

Appendix V

Vegetation Management Plan

Appendix V
Mankato – Mississippi River Transmission Project
Certificate of Need and Route Permit Application
E002/CN-22-532 and E002/TL-23-157

VEGETATION MANAGEMENT PLAN

Mankato to Mississippi River Transmission PROJECT

MPUC Docket Nos. E002 /CN-22-532
& E002/TL-23-157

February 2024

Northern States Power Company



414 Nicollet Mall
Minneapolis, MN 55401

DRAFT

Contents

1	Introduction	2
2	General Right-of-Way Vegetation Management	2
3	Vegetation Removal	3
3.1	Upland Vegetation Removal	4
3.2	Wetland Vegetation removal.....	4
4	Herbicide Use	5
5	Noxious Weeds and Invasive Species Control	5
6	Seeding and Revegetation	6
6.1	Seeding Methods.....	6
6.2	Natural Revegetation.....	7
7	Erosion Control	8
8	Monitoring	8

1 INTRODUCTION

The Mankato to Mississippi River Transmission Project (Project) is an approximately 120 mile 345 kilovolt (kV) transmission line from Xcel Energy's existing Wilmarth Substation located near Mankato, east to the Mississippi River southeast of Kellogg. In addition to the new 345 kV line, about 20 miles of an existing 161 kV line will need to be relocated from its current location (double circuited with an existing 345 kV line) between the North Rochester Substation near Pine Island and a point on the existing 161 kV line northeast of Rochester because a portion of the new 345 kV line would displace the 161 kV line.

This draft Vegetation Management Plan (VMP or Plan) is intended to describe Xcel Energy's standards for handling of vegetation removal and protection of existing vegetation during site preparation and construction and for revegetation of areas of exposed soil during restoration following Project construction.

Xcel Energy provides this draft VMP for consideration as part of the route permit proceedings currently underway with the Minnesota Public Utilities Commission (Commission).

2 GENERAL RIGHT-OF-WAY VEGETATION MANAGEMENT

Xcel Energy's standard practice is to clear all woody vegetation within the full right-of-way width for construction of new transmission lines. This includes cases where a new line will be located within an existing right-of-way such as for a line rebuild or double-circuiting a new line with an existing line. The purpose of clearing to the full extent of the right-of-way is to ensure adequate and safe working spaces for crews during construction as well as to provide appropriate clearances for safe reliable operation of the lines once construction is complete. There are limited circumstances when this practice is modified and selected vegetation can remain within the right-of-way provided National Electric Safety Code (NESC) clearance requirements are met.

While removing woody vegetation within the right-of-way is necessary, efforts are made to protect existing compatible low-growing vegetation to minimize construction impacts such as soil erosion, wetland damage, or habitat loss. The following is a list of general practices that will be used to minimize vegetation impacts related to Project construction:

- Use erosion control best management practices (BMPs) to intercept stormwater runoff from areas disturbed as part of clearing operations. Stormwater BMPs are

addressed in the Project-specific Stormwater Pollution Prevention Plan (SWPPP).

- Minimize rutting by using matting materials in wetland areas for all construction activities, including right-of-way clearing activities; or perform work on firm or frozen ground that can support the equipment used.
- Minimize soil disturbance in steeply sloped areas, to the extent possible and/or practicable.
- Limit construction activities, including vegetation removal, to the right-of-way and off right-of-way access.
- To the extent practicable and safe, limit traffic in the right-of-way between transmission structure locations to a single access path.
- Limit staging and lay-down areas to previously disturbed areas where practicable.
- To the extent practicable, complete construction in wet organic soils when the ground is frozen.
- When existing low growing vegetation is disturbed during construction restoration efforts focus on establishing compatible (low growing) non-invasive species within the right-of-way.

3 VEGETATION REMOVAL

The Project will require the clearing of vegetation within the right-of-way and along temporary construction access paths. Tall woody vegetation that may interfere with safe construction and safe and reliable operation of the transmission line will be removed and managed through the operational life of the Project.

Clearing of vegetation will occur prior to other construction activities as allowed by landowner agreements and permit conditions. Clearing may be accomplished with the use of chainsaws, mowers, and hydraulic tree-cutting equipment. Vegetation will be cut at, or slightly above, the ground surface. Rootstock or stumps will typically be left in place unless transmission structure installation or construction access requires otherwise or at the request of the landowner.

Landowners will be notified to allow them to harvest trees within easement boundaries prior to the initiation of clearing. The landowner will retain the title to all timber material, if desired. Non-merchantable material, including trees, brush, and slash, will be either cut and scattered, placed in windrow piles, chipped, or burned within the right-

of-way. Non-merchantable felled material may also be removed from the right-of-way in a fashion that does not cause erosion unless BMPs are installed.

3.1 UPLAND VEGETATION REMOVAL

The cut and scatter method, where understory trees, branches and brush are simply cut, sectioned into smaller pieces, and scattered across the site, may be used in areas where limited clearing is necessary, and access is challenging. The purpose of this method is to limit the need for unnecessary equipment access and hauling which could potentially disturb existing ground or vegetation.

