

**STATE OF NORTH DAKOTA
PUBLIC SERVICE COMMISSION**

**Northern States Power Company
230 kV Transmission Line –
McHenry & Ward Counties
Siting Application**

Case No. PU-17-102

FINDINGS OF FACT, CONCLUSIONS OF LAW AND ORDER

October 4, 2017

Appearances

Commissioners Randy Christmann, Julie Fedorchak, and Brian Kroshus

Valerie Herring, Attorney, and Zeviel Simpser, Attorney, Briggs and Morgan, P.A., 220 IDS Center, 80 South 8th Street, Minneapolis, Minnesota 55402, on behalf of Applicant, Northern States Power Company, a Minnesota corporation (NSP).

Zachary Pelham, Special Assistant Attorney General, 314 East Thayer Avenue, P.O. Box 400, Bismarck, North Dakota 58502, on behalf of the Public Service Commission.

Timothy Dawson, Administrative Law Judge, Office of Administrative Hearings, 2911 North 14th Street-Suite 303, Bismarck, North Dakota 58503, as Procedural Hearing Officer.

Preliminary Statement

On March 13, 2017, NSP filed consolidated applications for a certificate of corridor compatibility and route permit for the construction of approximately 20.5 miles of 230 kV transmission line including a new Magic City Substation and associated facilities to be constructed from the proposed Magic City Substation in Ward County near the City of Minot to the existing McHenry Substation in McHenry County near the City of Velva (Applications).

Also on March 13, 2017, NSP filed an application for waivers of procedures and time schedules established under North Dakota Century Code sections 49-22-07.2, 49-22-08, 49-22-08.1, 49-22-13, and North Dakota Administrative Code section 69-06-01-02 and chapter 69-06-06, requiring separate filings, separate notices, and separate hearings on applications for corridor certificates and route permits.

On June 27, 2017, the Commission deemed the Applications complete and issued a Notice of Filings and Public Hearing, scheduling a public hearing for August 18, 2017 at 11:00 a.m. (CDT) at the Sleep Inn, 2400 10th Street SW, Minot, North Dakota. The notice identified the following issues to be considered regarding the application for waiver of procedures and time schedules:

1. Are the proposed facilities of such length, design, location, or purpose that they will produce minimal adverse effects and that adherence to applicable procedures and time schedules may be waived?
2. Is it appropriate for the Commission to waive any procedures and time schedules as requested in the application?

The Notice of Filings and Public Hearing identified the following issues to be considered regarding the applications for a certificate of corridor compatibility and route permit:

1. Will the location and operation of the proposed facilities produce minimal adverse effects on the environment and upon the welfare of the citizens of North Dakota?
2. Are the proposed facilities compatible with the environmental preservation and efficient use of resources?
3. Will the proposed facility locations minimize adverse human and environmental impact while ensuring continuing system reliability and integrity and ensuring that energy needs are met and fulfilled in an orderly and timely fashion?

On August 18, 2017, a public hearing was held as noticed. NSP presented four witnesses and two members of the public offered comments.

Also on August 18, 2017, NSP submitted an executed Certification Relating to Order Provisions — Transmission Facility Siting. (Hearing Exhibit 4),

Having allowed all interested persons an opportunity to be heard and having heard, reviewed, and considered all testimony and evidence presented, the Commission makes the following:

Findings of Fact

1. NSP is a Minnesota corporation duly authorized to conduct business in the State of North Dakota as a public utility subject to the jurisdiction and regulation of the Commission pursuant to Title 49 of the North Dakota Century Code. NSP presently serves approximately 92,000 retail electric customers in North Dakota in and around the cities of Fargo, Grand Forks, and Minot.
2. NSP proposes to construct a new approximately 20.5 mile long 230 kV transmission line from the proposed Magic City Substation to be constructed southeast of the City of Minot in Ward County, North Dakota to the existing McHenry Substation

located near the City of Velva in McHenry County (the Minot Project). NSP intends to commence construction of the Minot Project in the fall of 2017 provided all pre-construction permits and approvals are obtained. NSP anticipates that construction of the Minot Project will be complete by the end of 2018, with the removal of the existing 115 kV transmission line in the spring of 2019. NSP expects to place the new 230 kV transmission line and Magic City Substation in-service by the end of 2018.

