporarily crossing or entering a wetland to perform silvicultural activities -** activity limits the impact on the hydrologic and biologic characteristics of the wetland; no dikes, drainage ditches, tile lines, or buildings; and no drainage of the wetland or public waters (8420.0415 Subp G)
- **Activity conducted as part of an approved replacement or banking plan, conducted or authorized by public agencies** for the purpose of wetland restoration or fish and wildlife habitat restoration (8420.0415 Subp D)

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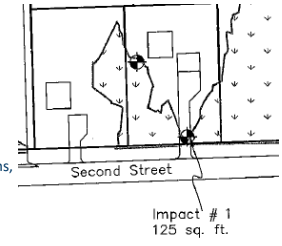
Exemptions

- Impacts to wetlands that DO NOT require replacement
  - The activity is still regulated.
  - WCA does not REQUIRE an application; some LGU's may.
  - May not be combined on a project.
- Exemptions do not apply to: calcareous fens, wetland bank sites, project-specific replacement sites (8420.0420 Subp 1B)



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WCA Exemptions

- Agricultural Activities
- Drainage
- Federal Approvals
- Restored Wetlands
- Utilities
- Forestry
- De Minimis
- Wildlife Habitat

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Exemptions

Table 1: Base de minimis exemption amounts for all of Minnesota

Non-Shoreland Areas	Types 1, 2, 6, 7 *(excluding white cedar and tamarack wetland and any Type 7 wetland in a < 50% metro county)*	10,000 ft² in all > 80% counties 5,000 ft² in non-metro 50-80% counties 2,500 ft² in metro 50-80% counties 2,000 ft² in non-metro < 50% counties 1,000 ft² in metro < 50% counties
	Types 3, 4, 5, 8, and white cedar and tamarack wetland *(excluding any Type 7 wetland in a < 50% metro county)*	100 ft²
Within Shoreland, but beyond structure setback	Types 1, 2, 6, 7	400 ft² *(1,000 ft²)
	Types 3, 4, 5, 8, and white cedar and tamarack wetland	100 ft²
Within Shoreland and structure setback	All wetland types	20 ft² *(100 ft²)

*Increased amounts shown in parenthesis may 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.

- De minimis 8420.0420 Subp 8
  - The de minimis exemption covers small impacts to wetlands typically used for driveways, roads, small projects by landowners, etc.
  - Very specific requirements depending on location in state, local area, shoreland, etc.
  - Review all nuances of each part for every project

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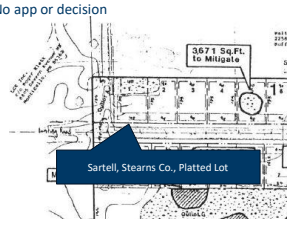
TEP Exercise

- 2,200 sq ft Wet Meadow wetland in lot 1
- Outside Shoreland
- Filled 730 sq ft for living space in rear yard.
- No app or decision



69

Exercise: Regulated? No Loss/Exe/Repl?

TEP Findings/Recommendation

- 10-12 inches of Gravel fill over organic peat soil conditions meeting A1 Histosol; Water table noted at 16 inches. Adj. veg met dominated by FACW RCG.
- 730 sq ft of Type 2 Wetland fill Impacts occurred without prior approval from LGU
- Wetland is shared between 2 landowners;
- Per 8420.0420 Sub 8 the impact exceeds 5% (110sqft) of landowner portion of the shared wetland;Fails to meet de minimis exemption.

Recommend Restoration or Replacement?

70

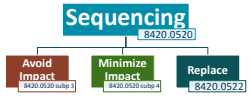
Replacement Plan Applications

BOARD OF WATER AND SOIL RESOURCES

Minnesota Wetland Professional Certification Program

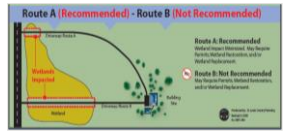
71

Replacement Plans



8420.0330 REPLACEMENT PLAN APPLICATIONS.

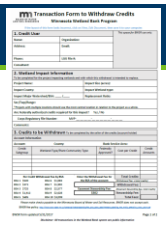
Subpart 1. **Requirement.** A landowner proposing a wetland impact that requires replacement under this chapter must apply to the local government unit and receive approval of a replacement plan before impacting the wetland.

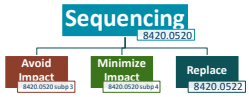


BWSR Wetland Section | www.bwsr.state.mn.us/wetlands

72

Replacement Plans


Transaction Form to Withdraw Credits
Minnesota Wetland Bank Program



8420.0330 REPLACEMENT PLAN APPLICATIONS.

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

73

Preapplication Meeting

- Prior to preparation of an application;
- Meet with the LGU/TEP, provide basic information of the project
- LGU/TEP inform the applicant of sequencing requirements and criteria to evaluate the replacement plan


PART ONE: Applicant Information
PART TWO: Site Location Information
PART THREE: General Project/Site Information

74

74

Application Contents

- Information necessary to be considered a complete application (a lot of this info can be pulled from the delineation report)
- For the impacted Wetland:

1. The amount of wetland impact (in sq ft or acres) by type
2. Minor/Major watershed, County, and Bank Service Area (BSA)
3. Soil survey of site, identify hydric soils
4. Hydrologic inlets and outlets, adjacent Public Waters (shoreland), floodplain


Wetland Bank Service Areas

75

75

Application Contents Continued…

5. Information pertaining to special considerations (8420.0515) (T & E, rare communities, cultural resources, etc.)
6. List of known local, state, and federal permits required for the activity
7. Identify project purpose and need and alternatives considered

76

76

Application Contents Continued…

- C. for the replacement wetland when the replacement consists of wetland bank credits:
- (1) the wetland bank account number;
- (2) the minor watershed, major watershed, county, and bank service area; (3) the amount of credits to be withdrawn in square feet; and
- (4) a completed application for withdrawal of wetland credits from the wetland bank in a form provided by the board or a purchase agreement signed by the applicant and bank account holder; and
- D. a description of the required replacement as determined according to the proposed replacement actions and the replacement standards in part 8420.0522.

77

77

Special Considerations (8420.0515)

These factors must be considered by the applicant before submitting a replacement and by the LGU during the review

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)
5. Groundwater sensitivity (Decorah edge, Geologic Sensitivity)

78

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)

79

Sequencing: 8420.0520

- LGU **MUST NOT** approve a wetland replacement plan unless the LGU finds the project complies with sequencing.

80

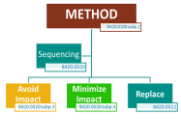
Key Concepts

- Sequencing is a MUST for all replacement plans
- TWO avoidance alternatives
- Evaluate projects…can wetlands be avoided?
- Are impacts minimized?
- Long term effects
- 8420.0520 Subp C – Page 45 of 2009 Rule book

81

Sequencing

- **Avoid**
- **Minimize**
- **Replace**



82

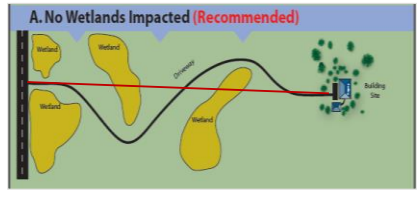
How does applicant *demonstrate* sequencing?