Woody vegetation may be chipped and scattered over the right-of-way to a maximum depth of one inch in non-agricultural upland areas.

3.2 WETLAND VEGETATION REMOVAL

The use of heavy equipment in wetlands will be kept to the minimum extent practicable. Wetland impact minimization will be accomplished by:

- constructing in wetlands during frozen conditions to the extent feasible;
- working in dry conditions; and
- using low ground-pressure tires or specialized tracked vehicles.

These BMPs are intended to minimize damage to wetland vegetation and soils.

Removal of trees and shrubs from forested wetlands may be necessary in some locations. The removal of woody vegetation within forested wetlands will be conducted in accordance with applicable wetland permit conditions. Within these areas, all trees and large shrub species will be cleared to ground level. Small diameter trees and shrubs (<6" diameter) will be cut and debris scattered in place. Large diameter trees and shrubs (>6" diameter) will be hauled out of wetland areas to suitable upland locations and treated according to applicable procedures. If the cut and scatter method is used within wetland areas no slash material will be left in the wetlands. Chipping or scattering of chips will not occur in wetlands.

Stump removal may occur within wetlands only where stumps interfere with the placement of construction mats or pole locations or pose a risk to construction tires and equipment. Where removal is required for access, stumps will be ground to a point at or slightly below the ground surface using low ground-pressure track-mounted equipment. Woody materials generated by stump grinding may be thin-spread in the wetland; but said material will not be mounded.

4 HERBICIDE USE

Herbicides may be used within the right-of-way to control regrowth of woody species, prevent the re-sprout of the stumps of tall-growing tree species or to control invasive or noxious weed species. All herbicide use will be in accordance with manufacturer's specifications and all applicable federal and state regulations. Herbicides designated for upland use will not be used within 75 feet of the vegetative buffer of waterbodies. Herbicides used in or near wetlands and waterbodies must be designed for use in wet areas as designated by manufacturer's specifications and federal and state regulations. Herbicides will not be used on public lands without any required permits/approvals and will not be used at organic farms or other properties where landowners prohibit their use.

The contractor applying herbicide will be required to obtain any necessary permits and/or certifications prior to herbicide placement and will be required to keep proper documentation of location and timing of herbicide use. Treatment shall conform to manufacturers' specifications.

5 NOXIOUS WEEDS AND INVASIVE SPECIES CONTROL

Xcel Energy has identified mitigation measures to be implemented to prevent the introduction and spread of noxious weeds and invasive species (NWIS) on lands disturbed by construction activities.

Preventing the introduction of NWIS from outside of the Project area is primarily accomplished by ensuring that, prior to arrival onsite, equipment is cleaned and visible dirt or plant parts are removed using methods such as vehicle washing, high pressure compressed air blowers or brushing. A variety of methods can be used to control NWIS that are already present within the Project right-of-way or access routes. These include completing tree and brush clearing during the winter, treating NWIS infested areas with herbicide prior to start of clearing, spreading mulch along access paths, and routing access paths away from NWIS infested areas.

Winter clearing limits the likelihood of construction equipment coming in contact with NWIS plant parts or seeds and reduces the chances of spreading those parts throughout the right-of-way. Treatment of NWIS areas with herbicides before they are able to go to seed can also minimize spread. If any mulch is used on the Project, it will consist of state-certified weed-free material or mulch derived from onsite locations. The contractor will be responsible for locating and documenting the source of certified weed-free mulch. Copies of the applicable certification documentation must be made available upon request to the appropriate agencies. Mulch derived from onsite locations may be spread up to six inches deep in upland areas to provide ground protection along

access paths. Upon abandonment of access routes, woodchip mulch will be spread evenly to a depth no greater than one inch. No mulch will be spread in wetland locations. Major infestation areas identified during the first growing season will be treated with the use of herbicides or by mechanical methods.

6 SEEDING AND REVEGETATION

Revegetation of areas disturbed by construction activities will take place as soon as practicable following construction completion in those areas. Seedbed preparation will be dependent on the site conditions following construction activities and may include tilling to a minimum depth of four inches with a disc, field cultivator, or chisel plow, breaking up large clumps and firming the soil surface. Prior to seeding, prepared beds should be sufficiently soft to allow for seed penetration and mulch anchoring, while sufficiently firm to provide surface soil stability. Seeding and mulching should occur parallel to ground contours as practicable.

In areas where stumps remain within areas of cleared forest, it may not be practical to access large areas of ground with seeding and seedbed preparation equipment. In these areas, smaller vehicles may be required to perform tasks such as smoothing ruts, preparing seedbeds with small rakes, and surface packing after seeding. Fertilizers and other soil amendments are not recommended and will only be applied as requested by and agreed to with landowners.