3. On January 4, 2017, in Case No. PU-16-644, the Commission issued Certificate of Public Convenience and Necessity Number 5899 for the Minot Project. The Minot Project is needed to meet the growing demand for electricity in the Minot area and to reinforce the reliability of the region's electric transmission system. NSP currently serves its entire load for the City of Minot from the Souris Substation via two 115 kV transmission lines that were built in the late 1950s and early 1960s. These lines are reaching capacity and experience low voltage conditions when certain elements of the system are out of service. In addition, the McHenry Substation 230/115 kV transformer also experiences overloads when certain elements of the transmission system are out of service. The Joint Minot Load Serving Study and Addendum concluded that the Minot Project is the most effective solution to address the near-term voltage issues and the long-term capacity issues in the Minot area.

4. The new 230 kV transmission line and new Magic City Substation will be constructed, owned, and maintained by NSP.

5. The McHenry Substation is owned by Great River Energy (GRE) and modifications to that substation to accommodate the new 230 kV line will be constructed and owned by GRE.

6. NSP proposed a corridor of 300 feet wide for the Minot Project. The proposed corridor includes the proposed Magic City Substation and extends southeast along the existing Souris-McHenry 115 kV transmission line to the McHenry Substation in McHenry County. A Class I Literature Search and Class III Cultural Resource Inventory of the Project corridor was conducted. The North Dakota State Historical Preservation Office concurred with the recommended finding of *No Historic Properties Affected* in a March 1, 2017 letter.

7. NSP selected the proposed route based on a number of factors including: input from landowners and federal, state, and local agencies; avoidance of wetlands; cultural sites and environmentally sensitive areas; compliance with Chapter 49-22 of the North Dakota Century Code and the Commission's siting rules; and feasibility from a design, construction, and access perspective.

8. The proposed route is located within the proposed corridor and extends southeast from the proposed Magic City Substation along the existing Souris-McHenry 115 kV line to the McHenry Substation. The proposed route deviates from the existing 115 kV line route in North Prairie Township in Ward County. In and around North Prairie Township,

the proposed route diverges south and then east from the existing 115 kV transmission line route for approximately 4.2 miles to follow section and half-section lines before rejoining the existing 115 kV transmission line route to the McHenry Substation.

Project Design

9. The new 230 kV transmission line will be constructed on single pole double circuit weathering steel structures with the existing 115 kV Souris-McHenry transmission line. The typical height of the single pole structures will range from 85 to 130 feet, depending on span length and topography. Once the new 230/115 kV transmission line has been constructed, the existing 115 kV line and wooden H-frame structures will be removed. Site specific conditions may require other structures to be used, such as structures having reduced or increased height or multiple pole structures.

10. The maximum span between structures will be approximately 1,000 feet and will vary depending on geological or engineering constraints. The typical right-of-way width that will be used during construction and maintained during the life of the Project is 125 feet.

11. The new 230/115 kV transmission line from the McHenry Substation will terminate at the proposed Magic City Substation. NSP has acquired 50 acres for the substation to accommodate transmission line interconnections and possible future expansion. Approximately 10 acres of the 50 acres will be fenced and developed for the Magic City Substation as part of this Project. Of the remaining 40 acres, approximately 10 acres will be used as a staging area during construction. A single 115 kV transmission line will exit the Magic City Substation and connect the 115 kV line to the existing Souris-McHenry 115 kV transmission line which serves the Souris Substation.

12. The proposed transmission line and associated facilities will be designed and constructed to meet or surpass all relevant state codes, the National Electric Safety Code, and NSP standards.

13. The total cost of the Project is estimated to be approximately \$50.5 million.

Siting Criteria

14. North Dakota Administrative Code, Chapter 69-06-08 sets forth certain criteria to guide the Commission in evaluating the suitability of granting an application for a Certificate of Corridor Compatibility and Route Permit for a transmission facility. The criteria as set forth in Section 69-06-08-02 are classified as Exclusion Areas, Avoidance Area, Selection Criteria, and Policy Criteria.

15. North Dakota Administrative Code 69-06-08-02 provides that Exclusion and Avoidance Areas may be located within a corridor, but at no given point may such an area encompass more than 50 percent of the corridor width unless there is no reasonable alternative.