- 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* **alternatives** that were considered or could be considered.

83

Impact Avoidance

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



84

Alternatives Analysis

What is *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

85

Evaluating Alternatives (continued)

- 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.)?

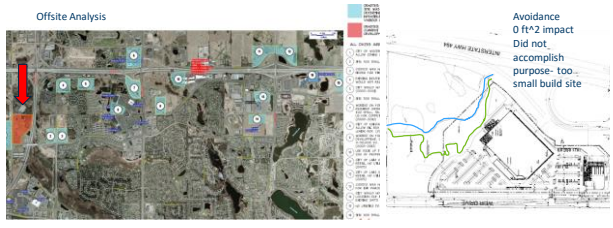
86

What if an avoidance alternative DOES exist?

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

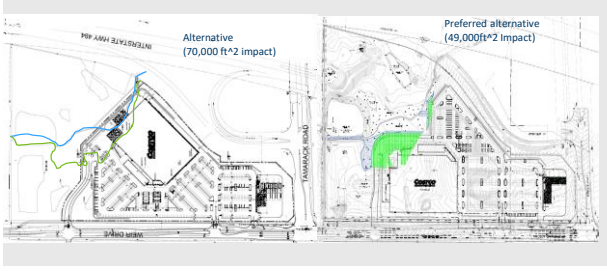
87

Avoidance



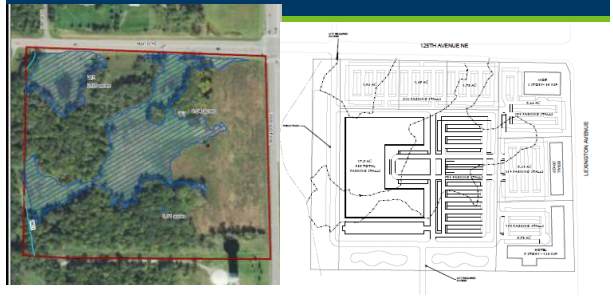
88

Minimization



89

Sequencing exercise



90

Alternatives Analysis Continued…

Future considerations when reviewing a site and potential off-site impacts

91

Alternatives Analysis Continued…

- Direct and secondary impacts:

A wetland may not be directly impacted (filled/drained/excavated) but can be impacted through loss of hydrology (storm pond, curb/gutter, pipes, etc.)

Figure 4 - Proposed Plan and Wetland/Tributary Impacts

92

What if an avoidance alternative does NOT exist?

- LGU evaluates:
  - Minimization
  - Rectification
  - Reduction/Elimination of impacts over time
  - Replacement

93

Impact Rectification

- Temporary impacts must be rectified by repairing, rehabilitating, or restoring the affected wetland to pre-project conditions

94

Reduction or Elimination of Impacts Over Time

- Once complete, further impacts must be reduced or eliminated and preserve or maintain wetland functions
- Best Management Practices (BMP)
- Silt fence
- Storm-ponds
- Buffers
- Drainage areas

95

Sequencing Flexibility

- Allowed at the discretion of the LGU if:
  1. Impacted wetland degraded;
  2. Avoidance results in severe degradation;
  3. Upland site of the project or replacement has greater function and value;
  4. Human health and safety is a factor.

96

Sequencing – Replacement

Final Review Step

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

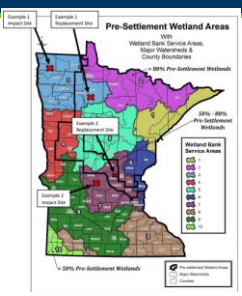
Adequate Replacement

- 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.)

97

Replacement Siting

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



98

Replacement Ratios

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

Must follow a priority order:
Minor Watershed
Major Watershed
Same BSA
Another BSA

99

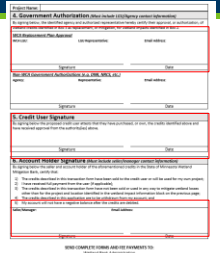
Result?

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

100

Application to withdraw wetland credits

- Be sure to complete all sections!
- Form auto calculates fees
- Signatures



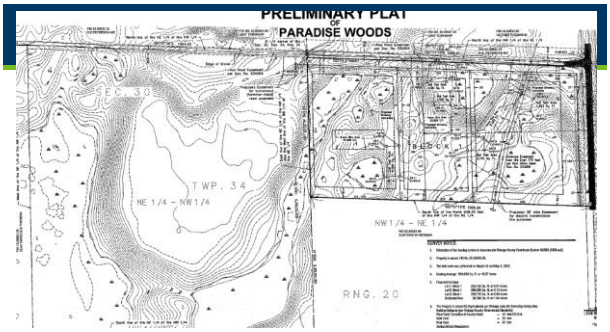
101

Complete application?

102

Complete application?

103



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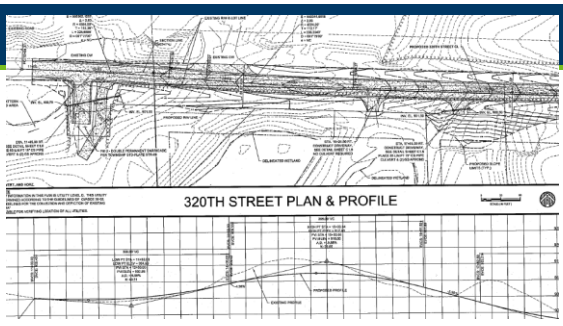


105

Attachment C
Avoidance and Minimization

Project Purpose, Need, and Requirements. Clearly state the purpose of your project and need for your project. Also include a description of any specific requirements of the project as they relate to project location, project footprint, water management, and any other applicable requirements. Attach an overhead plan sheet showing all relevant features of the project (buildings, roads, etc.), aquatic resource features (impact areas noted) and construction details (grading plans, storm water management plans, etc.), referencing these as necessary:

The public road is scheduled to be graded and widened according to the attached plans for safety reasons. See Appendix C.

Avoidance. Both the CWA and the WCA require that impacts to aquatic resources be avoided if practicable alternatives exist. Clearly describe all on-site measures considered to avoid impacts to aquatic resources and discuss at least two project alternatives that avoid all impacts to aquatic resources on the site. These alternatives may include alternative site plans, alternate sites, and/or not doing the project. Alternatives should be feasible and prudent (see MN Rules 8420.0520 Subp. 2 C). Applicants are encouraged to attach drawings and plans to support their analysis:

Wetland impacts were located on the existing road center line to avoid as much wetland impact as possible. See Appendix D.

Minimization. Both the CWA and the WCA require that all unavoidable impacts to aquatic resources be minimized to the greatest extent practicable. Discuss all features of the proposed project that have been modified to minimize the impacts to water resources (see MN Rules 8420.0520 Subp. 4):

The new road had 3:1 slopes down to the wetland to minimize the amount of fill as much as possible. See Appendix D.

Off-Site Alternatives. An off-site alternatives analysis is not required for all permit applications. If you know that your proposal will require an individual permit (standard permit or letter of permission) from the U.S. Army Corps of Engineers, you may be required to provide an off-site alternatives analysis. The alternatives analysis is not required for a complete application but must be provided during the review process in order for the Corps to complete the evaluation of your application and reach a final decision. Applicants with questions about when an off-site alternatives analysis is required should contact their Corps Project Manager.