Because of the linear nature of transmission line projects there are typically many different landcover types and plant communities impacted by Project construction. In cases where there are exposed soils in areas such as roadsides, field edges and other locations dominated by non-native species a Minnesota state seed mix from the 25 series (Non-Native Grassland) will typically be used. These are certified seed mixes which are designed for regional land cover types and meet minimum standards for seed purity, germination rate, weed seed content and pure live seed weight, and are certified as noxious weed free. Seed mixes can be found here: <https://bwsr.state.mn.us/seed-mixes>. In locations where disturbances are within previously undisturbed natural areas which contain native plant species an appropriate native seed mix will be used. On private agricultural lands, agents will work with landowners to develop appropriate measures for reseeding of disturbed soils which may involve planting of row crops. Pastures will be seeded with landowner-specified seed mix.

6.1 SEEDING METHODS

Seeding methods may include broadcast, seed drilling or hydroseeding. Broadcast seeding is the most commonly used method for relatively small, disturbed areas, which are typically what is seen in transmission line construction. Seed is uniformly distributed

by a mechanical, hand-operated seeder, or in small seeding areas, by hand. Following seeding, the surface is typically raked with a cultipacker, harrow, or hand rake. The bed is to be firmed as appropriate to site conditions.

Drilled seed will typically be sown at a depth of approximately 0.25 inches; however, some native seed mixes contain small seed which needs to be shallower. If native seed mixes are being installed via seed drill equipment will be able to accommodate and uniformly distribute different sizes of seed at the required depth. Feeding mechanisms will be able to evenly distribute different seed types at the rates specified. Seedbed soil is to be suitably firmed immediately following seed drilling. Seed drilling is only used in areas with a larger disturbance footprint.

Hydroseeding involves applying seed in a broadcast, hydromulch slurry. The hydromulch mix allows the installer to see where application has taken place, ensuring uniform coverage of the seeding area. The hydro-seeder must provide for continuous agitation of slurry and provide for a uniform flow of slurry. This method is not recommended for diverse native seed mixed because of the range of seed sized and necessary planting depths.

When used, native seed mixes are typically most successful when installed between April 1 to June 30, or when soil temperatures have fallen below 55 degrees Fahrenheit in the fall. However, seeding will also be completed outside of those time periods, as areas are ready for revegetation. This is in order to facilitate permanent vegetation cover as soon as possible. Additional seed may be installed in areas where initial seeding is not successful. Temporary seed (oats or winter wheat) may also be applied in those situations as a cover crop.

Temporary seeding of cover crop will occur in locations where unfrozen, bare soil surface conditions and ruts will not be permanently restored within 30 days of completion of active work. Temporary restoration activities will include the repair of rutted surfaces and an even broadcast-seeding of the temporary cover-crop seed mix at a rate appropriate to the cover crop to provide erosion control of the soils. No mulch is to be applied in wetland areas.

6.2 NATURAL REVEGETATION

In many cases natural revegetation by early successional native species following tree clearing is expected to occur. In areas where native species voluntarily revegetate the right-of-way, active restoration and seeding may not be required. Regular monitoring will take place to ensure that NWIS are controlled, that desirable native plant species become the dominant vegetation communities in natural areas, and that bare soils are

quickly stabilized to reduce erosion. In areas of minimal disturbance, vegetation will be allowed to regenerate naturally.

Where standing water is not present, and where surrounding vegetation is dominated by abundant native species, the seeding of bare soils created by rutting, using the temporary cover-crop seed mix may be sufficient for cover while native species revegetate the area.

In areas where wetland plant communities are dominated by native species with rhizomatous root systems that will likely recolonize areas of limited disturbance rapidly, bare soils may be broadcast-seeded with the seasonally appropriate temporary cover-crop. In areas where disturbed and bare soils are sufficient to preclude revegetation from the local, native seed source, a native wetland seed mix will be applied.

7 EROSION CONTROL

In some cases, temporary erosion control methods will be necessary to stabilize soils and give the seed time to germinate. Erosion control measures may consist of anchored straw mulch, hydromulch, wood chip mulch, or erosion control blankets. When used the contractor will be responsible for acquiring certified weed-free mulch. If used erosion control blanketing will be wildlife-friendly non-welded weave in order to minimize impacts to small wildlife. Mulch or blanketing will be required on disturbed, exposed soils on all slopes greater than five percent, and on dry, sandy soils prone to erosion by wind or rain.

If there are locations where seeding is not possible, and there is adequate seed bank present in the soil, temporary stabilization using erosion control matting or mulch will be installed and maintained in a similar manner as in seeded areas. Dormant seeding may be used after soil temperatures have fallen below 55 degrees Fahrenheit when lower temperatures prevent seed from germinating. If dormant seeding is performed, temporary erosion control measures will be installed as indicated in the Project SWPPP.

8 MONITORING

Xcel Energy will monitor and control NWIS within the right-of-way through the construction. The environmental inspector will inspect and provide information regarding infestations of NWIS along the right-of-way to the appropriate agencies. The Permittee will be required to meet easement and lease conditions and obligations and will continue to work with landowners and the appropriate agencies to achieve standards set forth in easement or lease agreements.

The Permittee will monitor areas where seeding and erosion control measures have been implemented and will follow-up with reseeding measures where vegetative cover

by the specified seed mix, or revegetation by the local, native seed source is inadequate to provide long term stability and sustainable native plant communities.

DRAFT