16. North Dakota Administrative Code, Section 60-06-08-02 provides that a transmission facility route must not be sited within an Exclusion Area. A transmission facility route must not be sited within an Avoidance Area unless the Applicant shows under the circumstances there are no reasonable alternatives.

17. In accordance with the Commission's Selection Criteria, a corridor or route may be approved if it is demonstrated that any significant adverse impacts that will result from the location, construction, and maintenance of the transmission facility will be at an acceptable minimum or managed at an acceptable minimum.

18. In accordance with the Commission's Policy Criteria, preference may be given to an applicant demonstrating certain benefits from the adoption of certain policies and practices.

19. NSP submitted information in its Application, exhibits, and testimony at the August 18, 2017 hearing, concerning compliance with the Commission Exclusion and Avoidance Areas Criteria as applied to the proposed corridor and route.

20. NSP evaluated a corridor width of approximately 300 feet centered on the proposed route for Commission Exclusion and Avoidance areas.

21. At no point within the Project corridor does an Exclusion or Avoidance Area encompass more than 50 percent of the Project corridor width.

22. No exclusion areas have been identified within the Project corridor.

23. There are avoidance areas within the 300 foot Project corridor. Both the City of Velva wellhead protection area and the North Prairie Watershed District III are present within the Project corridor and the southern end of the proposed route. There is no reasonable alternative to bypass these avoidance areas. The proposed route in this area follows the route of the existing Souris-McHenry 115 kV transmission line. To bypass these two avoidance areas is not reasonable as it would require additional land use impacts when an existing transmission line is already present in these areas. In addition, NSP will use best management practices to minimize potential impacts to surface and ground water. One such practice that will be employed will be to avoid re-fueling construction equipment on and around wellhead protection area and watershed district to avoid contamination of the soil and groundwater.

24. NSP has performed a Class III Cultural Resource Inventory (pedestrian survey) of the Project corridor. The North Dakota State Historic Preservation Office has concurred with the survey's recommended finding of *No Historic Properties Affected*.

25. There are six residences within 500 feet of the centerline of the proposed route. The owners of these residences have consented to the location of the Minot Project within 500 feet of their residence and have executed a waiver of this routing Avoidance Area criteria. There are no businesses or schools within 500 feet of the proposed route.

26. NSP submitted information in its Application and through its testimony that any adverse effects from the location, construction, and maintenance of the transmission facility as they relate to the Selection Criteria listed at Section 69-06-08-02(3) of the North Dakota Administrative Code, will be at an acceptable minimum or will be managed and maintained at an acceptable minimum.

27. NSP submitted information in its Application and through its testimony at the hearing to demonstrate its commitment to maximize, to the extent possible, the benefits of the transmission facility to meet the Policy Criteria set forth in Section 69-06-08-02(4) of the North Dakota Administrative Code.

28. NSP will implement mitigation measures to minimize impacts from the construction, operation, and maintenance of the Project as described in Section 6.0 of the Application.

29. NSP will abide by the terms of the Certification Relating to Order Provisions — Transmission Facility Siting with accompanying Tree and Shrub Mitigation Specifications executed on August 9, 2017 by NSP as modified below. All trees and tall shrubs will be cut and removed from the right of way unless future growth is not anticipated to interfere with the operation or maintenance of the transmission line. A tree inventory will be completed for all wooded areas that are cleared and an appropriate mitigation plan will be prepared and filed for Commission approval. NSP will ensure affected landowners are aware of tree clearing across the width of the right-of-way.

30. NSP submitted information in its Applications and at the hearing that good cause exists to waive procedures, time, schedules, and public hearings otherwise required by the Siting Act.

From the foregoing Findings of Fact, the Commission now makes its:

Conclusions of Law

1. The Commission has jurisdiction over this proceeding under North Dakota Century Code Chapter 49-22.

2. The Project proposed by NSP is a transmission facility as defined in North Dakota Century Code Section 49-22-03(12).

3. The location, construction, and operation of the proposed Project will produce minimal adverse effects of the environment and upon the welfare of the citizens of North Dakota.

4. The Application submitted by NSP meets the corridor and route evaluation criteria required by Chapter 49-22 of the North Dakota Century Code.

5. The proposed transmission facility corridor and route will minimize adverse human and environmental impact while ensuring continuing system reliability and integrity and ensuring that energy needs are met and fulfilled in an orderly and timely fashion.
6. The proposed Project is compatible with the environmental preservation and the efficient use of resources.
7. It is appropriate for the Commission to approve a Project corridor of less than ten percent of its length and less than one mile.

