

Wetland Conservation Act

Technical Guidance on “Rare Natural Communities”



November 7, 2017

I. Introduction

This agency guidance document, jointly adopted by the Minnesota Department of Natural Resources (DNR) and Board of Water and Soil Resources (BWSR), identifies general factors for DNR to consider in identifying rare natural communities under Minnesota’s Wetlands Conservation Act (WCA) and for local units of government (LGUs) to consider in determining when a proposed project¹ will permanently adversely affect a rare natural community. This guidance applies solely to application of the rare natural community rule provision of WCA (see below).

Rare natural communities are one of several “Special Considerations” listed in the WCA rules for wetland replacement plans.

BWSR, in consultation with DNR, has adopted rules governing the approval of wetland value replacement plans under WCA. (See Minn. Stat. § 103G.2242 and Minn. R. 8420.0500 - 0544 *et. seq.*) The WCA rule governing evaluation of wetland replacement plan applications provides that:

“A replacement plan for activities that involve the modification of a rare natural community as determined by the Department of Natural Resource’s natural heritage program must be denied if the local government unit determines that the proposed activities will permanently adversely affect the natural community.” Minn. R. 8420.0515, subp. 3.

WCA statutes further provide that:

“When making a determination under rules adopted pursuant to this subdivision on whether a rare natural community will be permanently adversely affected, consideration of measures to mitigate any adverse effect on the community must be considered.” Minn. Stat § 103G.2242, subd. 1(d)

This guidance document is designed to:

1. Acquaint DNR staff, local governments, Technical Evaluation Panels (TEPs), and individual landowners or project proposers with the preliminary screening steps they can take to determine the possible presence of rare natural communities on a project site and thus whether additional evaluation by the DNR may be needed.

¹ For purposes of this guidance, the term “project” has the meaning assigned within WCA and includes site-specific plans and related activities that would have wetland impacts requiring wetland replacement under an approved wetland plan. See *generally*, Minn. Stat. § 103G.222 and 103G.005, subd. 14 and Minn. R. 8420.0111, subp. 54.

2. Assist DNR Ecological and Water Resources (EWR) staff in determining the existence and scope of a rare natural community at a proposed project site, recognizing that the applicable WCA rules assign this responsibility to the DNR.
3. Assist LGUs (or DNR's Division of Lands and Minerals (LAM) in the case of mining-related replacement plans²) in determining whether specific proposed activities will "permanently adversely affect" rare natural communities identified by the DNR.

II. Applicable Statutes & Rules

Statutes and rules relevant to this guidance include the following:

Minn. Stat. § 103G.2242, subd. 1(d) WETLAND VALUE REPLACEMENT PLANS

Minn. Stat. § 103G.222, subd. 1(a)-(b) and (e) (2016) REPLACEMENT OF WETLANDS. Requirements.

Minn. R. 8420.0515, subp. 3 (2015) SPECIAL CONSIDERATIONS. Rare Natural Communities.

III. GENERAL GUIDANCE for Identifying Rare Natural Communities Under WCA

This section of the guidance outlines the information and factors DNR EWR staff should consider when determining whether a project site involves native plant communities that qualify as rare natural communities for purposes of Minn. R. 8420.0515, subp. 3. Application of these factors to any given site will depend, in large part, on the specific characteristics of the project site and surrounding lands.

DNR's Natural Heritage Program is responsible for determining whether a potentially impacted wetland contains a rare natural community. Minnesota Rule 8420.0515, subp. 3. The term "rare natural community" is not defined in the WCA rule or elsewhere, leaving it to DNR to determine what constitutes a rare natural community on a case-by-case basis. DNR's Natural Heritage Program, which is currently managed within the Division of Ecological and Water Resources, identifies, describes and maps intact, high quality native plant communities and this information is maintained in the Natural Heritage Information System (NHIS).³ The NHIS provides a useful starting point for identifying potential rare natural communities at a site-specific level, for purposes of applying this WCA rule provision. However,



Example of a potential rare natural community: Ephemeral wetlands associated with a Southern Bedrock Outcrop native plant community.

² For wetland impacts regulated under a permit to mine, the DNR serves as the regulatory authority.

³ For more information, see: <http://www.dnr.state.mn.us/nhrp/nhis.html>

inclusion in the NHIS is neither a necessary nor sufficient condition for identifying a rare natural community.

This guidance document only applies to native plant communities that would be directly affected by specific activities⁴ requiring an approved wetland replacement plan under WCA. Generally, these will be *wetland* communities subject to a WCA replacement plan application, but may also include upland communities if they would be directly affected by actions proposed under a wetland replacement plan (e.g., an upland community proposed to be excavated to create a replacement wetland).