N/A

106

Purpose and Need

[redacted] Construction proposes this project to rehabilitate and expand 320th Street in this location.

The purpose of the project is to reconstruct 320th Street to facilitate the proposed developments and to correct the issues that render it substandard in the existing condition. The project will expand the roadway to the south and re-grade the surface to improve clear zones and provide adequate shoulder widths in concert with the wetland, drainage, and natural resources characteristics of the area.

The demand for an improved roadway is needed due to increased housing and traffic in the area.

The housing development to the south built by KNJ Construction will add additional traffic to the roadway. Two Professional Engineers [redacted] from [redacted] and [redacted] from [redacted] state that the road needs to be improved from a 7 ton road to a 9 ton road to accommodate the new traffic from the future development as well as existing heavy truck traffic coming to and from the gravel pit to the west of the project area. The existing roadway is substandard and does not meet current Township standards from a width and roadway section perspective. Also, the existing vertical roadway profile does not meet state standards for any design speed. The proposed project will address these issues, provide a safer travel way and "beef" up the roadway section to help with the frequency of future maintenance.

The project is in concert with the Chisago County Comprehensive Plan which has five desired outcomes:

1) Stewardship
2) Prosperity
3) Equity
4) Livability
5) Sustainability

This roadway project represents good stewardship which leads to greater prosperity, equity, livability and sustainability. The project increases prosperity which provides more financial resources to support stewardship, equity, livability and sustainability. The project promotes equity with a safe roadway which helps to create greater prosperity and livability in Chisago County.

Complete application?

107

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

108

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

109

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

110

110

What is a serviceable road?

111

111

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

112

112

Application Requirements

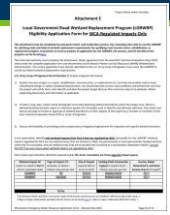
Local Road Authority must provide the TEP the following:

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

113

113

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

114

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

115

115

Errors

Project Name and/or Number:

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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.

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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

116

116

Qualifying Project

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

117

117

Qualifying Project

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.

Excessive traffic queueing on TH 19 (driven by large trucks utilizing the Flying J Travel Plaza) is congesting the in place CSAH 46/TH 19 intersection, causing significant safety concerns. The intersection will be realigned and the roadway will be designed to be in compliance with Chapter 8820 of State Aid Operations (extracted from MN Rules 2013, including amendments adopted through October 30, 2017), specifically 8820.9920 Minimum Design Standards: Rural and Suburban Undivided; New or Reconstruction Projects and 8820.9926 Minimum Design Standards: Rural and Suburban Undivided; Reconditioning Projects. In addition, the current edition of the MN Department of Transportation's "Standard Specifications for Construction", including all supplemental specifications, will apply to the project. Finally, MnDOT has provided design guidance and requirements for work associated directly to MN TH 19 improvements.

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118

Qualifying Project

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.

119

119

Class exercise - determine eligibility

The project proposed is a Shoulder Widening and Aggregate Shouldering project, 7.56 miles in length from CSAH 13 to 0.18 miles west of TH 9.

The purpose of the project is to improve roadway safety.

The project's need is to meet current design standards by improving deficiencies in roadway width, inslopes, culverts and drainage.

Construction will consist of earthwork for shoulder widening requiring cutting, filling, and widening shoulders. The existing shoulders will be excavated and replaced with granular borrow and class 5 material. Existing culverts will be replaced with new culverts. Inslopes and backslopes will be flattened and ditch bottoms graded for adequate drainage.

The purpose of this project is to improve safety and will affect 23 wetlands adjacent to the project. The proposed alignment follows the existing alignment, this will minimize large impacts to wetlands. The plan views and cross section sheets that impact these areas are included in the appendix for this permit.

Approximately 1.19 acres of tree removal will take place during the winter season and be completed by 3-31-24.

The schedule for implementation of this project is beginning in spring of 2024 and completion in the fall of 2024.

120

120

Class exercise - determine eligibility

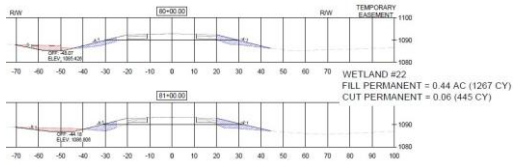
Becker County is proposing to reconstruct County Highway 34 from County Highway 21 to 300th Street (4.36 miles). Currently there are 12 foot bituminous lanes and 3 foot shoulders on each side of the roadway. We are proposing to widen the roadway to accommodate 12 foot bituminous lanes with 6 foot shoulders and flatten the in-slopes to a 4:1 slope along the entire project to correct the safety hazards associated with the narrow shoulders and steep in-slopes. All centerline culverts will be replaced and or extended and lined based on hydraulic studies. All approach culverts will be replaced with same type and size. This work is scheduled for Summer/Fall of 2023.

This segment of County Highway 34 has an ADT of 1004 vehicles a day with large numbers of truck traffic due to agricultural and logging use in this area of the County. This entire segment is insufficient in shoulder width, inslope ratio, clear zone and the culverts are over 60 years old and in need of replacement.

There is estimated to be 1.90 acres of tree clearing required with this project to ensure that the right of way and clear zone is free of hazards and to accommodate the required widening to allow for safety improvements. The trees to be cleared are a mix of deciduous and evergreen trees. Plan sheets showing areas of tree clearing are attached with areas highlighted for your review.

121

Class exercise – interpreting construction plans

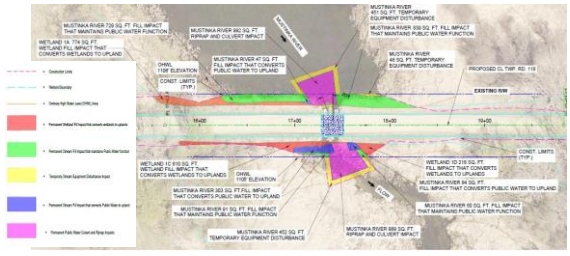


122

Class exercise - interpreting construction plans

123

WCA & PW impacts



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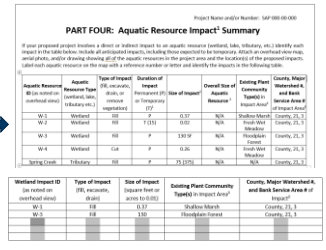
Attachment E – Joint Application

All impacts to aquatic resources

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



PART FOUR: Aquatic Resource Impact[2] Summary

125

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Attachment E – SIGN IT!!!