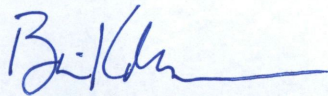
From the foregoing Findings of Fact and Conclusions of Law, the Commission now makes its:

Order

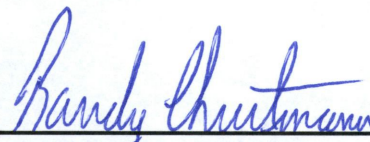
The Commission Orders:

1. NSP's application for a waiver of procedures and time schedules is granted.
2. Certificate of Corridor Compatibility No. 200 is issued to NSP designating a corridor for the construction, operation, and maintenance of the proposed approximately 20.5 mile, 230 kilovolt electric transmission line, Magic City Substation and associated facilities to be located in Ward and McHenry counties in North Dakota. For purposes of the Certificate, the designated corridor is 300 feet wide centered on the transmission route.
3. Route Permit No. 211 is issued to NSP granting authority to construct and operate an approximately 20.5 mile, 230 kilovolt electric transmission line, Magic City Substation and associated facilities in the route location as described in Exhibit 1, Appendix B.
4. The Certification Relating to Order Provisions — Transmission Facility Siting with accompanying Tree and Shrub Mitigation Specifications executed August 9, 2017, is incorporated by reference and attached to this Order, except that NSP may clear cut the entire right-of-way width through windbreaks, shelterbelts and all other wooded areas.
5. NSP shall survey all previously un-surveyed areas of the corridor for environmental and cultural resources and file copies of SHPO concurrence prior to beginning construction in those previously un-surveyed areas.

PUBLIC SERVICE COMMISSION



Brian Kroshus
Commissioner



Randy Christmann
Chairman



Julie Fedorchak
Commissioner

**PUBLIC SERVICE COMMISSION
STATE OF NORTH DAKOTA**

Certificate of Corridor Compatibility Number 200

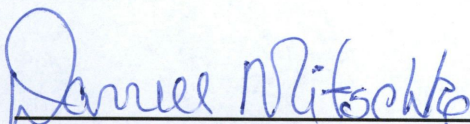
This is to certify that the Commission has designated a transmission facility corridor for Northern States Power Company for the construction of approximately 20.5 miles of 230 kV transmission line extending from the existing McHenry Substation in McHenry County near Velva to a new Magic City Substation to be constructed in Ward County near Minot, North Dakota.

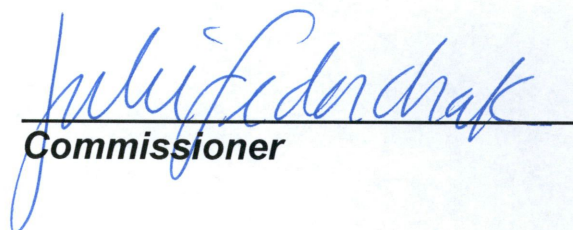
This certificate is issued in accordance with the Order of this Commission dated October 4, 2017 in Case No. PU-17-102 and is subject to the conditions and limitations noted in the Order.

Bismarck, North Dakota, June 22, 2016.

ATTEST:

PUBLIC SERVICE COMMISSION


Executive Secretary


Commissioner

PUBLIC SERVICE COMMISSION
STATE OF NORTH DAKOTA

Route Permit Number 211

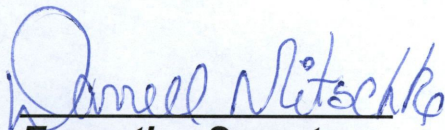
This is to certify that the Commission has designated a transmission facility route for Northern States Power Company for the construction of approximately 20.5 miles of 230 kV transmission line extending from the existing McHenry Substation in McHenry County near Velva to a new Magic City Substation to be constructed in Ward County near Minot, North Dakota.

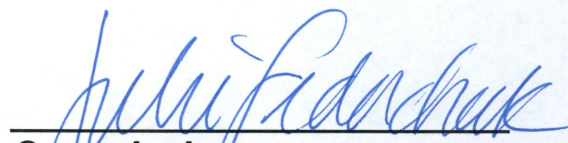
This permit is issued in accordance with the Order of this Commission dated October 4, 2017 in Case No. PU-17-102 and is subject to the conditions and limitations noted in the Order.