Factors that should be considered by DNR EWR staff when determining whether a plant community within the boundary of a specific project constitutes a rare natural community include, but are not limited to:

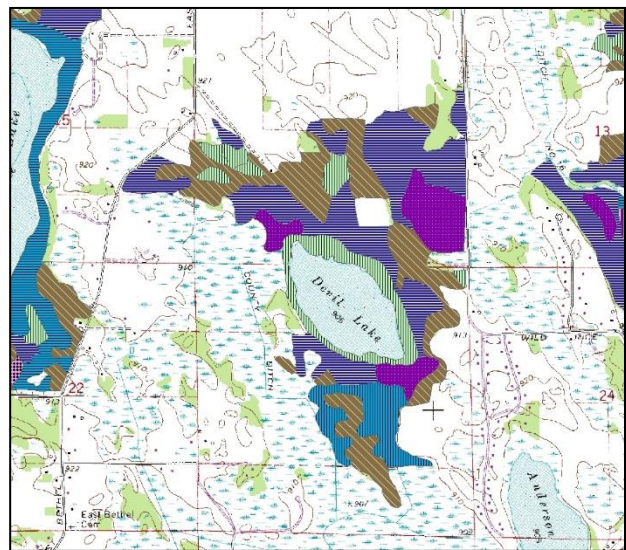
- (1) The NHIS status of the plant community;
- (2) The conservation status rank (e.g., S1, S2) of the native plant community;
- (3) The condition rank (e.g., A, B) of the native plant community;
- (4) The landscape context of the native plant community; and
- (5) If present, the rank (e.g., Outstanding, High) of the Site of Biodiversity Significance within which the native plant community occurs.

Each of these factors is discussed in greater detail below. There is no set threshold for designating a rare natural community. All of the above, and any additional pertinent information, should be considered when determining whether a plant community on a project site constitutes a rare natural community for purposes of applying Minn. R. 8420.0515, subp. 3.

A. Applicable Factors

1. Natural Heritage Information System Status

Native plant communities that are currently mapped in the NHIS are potential candidates for designation as rare natural communities because they have previously been determined by the DNR to be intact, viable, and of relatively high quality. However, the fact that a community is mapped in the NHIS does not by itself confer rare natural community status under WCA. Some areas of the state were surveyed many years ago and previously mapped communities may have changed over time such that they are no longer intact or of high quality. In addition, the NHIS includes communities that are not particularly rare in their landscape context. Thus, the concept of rarity is explored separately, as part of the landscape context factor, in determining whether a plant community is a rare natural community.



GIS data layers of mapped native plant communities and sites of biodiversity significance are available for download from Minnesota Geospatial Commons at: <https://gisdata.mn.gov/group/biota>

⁴ For purposes of this guidance document, the term “activity” means “any work or action conducted in or near a wetland that could potentially affect a wetland.” Minn. R. 8420.0111, subp. 5.

Conversely, it's possible that a plant community that is not mapped in the NHIS may qualify as a WCA rare natural community. Portions of the state have not yet been surveyed and some potential rare natural communities may be unmapped because of minimum size requirements of the NHIS mapping guidelines.

For the purposes of making rare natural community determinations, all NHIS mapped native plant communities that may be directly affected by activities authorized under a wetland replacement plan are potential candidates, subject to consideration of the other factors identified below. High quality native plant communities that are not mapped in the NHIS (and will be affected by activities authorized under a WCA replacement plan) may also be candidates, subject to the other factors below. If communities that are not in the NHIS are designated as rare natural communities, it is expected that the DNR would subsequently map them in the NHIS.

2. Conservation Status Rank of Identified Plant Community

Native plant communities in Minnesota are classified according to the Minnesota Native Plant Community Classification System developed by the DNR.⁵ Each type of native plant community in Minnesota has been assigned a conservation status rank that reflects the “risk of elimination of that community type from Minnesota.” See *Conservation Status Ranks for Native Plant Community Types and Subtypes* (August 31, 2009), available at:

http://files.dnr.state.mn.us/natural_resources/npc/s_ranks_npc_types_&_subtypes.pdf.

All native plant community types in Minnesota are given one of the five following classifications:

S1	Critically imperiled
S2	Imperiled
S3	Vulnerable to extirpation
S4	Apparently secure, uncommon but not rare
S5	Secure, common, widespread and abundant

The *Conservation Status Ranks for Native Plant Community Types and Subtypes* (August 31, 2009) should be used by DNR EWR staff when undertaking a project site assessment of a plant community. For purposes of making rare natural community determinations, DNR EWR staff should give greatest consideration to affected communities having a conservation status ranking of S1, S2 or S3.