126

Wetland Banking

127

Establishing a Wetland Bank

State and Federal Review Process in Minnesota

- Draft Prospectus
  - State: Optional
  - Federal: Optional
- Prospectus
  - State: Optional
  - Federal: Required
- Mitigation Plan/Draft MBI
  - State and Federal: Required
- Final Mitigation Plan and MBI
  - Federal only and required

WCA	Corps
Draft Prospectus (optional)	Draft Prospectus (optional)
Prospectus (optional)	Prospectus (required)
Mitigation Plan (required)	Mitigation Plan (required)
Easement Acquisition	Final Mitigation Plan (required)

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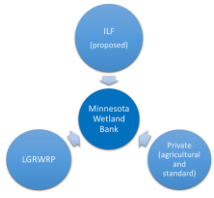
Wetland Bank types

- 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
- Local Government Road Wetland Replacement Program
  - Replaces impacts resulting from local transportation projects
- In-lieu Fee (proposed)
  - Open to only government and NGOs, mitigation completed in advance, requires compensation planning framework



129

How are Credits Generated

- Preserve
- Vegetation
- Hydrology
- Area

Credits offset permanent wetland losses elsewhere

130

Actions Eligible for Credit 8420.0526

Subpart	Action
2	Buffer
3	Restoration, Completely Drained or Filled
4	Restoration, Partially Drained or Filled
5	Vegetative Restoration of Farmed Wetland
6	Protection of Wetlands Previously Restored
7	Wetland Creation
8	ENRV
9	Preservation

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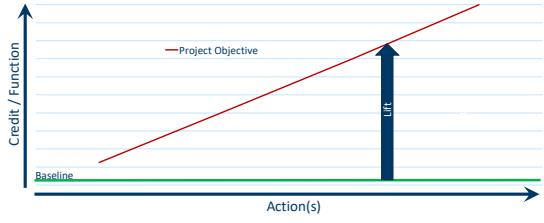
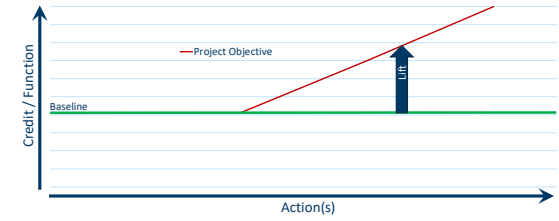
131

How are Credits Generated



132

How are Credits Generated



133

Review Teams

WCA Technical Evaluation Panel (TEP)	Corps Interagency Review Team (IRT)
• LGU	• Corps
• SWCD	• EPA
• BWSR	• BWSR
• DNR	• DNR
	• FAA
	• Others

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Review Teams

BWSR Review Roles:

- WS is BWSR's lead and coordinates BWSR comments to TEP
- Evaluate easement issues
- Engineering comments
- Statewide consistency
- Technical answers and interpretations
- Coordinate with Corps

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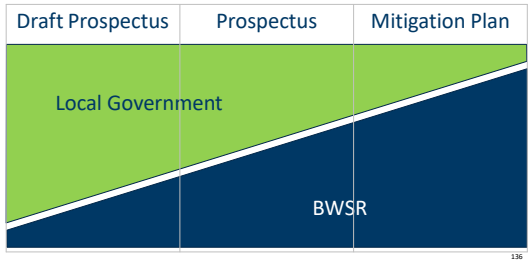
Roles in Establishing a Wetland Bank



136

Draft Prospectus

WCA Outcome:

- Comments received and project discussed at TEP meeting
- TEP writes Findings and recommendation for bank sponsor
- Sponsor decides what to do

- Goal of TEP findings within 30 days

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138

Could this site be a wetland bank?

139

Prospectus

WCA Outcome:

- TEP and engineering comments received and project discussed at TEP meeting
- TEP writes Findings based on comments and discussion
- Sponsor decides to proceed or not

- Goal of TEP findings within 60 days

140

Draft MBI/Mitigation Plan

WCA Review Results

- Expect multiple MP submittals
- Track 15.99 time-limit and extend as needed
- TEP and engineering comments received and discussed at TEP meeting
- TEP writes Findings and recommendations to LGU based on comments and discussion
- If plan approval is not recommended the TEP instructs the sponsor to resubmit a revised MP to address findings

141

Draft MBI/Mitigation Plan

WCA Review Results

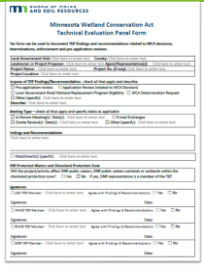
- If plan approval is recommended the LGU makes their decision and sends NOD
- Clearly identify and retain the approved Mitigation Plan
- WCA and Corps should approve the same plans whenever possible

- Goal of TEP findings within 90 days (for each version)

142

TEP Review for Wetland Banks

- Verify previous information carried forward and comments addressed
- Verify baseline information is complete and adequate
- Wetland delineation approval
- Review detailed plans to your comfort level


Minnesota Wetland Conservation Act
Technical Evaluation Panel Form

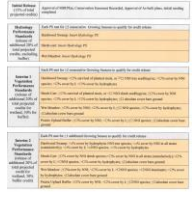
143

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

144

Typical Performance Standard/Credit Release Schedule

145

145

Credit Release Schedule

Common release schedule elements*

- Hydrology release approved before vegetation releases occur
- Buffer credits released at same time and rate as wetland credits
- Final release requires 1 growing season after Interim 2 approved
- Final release should not be approved before annual monitoring has ended

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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

147

Performance Standards

Common hydrology metrics*

- Meet standard for 2 full growing seasons
- Reference site (± 20%)
- Water table/inundation timing and duration measurements
- Expect wells with daily readings

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Performance Standards

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
- Multi-strata communities may have metrics in each stratum

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Monitoring Reports

150

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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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Monitoring Reports

Monitoring Report Components

- Project location, legal description, and MP approved replacement wetland goals and performance standards
- Description of activities completed the prior season, and planned the coming seasons
- Hydrology and vegetation assessments (variable depending on bank)
- Comparison of results as related to performance standards
- Maps and photographs (from reference locations)

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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

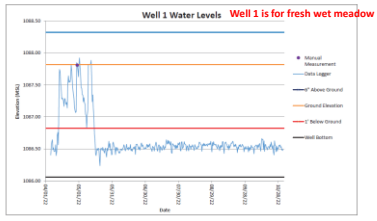
The LGU (TEP) "must evaluate all monitoring reports received …" to determine if the goals of the approved plan are being met

153

153

Monitoring Report Exercise 1

Figure 7a) 2022 Well Monitoring Data



NOTES:

- The water table during the April 5th, August 11th, and November 1st site visits was below the bottom of the well casing.

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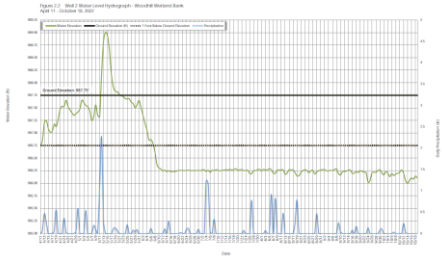
Monitoring Report Exercise 2



155

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Monitoring Report Exercise 3

Wetland Bank
Vegetation Monitoring 2022

VEGETATIVE ASSESSMENT DEEP MARSH						
Species	Indicator	Native	Invasive	Strata*	Site A Transect 2	Site B Transect 6
Reed manna grass (Glyceria grandis)	OBL	Yes	No	H	10	5
Rice cut grass (Leersia oryzoides)	OBL	Yes	No	H	5	0
Lake Sedge (Carex lacustris)	OBL	Yes	No	H	5	0
Common water plantain (Alisma subcordatum)	OBL	Yes	No	H	15	2
Broad-leaf Arrowhead (Sagittaria latifolia)	OBL	Yes	No	H	1	3
River Bulrush (Bolboschoenus fluviatilis)	OBL	Yes	No	H	5	10
Soft-stem Bulrush (Schoenoplectus tabernaemontani)	OBL	Yes	No	H	3	5
Water Horsetail (Equisetum fluviatile)	OBL	Yes	No	H	1	0
Burreed (Sparganium eurycarpum)	OBL	Yes	No	H	1	0
Reed canary grass (Phalaris arundinacea)	FACW	Yes	No	H	0	0
Wool-grass (Scirpus cyperinus)	FAC	Yes	No	H	1	0
Narrow-leaved cattail (Typha angustifolia)	OBL	No	Yes	H	3	1
Open water	N/A	N/A	N/A	N/A	30	75
Total					100	101
% annual cover invasives					0	1
% annual cover non-invasive natives					67	21
% aveal cover hydrophytes					70	26
Number Native Non-invasive Species					10	5