Bismarck, North Dakota, October 4, 2017.

ATTEST:

PUBLIC SERVICE COMMISSION


Executive Secretary


Commissioner

STATE OF NORTH DAKOTA
PUBLIC SERVICE COMMISSION

Northern States Power Company
230 kV Transmission Line – McHenry & Ward Counties
Siting Application

Case No. PU-17-102

CERTIFICATION RELATING TO ORDER PROVISIONS
TRANSMISSION FACILITY SITING

I am Pamela Jo Rasmussen, a representative of Northern States Power Company (“Company”) with authority to bind the Company to requirements to be set forth by the Commission in its Order and I certify the following:

1. Company understands and agrees that any Certificate of Corridor Compatibility or Route Permit issued by the Commission will be subject to the conditions and criteria set forth in Chapter 49-22 of the North Dakota Century Code and Chapter 69-06-08 of the North Dakota Administrative Code, and that Company shall be responsible for compliance with this order and conditions and criteria set forth in the applicable laws and rules.
2. Company agrees to comply with the rules and regulations of all other agencies having jurisdiction over any phase of the transmission facility including all city, township, and county zoning regulations.
3. Company understands and agrees that it shall obtain all other necessary licenses and permits, and shall provide copies of all licenses and permits to the Commission prior to construction activity associated with the transmission facility that requires said license or permit.
4. Company understands and agrees that any Certificate of Corridor Compatibility or Route Permit issued by the Commission is subject to suspension or revocation and may, in an appropriate and proper case, be suspended or revoked for failure to comply with the Commission’s order, the conditions and criteria of the certificate or subsequent modification, or failure to comply with the applicable statutes, rules, regulations, standards, and permits of other state or federal agencies.
5. Company agrees to maintain records that will demonstrate that it has complied with the requirements of the Commission’s order issuing a Certificate of Corridor Compatibility or Route Permit, and that it will preserve these records for Commission inspection at any reasonable time upon reasonable notice.
6. Company understands and agrees that the authorizations granted by any Certificate of Corridor Compatibility or Route Permit issued by the Commission for



the transmission facility are subject to modification by order of the Commission if deemed necessary to protect further the public or the environment.

Construction:

7. Company agrees to hold a preconstruction conference prior to commencement of any construction, which must include a Company representative, its construction supervisor, and a representative of Commission Staff, to ensure that Company fully understands the conditions set forth in the Commission's order.
8. Company understands and agrees that all cultural resource mitigation plans must be submitted to the North Dakota State Historic Preservation Office and approved prior to the start of any fieldwork and construction activity in the affected area.
9. Company understands and agrees that topsoil removal will begin when the Commission's third-party construction inspector is present at the Project site to observe that topsoil is properly removed and kept segregated from subsoil until replacement occurs. Company shall establish the date and time for the Commission's third-party construction inspector's topsoil removal oversight in the preconstruction conference.
10. Company agrees to inform the Commission and the Commission's third-party construction inspector of its intent to start construction on the transmission facility prior to the commencement of construction. Once construction has started, Company shall keep the Commission and the Commission's third-party construction inspector updated on construction activities on a monthly basis.
11. Company understands and agrees that all topsoil, up to 12 inches, or topsoil to the depth of cultivation, whichever is greater, over and along trench areas where cuts will be made, must be carefully stripped and segregated from the subsoil. Any area on which excavated subsoil will be placed must also be stripped of topsoil. The stripped topsoil must not be stockpiled in natural drainages, and must be protected from water erosion. Care must be taken to protect topsoil from unnecessary compaction by heavy machinery. Unless otherwise approved by the Commission, topsoil must be removed before topsoil freezes in the late fall/ early winter to the point that frost inhibits proper soil segregation. After backfilling with subsoil is completed, any excess subsoil must be placed over the excavation area, blending the grade into existing topography. Topsoil must be replaced over areas from which it was stripped only after the subsoil is replaced.
12. Company understands and agrees that all buried facility crossings of graded roads must be bored unless the responsible governing agency specifically permits Company to open cut the road.