3. Condition Rank of the Native Plant Community

The Minnesota Biological Survey (MBS) has developed condition rankings for native plant communities. These rankings are intended to reflect the degree of ecological integrity of a specific occurrence of a native plant community. The condition rank considers the species composition, vegetation structure, ecological processes and functions, level of human disturbance, and presence of non-native species, among other factors. Individual community occurrences are then assigned one of the following rankings:

⁵ See: <http://www.dnr.state.mn.us/npc/index.html>

A	Excellent Ecological Integrity. Species composition, structure, and ecological processes are typical of the natural or historic range of the community and have been little disturbed by recent human activity or invasive species.
B	Good Ecological Integrity. Lightly disturbed plant communities and communities that were disturbed in the past but have recovered and now have relatively natural composition and structure. B-rank occurrences normally will return to A-rank condition with protection or appropriate management.
C	Fair Ecological Integrity. Show strong evidence of human disturbance, but retain some characteristic species and have some potential for recovery with protection and management.
D	Poor Ecological Integrity. The original composition and structure of the community has been severely altered by human disturbances or invasion by exotic species. They have little chance of recovery to their natural or historic condition.

Additionally, community-specific condition ranking guidelines have recently been developed by the DNR for some native plant community types and more are in preparation. DNR EWR staff should consult any applicable community-specific condition ranking guidelines that may be available. Otherwise, the general ranking guidelines above should be applied. Community-specific condition ranking guidelines can be found at:

<http://www.dnr.state.mn.us/npc/classification.html>, under the “Field Guides” tab.

If the project site community has previously been assigned a condition rank, DNR EWR staff should verify that the previously assigned rank is still applicable as site conditions may change over time. Otherwise, DNR EWR staff should evaluate and rank the condition of the native plant community using the appropriate condition ranking guidelines.

For the purposes of making rare natural community determinations, DNR EWR staff should give greatest consideration to those communities with an A or B rank.

4. Landscape Context of the Native Plant Community

The context of the native plant community on the landscape is a relevant factor in determining whether a community at a particular location qualifies as a rare natural community. Landscape factors that may be considered include, but are not limited to:

- The location of the affected native plant community relative to surrounding land uses and other native plant communities that may influence the continued viability of the affected community;
- The presence and abundance of other occurrences of the same native plant community type within or near the project site;
- The rarity of the native plant community at local, regional and statewide scales. A high quality native plant community located at the edge of its naturally occurring range in the state may qualify as a rare natural community even if it is common in other parts of the state; and
- The currency and completeness of data about the affected native plant community, including known and potential occurrences in areas that have not yet been surveyed.

5. Native Communities within Sites with Biodiversity Significance Ranks

Besides identifying, evaluating and mapping individual occurrences of native plant communities, DNR MBS ecologists evaluate the overall survey site within which the individual communities occur. Biodiversity significance ranks are a measure of the statewide native biodiversity importance of MBS

survey sites. The rankings are based on the presence of rare species populations, the size and condition of native plant communities within the site, and the landscape context of the site.⁶ The ranking system used by the MBS program is outlined below:

Outstanding	Sites containing the best occurrences of the rarest species, the most outstanding examples of the rarest native plant communities, and/or the largest, most intact functional landscapes
High	Sites containing very good quality occurrences of the rarest species, high-quality examples of rare native plant communities, and/or important functional landscapes
Moderate	Sites containing occurrences of rare species, moderately disturbed native plant communities, and/or landscapes that have a strong potential for recovery
Below	Sites below the minimum threshold for statewide biodiversity significance; lack occurrences of rare species and natural features

Since individual native plant communities contribute to the overall quality of the larger landscape comprising MBS survey sites, communities that occur within areas that have been assigned biodiversity significance rankings are candidates for rare natural community designation. For the purposes of making rare natural community determinations, DNR EWR staff should give greatest consideration to native plant communities occurring in sites assigned, or eligible to be assigned, biodiversity significance ranks of “high” or “outstanding.” Native plant communities not located within a MBS Site of Biodiversity Significance can still be considered for rare natural community designation, based on the other factors discussed in this guidance.

B. Procedure for Determining Presence of a Rare Natural Community

The responsibility for identifying rare natural communities ultimately lies with the DNR. However, others, including project applicants, consultants, LGU staff, and TEP members have access to publicly available NHIS data layers and can assist in the identification process. The general procedure described here consists of a preliminary screening step to identify native plant communities requiring further evaluation by DNR EWR staff, using the factors described in Part III.A. of this guidance.

1. Preliminary Screening

Generally, the first step in determining if a rare natural community may be present at a specific site is to consult the NHIS data layers to determine if any DNR Native Plant Communities or MBS Sites of Biodiversity Significance have been identified on or near the site.