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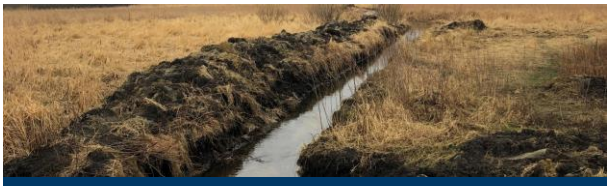
156



WCA Enforcement

BOARD OF WATER AND SOIL RESOURCES

157

Enforcement Procedure Overview

158

Assessing Wetland Impacts

159

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

160

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

161

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

162

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

163

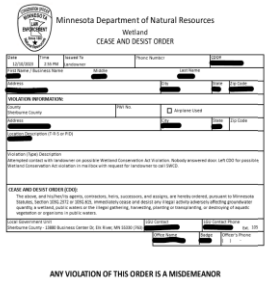
Resource Protection Notices


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

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

164

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.

165

Off-Site Review

Review available data prior to site visit

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

166

Off-Site Review Exercise

167

Off-Site Review Exercise

- BWSR Wetland Specialist along with the County WCA TEP, Corps of Engineers and the Environmental Protection Agency was asked by DNR Hydrologist to provide comment on an amendment to Surface Water Appropriation permit # Permit No.XXXXX.
- DNR stated the landowner was pumping more water than the permit allowed.
- Landowner expanded wild rice patty by moving roads/berms and increasing drainage.

168

Off-Site Review Exercise

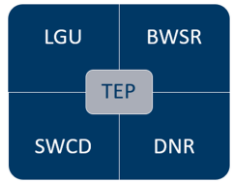
- Is the reported activity occurring within a wetland?
- Could the new fill and Ag use be a violation?
- Is there a possible exemption for these reported activities?

169

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

170

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

171

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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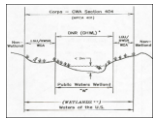
Public Waters & WCA Violations

- 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



174

On-Site Exercise

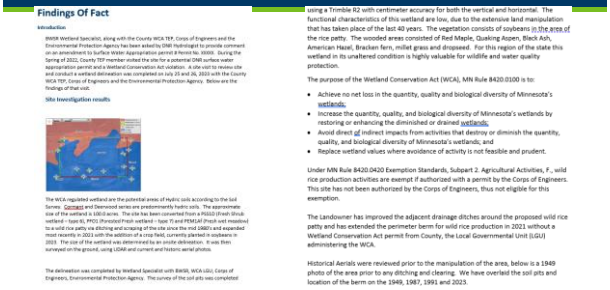
175

On-Site Exercise

- Is the activity occurring within a wetland?
- Does it qualify for a No Loss/Exemption?
- What is the next step?

176

On-Site Exercise



Findings Of Fact

Introduction

Site Investigation results

using a Trimble R2 with centimeter accuracy for both the vertical and horizontal. The functional characteristics of this wetland are low, due to the extensive land manipulation that has taken place of the last 40 years. The vegetation consists of soybeans in the area of the rice patty. The wooded areas consisted of Red Maple, Quaking Aspen, Black Ash, American Hazel, Bracken fern, millet grass and dropseed. For this region of the state this wetland in its unaltered condition is highly valuable for wildlife and water quality protection.

The purpose of the Wetland Conservation Act (WCA), MN Rule 8420.0100 is to:

- Achieve no net loss in the quantity, quality and biological diversity of Minnesota's wetlands;
- Increase the quantity, quality, and biological diversity of Minnesota's wetlands by restoring or enhancing the diminished or drained wetlands;
- Avoid direct or indirect impacts from activities that destroy or diminish the quantity, quality, and biological diversity of Minnesota's wetlands; and
- Replace wetland values where avoidance of activity is not feasible and prudent.

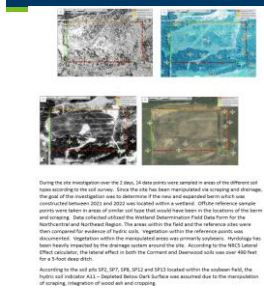
Under MN Rule 8420.0420 Exemption Standards, Subpart 2. Agricultural Activities, F., wild rice production activities are exempt if authorized with a permit by the Corps of Engineers. This site has not been authorized by the Corps of Engineers, thus not eligible for this exemption.

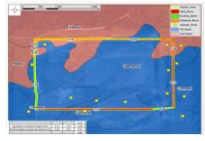
The Landowner has improved the adjacent drainage ditches around the proposed wild rice patty and has extended the perimeter berm for wild rice production in 2021 without a Wetland Conservation Act permit from County, the Local Governmental Unit (LGU) administering the WCA.

Historical Aerials were reviewed prior to the manipulation of the area, below is a 1949 photo of the area prior to any ditching and clearing. We have overlaid the soil pits and location of the berm on the 1949, 1987, 1991 and 2023.

177

On-Site Exercise

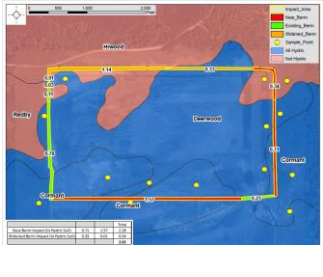




Conclusions and technical recommendation

178

On-Site Exercise



179

Writing an RO

180

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

181

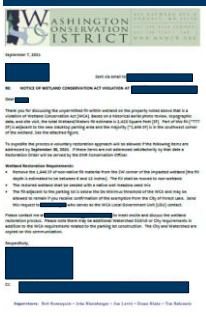
Voluntary Restoration

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

182

Voluntary Restoration


WASHINGTON CONSERVATION DISTRICT

183

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

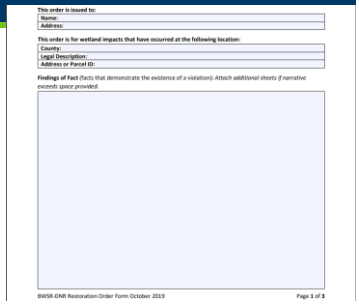

Minnesota Wetland Conservation Act
Restoration Order

184

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

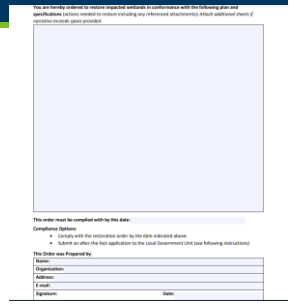

This order is issued to:
Name:
Address:
This order is for wetland impacts that have occurred at the following location:
County:
Legal Description:
Address or Parcel ID:
Findings of Fact (facts that demonstrate the existence of a violation): Attach additional sheets if narrative exceeds space provided.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

185

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

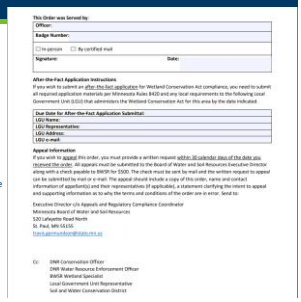

You are hereby ordered to restore impacted wetlands in conformance with the following plan and specifications (actions needed to restore including any referenced attachments). Attach additional sheets if narrative exceeds space provided.
This order must be complied with by this date:
Compliance Options:
This Order was Prepared by:
Name:
Organization:
Address:
E-mail:
Signature: Date:

186

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
travis.germundson@state.mn.us
Cc: DNR Conservation Officer
DNR Water Resource Enforcement Officer
BWSR Wetland Specialist
Local Government Unit Representative
Soil and Water Conservation District

187

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 activity 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.