13. Company understands and agrees that staging areas or equipment shall not be located on land owned by a person other than Company unless otherwise negotiated with landowners.
14. Company understands and agrees that if any cultural resource, paleontological site, archeological site, historical site, or grave site is discovered during construction, it must be marked, preserved and protected from further disturbances until a professional examination can be made and a report of such examination is filed with the Commission and the State Historical Society.
15. Company understands and agrees that construction must be suspended when weather conditions are such that construction activities will cause irreparable damage to roads or land, unless adequate protection measures are taken by Company.
16. Company understands and agrees that the Commission has authority to stop Project construction activities in the event of a probable violation of the siting laws, siting rules, or applicable Commission Orders if, in the opinion of the Commission, construction activities are likely to result in irreparable or significant harm.

Restoration and Maintenance:

17. Company understands and agrees that it shall, as soon as practicable upon the completion of the construction of the transmission facility, restore the area affected by the activities to as near as is practicable to the condition as it existed prior to the beginning of construction.
18. Company understands and agrees that all pre-existing township and county roads and lanes used during construction must be repaired or restored to a condition that is equal to or better than the condition prior to the construction of the transmission facility and that will accommodate their previous use, and that areas used as temporary roads or working areas during construction must be restored to their original condition.
19. Company understands and agrees that reclamation, fertilization, and reseeding is to be done according to the Natural Resources Conservation Service recommendations, unless otherwise specified by the landowner and approved by the Commission.
20. Company will fulfill its obligation for reclamation and maintenance of the approved transmission facility right-of-way, transmission facility, and associated facilities continuing throughout the life of the transmission facility.
21. Company will repair all fences and gates removed or damaged during all phases of construction and operation of the transmission facility.

22. Company will repair or replace all drainage tile broken or damaged as a result of construction and operation of the transmission facility.
23. Company agrees to comply with the Tree and Shrub Mitigation Specifications, attached.
24. Company understands and agrees that it shall work with landowners and residents to mitigate any increase in television and residential radio interference that results from the construction of the transmission facility.
25. Company understands and agrees that it shall remove all waste that is a product of construction and operation, restoration, and maintenance of the site, and properly dispose of it on a regular basis.
26. Company understands and agrees that it shall provide any necessary safety measures for traffic control or to restrict public access to the transmission facility.

Communication with Landowners and PSC:

27. Company understands and agrees that, prior to beginning construction of the transmission facility at a location, it shall send a letter to each landowner with whom an easement was executed for that location specifying the name and phone number of the company representative who is responsible for receiving and resolving landowner issues for the life of the easement.
28. Company understands and agrees that it will file with the commission the name and phone number of the current company representative who is responsible for receiving and resolving landowner issues for the transmission facility. The company will update this information whenever there is a change to the current company representative for the life of all easements for the transmission facility.
29. Upon request, Company agrees to provide the Commission with engineering design drawings of the transmission facility prior to construction.
30. Company understands and agrees that it shall advise the Commission as soon as reasonably possible of any extraordinary events which take place at the site of the transmission facility, including injuries to any person.
31. Company agrees to report to the Commission, as soon as reasonably possible, the presence in the permit area of any critical habitat or threatened or endangered species of which Company becomes aware and which were not previously reported to the Commission.

32. Company understands and agrees that it shall inform the Commission in writing of any plans to modify the transmission facility or of any plans to modify the site plan for the transmission facility.
33. Company agrees to provide the Commission with both an electronic and a paper copy of the corridor approved by the Commission and the facility design specifications for the construction of the transmission facility showing the location of the transmission facility as built, and will provide this information within 3 months of the completion of the construction. Company also agrees to provide an electronic version of the corridor approved by the Commission and the facility design specifications for the construction of the transmission facility showing the location of the transmission facility as built that can be imported into ESRI GIS mapping software within 3 months of the completion of the construction. This electronic map data must be referenced to the North Dakota coordinate system of 1983, North and/or South zones US Survey feet (NAD 83) UTM Zone 13N or 14N feet (NAD 83), or geographic coordinate system (WGS 84) feet. The vertical data must be in the appropriate vertical datum for the coordinate system used. All submissions must specify the datum in which the data was developed.
34. Company shall notify the Commission as soon as reasonably possible if any damage, as defined by North Dakota Century Code Chapter 49-23, occurs to underground facilities during construction conducted under the certificate or permit issued in this proceeding. In the event of any damage to underground facilities, Company shall suspend construction in the vicinity of the damage until compliance with One-Call Excavation Notice System requirements under North Dakota Century Code Chapter 49-23 has been determined.