Project applicants, consultants, LGU staff, all DNR staff and TEP members are encouraged to consult DNR’s publicly available NHIS data layers (located at: <https://gisdata.mn.gov/group/biota>) to determine early in project planning if any native plant communities or sites of biodiversity significance have been mapped at the site in question. Conservation status, condition, and biodiversity significance ranks can be accessed in the attribute tables of these data layers.

Based on the NHIS search and other available information, the following native plant communities should be evaluated further by DNR EWR staff:

⁶ For more information, see: http://www.dnr.state.mn.us/eco/mcbs/biodiversity_guidelines.html

- Native plant communities having a conservation status rank of S1, S2 or S3
- Native plant communities occurring within a site of outstanding or high biodiversity significance

Although the NHIS data layers are useful for preliminary screening, the absence of a mapped feature in the NHIS does not necessarily mean that a rare natural community is not present. Local government staff and TEP members possess knowledge of local resources that can be helpful in identifying communities that may qualify as rare natural communities. In addition, plant community data and descriptions in applicable wetland delineation report(s) and replacement plan application materials can be useful in identifying native plant communities requiring further evaluation by DNR EWR staff.

The DNR is on the mailing list to receive WCA notices of application and may undertake a preliminary screening to determine whether further review under this guidance is warranted. DNR EWR staff will notify the project applicant, LGU, TEP and/or other applicable DNR staff if further evaluation is needed.

2. Evaluation of the Rare Natural Community Factors

If preliminary screening indicates that a rare natural community may be present at a project site, then DNR EWR staff should be consulted⁷ if they are not already involved. DNR EWR staff will conduct a field review in coordination with the TEP and project applicant to further assess the community. The onsite evaluation should confirm if the native plant community is present and whether or not any previously-assigned condition ranks are valid. Based on the site review and consideration of the factors listed in Section III.A above and any other applicable information, the DNR EWR Division Director or their designee will determine if the project site contains a rare natural community.

The DNR will prepare written findings on its determinations on the presence/absence of a rare natural community, which will include documenting the application of the factors set forth in Section III.A of this guidance document to the project site. The DNR's findings will be provided to the appropriate entities, including the project proposer and the LGU (or, in the case of mining-related wetland replacement plans, the DNR LAM Division Director).

IV. GENERAL GUIDANCE for Determining When a Proposed Project Activity Will “Permanently Adversely Affect” a Rare Natural Community.

Once a rare natural community has been identified at the project site, it is the LGU's responsibility (or the responsibility of DNR LAM Division, in the case of mining-related wetland replacement plans) to officially determine whether the proposed activity will “permanently adversely affect” the rare natural community. When making this determination, the LGU/DNR LAM Division should consider indirect, as well as direct, impacts that the activity may have on the rare natural community. This is a site-specific determination that involves the analysis of a number of factors including, but not limited to:

- The permanence of the impact to the rare natural community;
- The scope of the impact, in terms of the size of the area affected and the extent to which the impact will alter the character and quality of the community;
- The potential for ongoing and reasonably foreseeable future impacts to those portions of the

⁷ DNR Regional Environmental Assessment Coordinator or the local DNR TEP representative; see: http://www.bwsr.state.mn.us/wetlands/wca/DNR_TEP_contacts.pdf.

rare natural community that will remain, such as fragmentation, sedimentation/erosion, or introduction or spread of non-native, invasive species;

- On-site mitigation measures aimed at sustaining the rare natural community, such as setbacks, buffers, restrictive covenants and enhancement actions;
- Compensatory mitigation measures that restore comparable rare natural communities (preferably in the same watershed or ecological section) in a setting that will permanently maintain the native community attributes, or measures that permanently protect another at-risk rare natural community. WCA requires that wetlands affected by unavoidable impacts be replaced by wetlands of at least equal public value. Minn. Stat. § 103G.222, subd. 1. Consequently, the standard for replacing impacts to a rare natural community is quite high.

DNR EWR staff will work with the TEP, applicant, and LGU/DNR LAM staff to assess potential impacts and, if possible, help design a project that avoids permanent adverse effects on the rare natural community. DNR EWR staff may submit an analysis or opinion to the LGU/DNR LAM Division Director on anticipated impacts for consideration in determining the potential for permanent adverse effects.

If the LGU/DNR LAM Division Director finds that the rare natural community will be permanently adversely affected, the application must be denied per Minn. R. 8420.0515, subp. 3 and the decision must be appropriately documented in the LGU/DNR LAM Division's Findings of Fact.

This document is available on the BWSR website and may be revised periodically. Check the web site for the most current version: www.bwsr.state.mn.us/wetlands.

For more information, contact your local Board of Water and Soil Resources wetland specialist or the DNR, Division of Ecological and Water Resources Wetland Program Coordinator.