188

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.

189

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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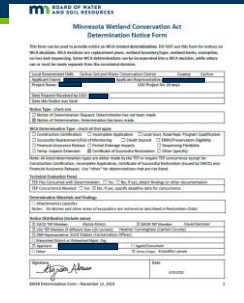
Certificate of Successful Restoration

- 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

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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

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After the Fact Applications

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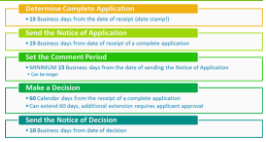
AFT Applications

- 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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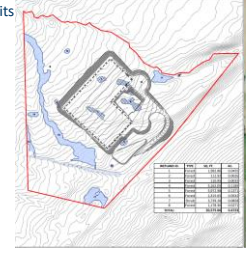
AFT Applications

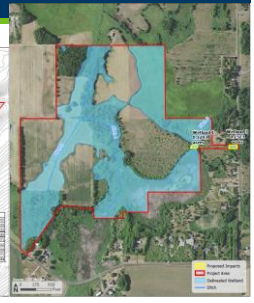
Poor Exhibits

196

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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Questions?

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Resources for TEP members

- Offsite Resources

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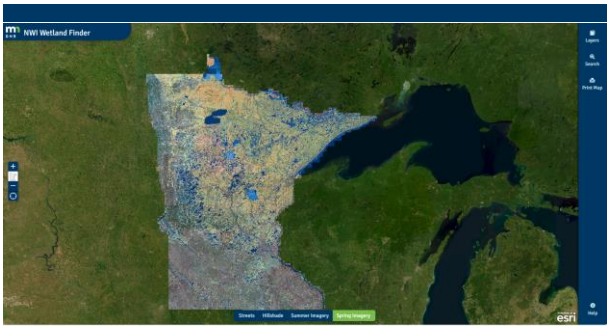
Important Resources for TEP members

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



201



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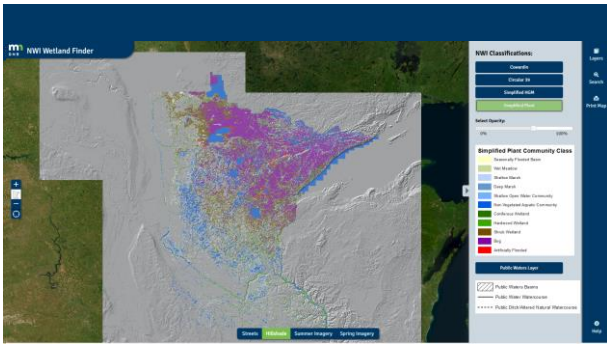

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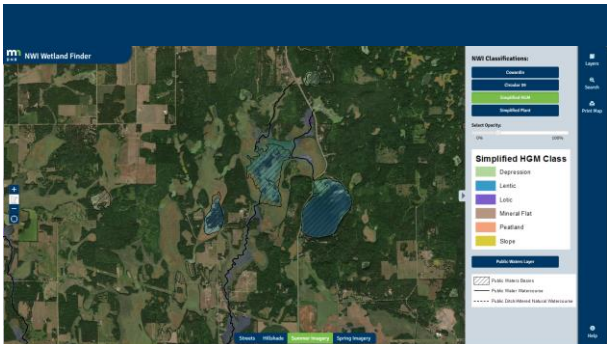

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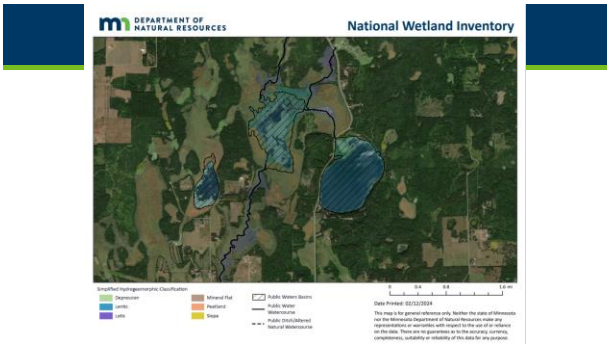

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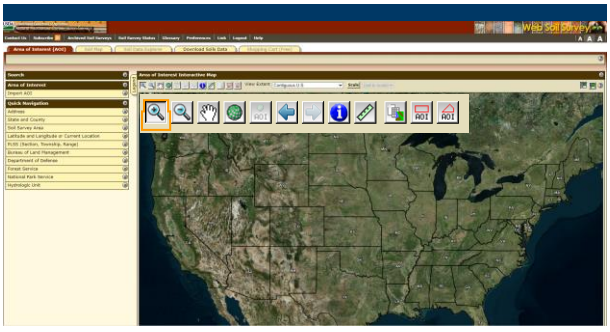

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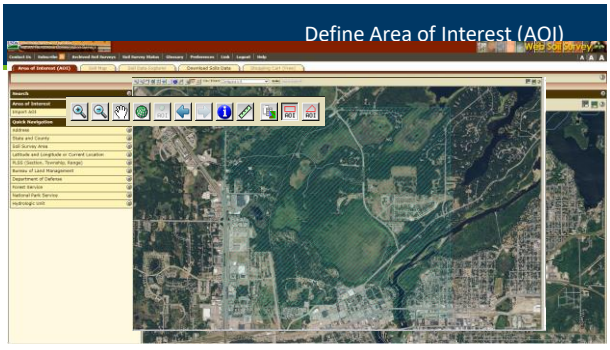

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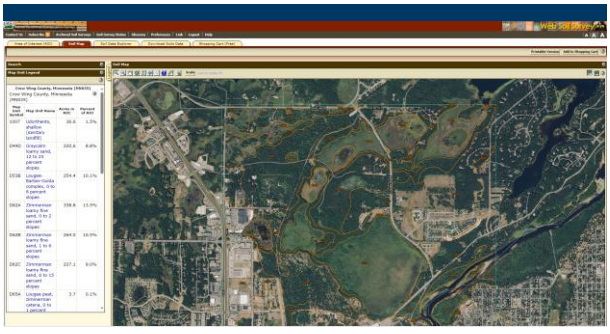