Dated this 9 day of August, 2017.

NORTHERN STATES POWER COMPANY

By Jan J. Rasmussen
Sr. Manager Siting & Land Rights

Its Agent

STATE OF NORTH DAKOTA
PUBLIC SERVICE COMMISSION

Northern States Power Company
230 kV Transmission Line – McHenry & Ward Counties
Siting Application

Case No. PU-17-102

Tree and Shrub Mitigation Specifications

Inventory

1. Trees and shrubs anticipated to be cleared, including those that are considered invasive species or noxious weeds (*e.g.*, *Caragana arborescens*, *Elaeagnus angustifolia*, *Rhamnus cathartica*, *Tamarix chinensis*, *T. parviflora*, *T. ramosissima*, *Ulmus pumila*), must be inventoried before cutting. The inventory must record the location, number, and species of trees and shrubs.
2. In windbreaks, shelterbelts and other planted areas, trees or shrubs anticipated to be cleared, regardless of size, must be inventoried for replacement.
3. In native growth areas, trees anticipated to be cleared that are 1 inch diameter at breast height (dbh) or greater must be inventoried for replacement.
4. In native growth areas, shrubs anticipated to be cleared in the permanent right-of-way must be inventoried for replacement.
5. In native growth areas outside the permanent right-of-way, shrubs must be cut flush with the surface of the ground, taking care to leave the naturally occurring seed bank and root stock intact. If soil disturbance is necessary, the native topsoil must be preserved and replaced after construction. Shrubs must be allowed to regenerate naturally where native topsoil is preserved and replaced. Where native topsoil is not preserved and replaced, shrubs anticipated to be cleared must be inventoried for replacement.
6. In native growth areas, trees and shrubs may be inventoried by actual count or by a sampling method that will properly represent the woody vegetation

population. A sampling plan developed by the company, filed with the North Dakota Public Service Commission (Commission) and approved prior to the start of construction must define the sampling method to be used for trees, for tall shrubs and for low shrubs. The data from the sample plots must be extrapolated to the total acreage of the wooded area to be cleared to determine the species and quantity of trees and shrubs to be replaced.

Clearing for Construction

7. Trees and shrubs must be selectively cleared, leaving mature trees and shrubs intact where practical.
8. The maximum width of clear cuts through windbreaks, shelterbelts and all other wooded areas is 50 feet, unless otherwise approved by the Commission.
9. If the area of trees or shrubs actually cleared differs from the area inventoried, the difference in number of trees and shrubs to be replaced must be noted on the inventory.

Replacement

10. Prior to tree and shrub replacement, documentation identifying the number and variety of trees and shrubs removed, as well as the mitigation plan for the proposed number, variety, type, location and date of replacement plantings, must be filed with and approved by the Commission.
11. Two 2-year-old saplings must be planted for every one tree removed. Two shrubs (stem cuttings) must be planted for every one shrub removed.
12. Except in the case of invasive or noxious species, trees and shrubs must be replaced by the same species or similar species, suitable for North Dakota growing conditions as recommended by the North Dakota Forest Service. Invasive or noxious species must be replaced by similar non-invasive or non-

noxious species suitable for North Dakota growing conditions as recommended by the North Dakota Forest Service.

13. Tree and shrub replacement must not be conducted within a 20 to 30 foot wide path over the pipeline to facilitate visual inspections of the right-of-way in accordance with U.S. Department of Transportation safety regulations.
14. Landowners must be given the option of having replacement trees and shrubs planted on the landowner's property, either on or off the right-of-way. The landowner must also be given the opportunity to waive those options in writing in order to have replacement trees and shrubs planted off the landowner's property.
15. At the conclusion of the project, documentation identifying the actual number, variety, type, location and date of the replacement plantings must be filed with the Commission.
16. Tree and shrub replacements must be inspected annually, in September, for three years. The first annual inspection must be at least one year from the anniversary date of the original plantings. A report of each annual inspection must be submitted to the Commission by October 1 of each year, documenting the condition of plantings and any woodlands work completed as of September of each year. If after the third annual report the survival rate is less than 75%, the Commission may order additional planting(s).