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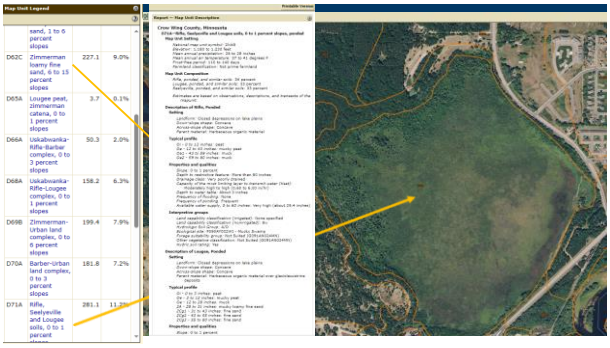

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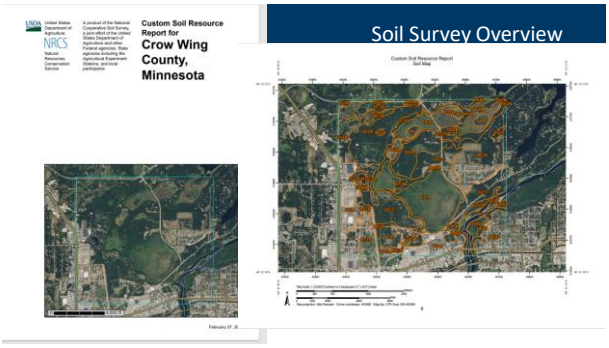

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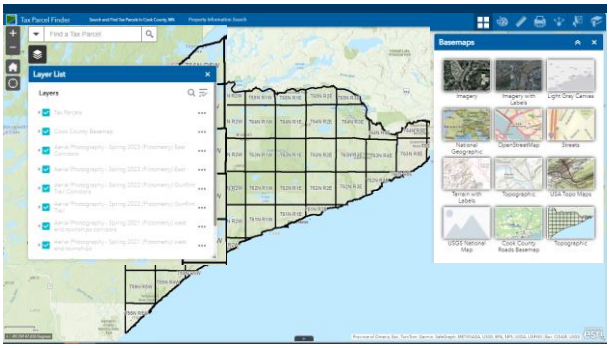

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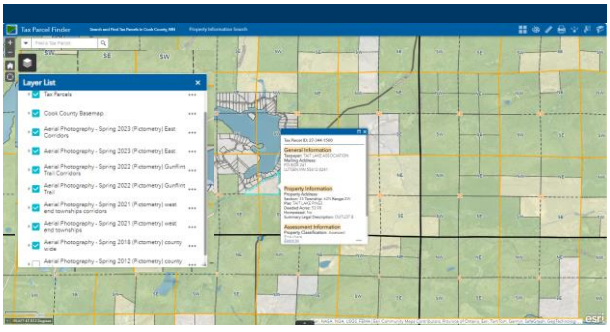

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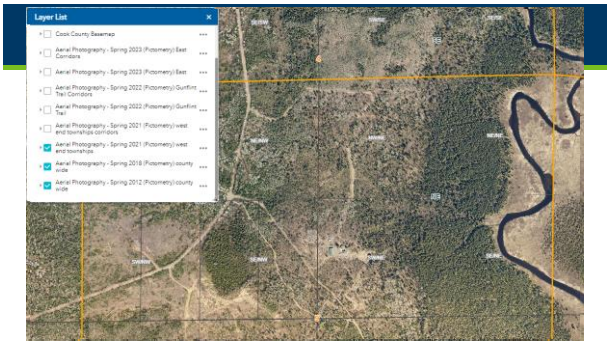

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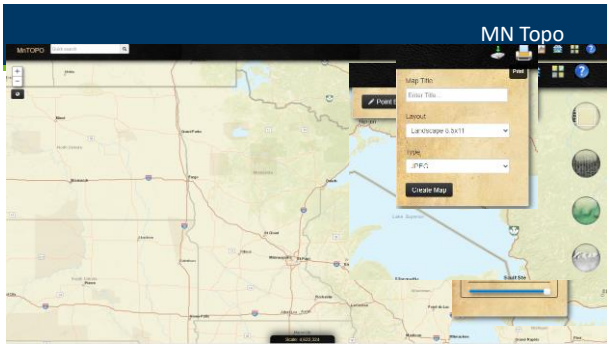

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EnviroAtlas

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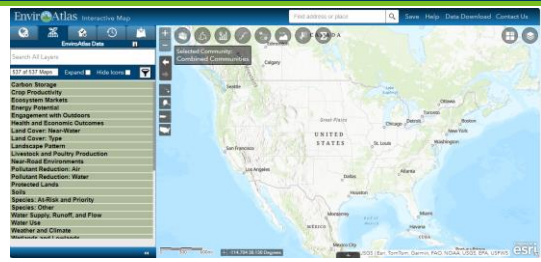

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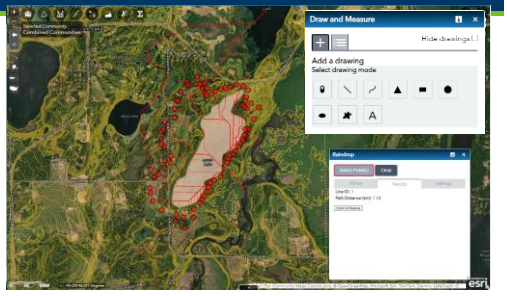
Defining Catchment Area



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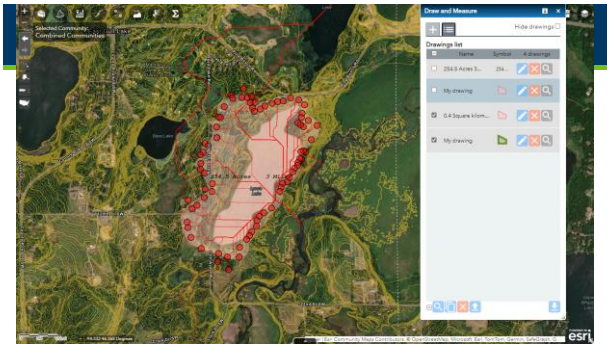

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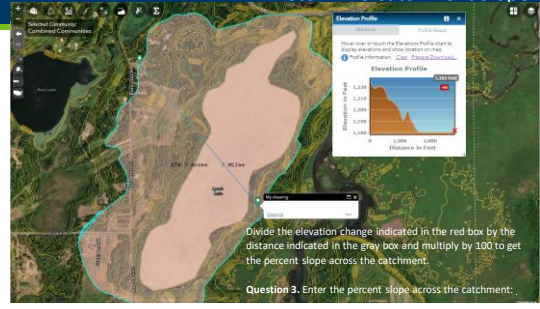
221

Determine Catchment Slope



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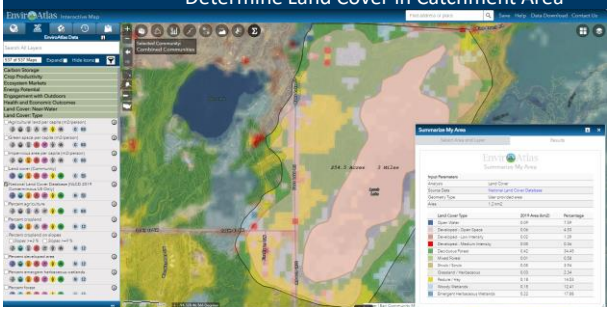
Determine Land Cover in Catchment Area



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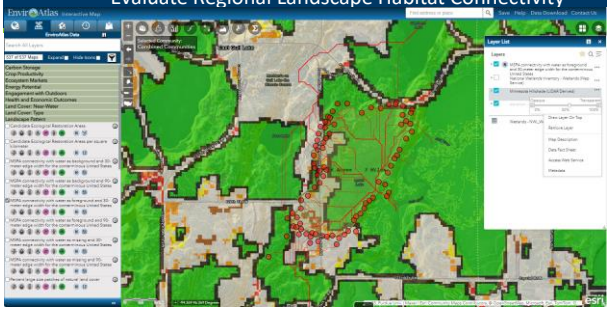
Evaluate Regional Landscape Habitat Connectivity



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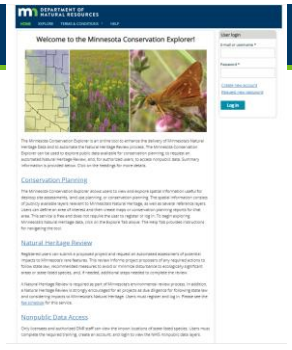
MN Conservation Explorer



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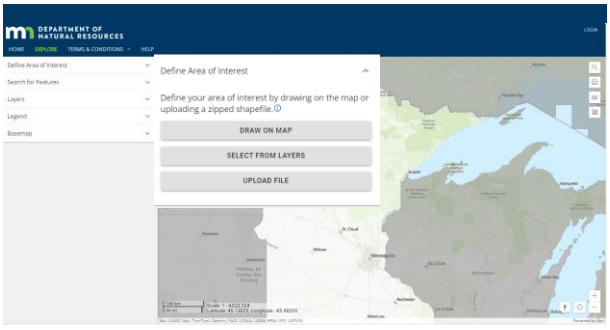

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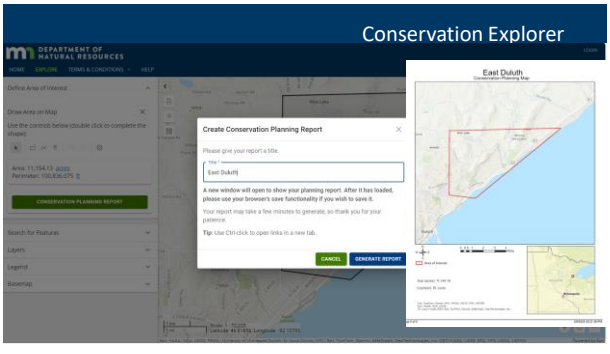
Conservation Explorer



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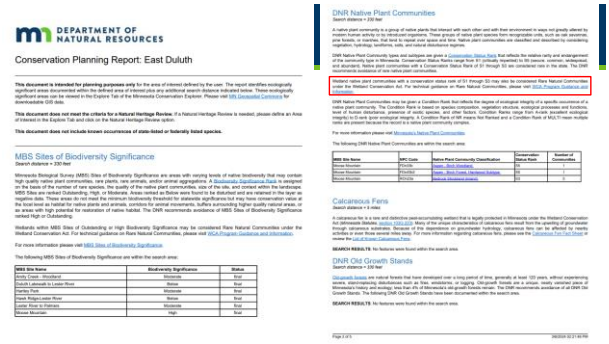

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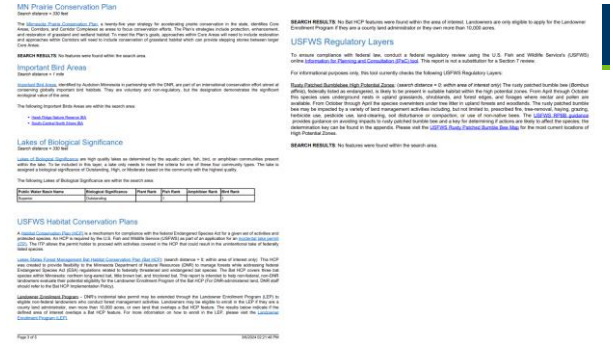

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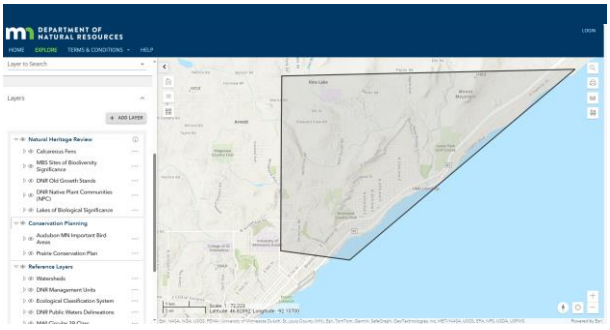

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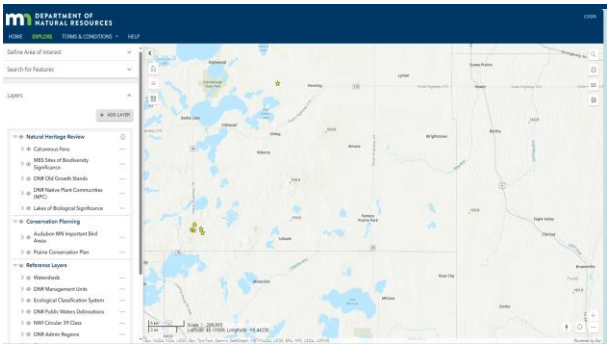

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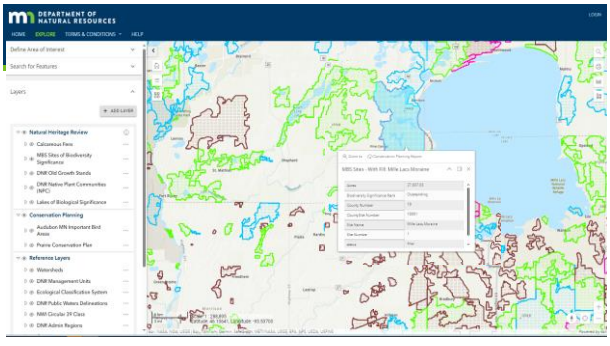

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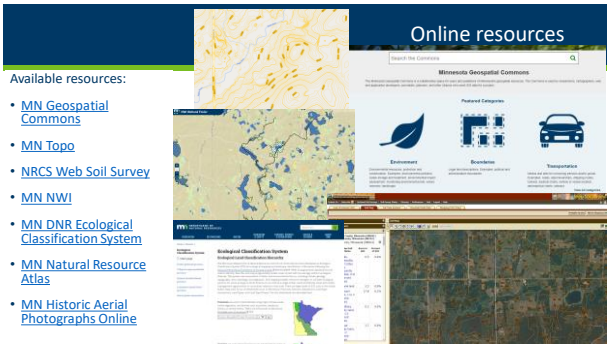

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Group Discussion

- What is the most common scenario you have encountered in your time on a TEP?
- What is the most difficult scenario you have encountered as a member of TEP?
- What are the TEP "dyanamics" like in the TEP you serve on? Have they changed with time?
- Any advice for a new TEP member?

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BOARD OF WATER AND SOIL RESOURCES

Minnesota Wetland Professional Certification Program

Questions?

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