

# New Frontier Wind Energy Project

## Tree and Shrub Inventory and Mitigation/Replacement Plan

March 2020

Prepared for: Meadowlark Wind I LLC, a wholly-owned subsidiary of



155 Federal Street, Suite 1200, Boston, Massachusetts 02110

Prepared by:



350 Indiana Street, Suite 500, Golden, Colorado 80401



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# 1. INTRODUCTION AND REGULATORY BACKGROUND

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In 2018, Meadowlark Wind I LLC (Meadowlark), a wholly-owned subsidiary of Capital Power Corporation, constructed the 99 megawatt New Frontier Wind Energy (Project) in McHenry County, North Dakota (Figure 1). The North Dakota Public Service Commission (Commission or PSC) issued a Certificate of Site Compatibility for the Project on April 25, 2012, and an Order of Continuing Suitability (PSC Order) on May 10, 2017 (Commission Case No. PU-11-69).

Construction of the Project required the removal of trees and shrubs. According to Condition 27 in the PSC Order, Meadowlark agreed to comply with the Tree and Shrub Mitigation Specifications, which were provided as an attachment to the PSC Order (Appendix A, *North Dakota Public Service Commission Order of Continuing Suitability*, Case No. PU-11-69).

The PSC requires submittal and approval of a tree and shrub mitigation/replacement plan before trees or shrubs are replaced. Meadowlark elected to inventory trees and shrubs through a combination of actual count and sampling of trees and shrubs anticipated to be removed, as provided for in Item 6 of the Tree and Shrub Mitigation Specifications. Meadowlark filed the Tree and Shrub Sampling Plan with the PSC on June 7, 2017, and the Tree and Shrub Sampling Plan was approved by the PSC on June 16, 2017. Paragraphs 12, 14, and 16 of the PSC Order outline the specific requirements for tree and shrub replacement, as follows:

- 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.*
- 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 these options in writing in order to have replacement trees and shrubs planted off the landowner's property.*
- 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).*

Meadowlark retained Tetra Tech to conduct the tree and shrub inventory (Appendix B) and to assist in the preparation of the tree and shrub mitigation plan for the Project. Meadowlark retained the South McHenry County Soil Conservation District (SCD) to assist in contacting landowners to determine their tree replacement preferences and prepare the planting plans (Appendix C). The numbers of trees and shrubs

removed are provided in Section 2. A summary of the landowner consultation is provided in Section 3. The proposed planting schedule is provided in Section 4. A monitoring plan is provided in Section 5.

## 2. INVENTORY OF TREES AND SHRUBS IN PROJECT AREA

Tetra Tech conducted a pre-construction survey to estimate the number and location of projected trees and shrubs that would be removed during construction of the Project based on proposed ground disturbance. Post-construction, Tetra Tech surveyed windbreaks, shelterbelts, other planted areas, and native growth areas to confirm the overall initial estimate. Counts were completed by direct stem count. The tree and shrub inventory included 335 trees and 671 shrubs for a total number of 1,006 (Appendix B).

Trees were removed from 13 locations. A total of 1,006 trees and shrubs were removed from within the Project right-of-way (Table 1). The total number of trees/shrubs to be replaced is 2,012, based on the required 2:1 replacement ratio.

**Table 1. Location and Number of Trees and Shrubs Removed within Project Area**

Landowner	Location			Type of Tree/Shrub Removed	Tree or Shrub	Number of Trees/Shrubs Removed
	Township	Range	Section			
C. Legg	151	80	34	Saskatoon serviceberry	Shrub	3
				Chokecherry	Shrub	17
				Western snowberry	Shrub	3
C. Nelson	153	80	26	Boxelder	Tree	128
				Green ash	Tree	10
				Cottonwood	Tree	39
				Siberian peashrub	Shrub	60
				American plum	Shrub	22
				Chokecherry	Shrub	10
D. Baluski	151	80	19	Siberian elm	Tree	2
				Saskatoon serviceberry	Shrub	13
				Hawthorn	Shrub	74
				Chokecherry	Shrub	13
				Silverberry	Shrub	6
				Western snowberry	Shrub	13
David L. Newman, Vicki Johnsons and Marilyn A Nurnberger				Hawthorn	Shrub	8
				Western snowberry	Shrub	7

**Table 1. Location and Number of Trees and Shrubs Removed within Project Area**

Landowner	Location			Type of Tree/Shrub Removed	Tree or Shrub	Number of Trees/Shrubs Removed
	Township	Range	Section			
F. Baluski	151	80	30	Saskatoon serviceberry	Shrub	11
				Hawthorn	Shrub	60
				American plum	Shrub	5
				Chokecherry	Shrub	22
				Western snowberry	Shrub	11
J. Olson				Hawthorn	Shrub	1
J. Ganje				Green ash	Tree	2
				Siberian elm	Tree	5
				Cottonwood	Tree	7
				Chokecherry	Shrub	1
M. Shattuck				Green ash	Tree	6
				Siberian elm	Tree	12
				Hawthorn	Shrub	2
				Western snowberry	Shrub	2
L. Anderson				Green ash	Tree	7
				Hawthorn	Shrub	106
				Western snowberry	Shrub	3
M. Berg				Western snowberry	Shrub	1
R. Hauf				Peachleaf willow	Tree	8
				Silverberry	Shrub	1
				Western snowberry	Shrub	191
R. Anderson				Cottonwood	Tree	22
				Siberian elm	Tree	5
				Chokecherry	Shrub	2
W. Berg				Green ash	Tree	63
				Cottonwood	Tree	19
				Tatarian honeysuckle	Shrub	2
				American plum	Shrub	1
<b>Total</b>						<b>1,006</b>

### 3. LANDOWNER CONSULTATION

The South McHenry County SCD contacted the 13 landowners affected (see Table 1) to determine preferences for tree/shrub replacement. The landowners were asked whether they preferred trees/shrubs to be replaced on their property off the Project right-of-way, or whether they preferred not to have trees/shrubs replaced on their property and instead have them planted at an alternative location. Five landowners requested replacement of the trees/shrubs on their property and the remaining landowners chose not to have trees/shrubs replaced on their property; therefore, alternate locations were determined.

The South McHenry County SCD coordinated with the landowners to determine which tree/shrub species were preferred for replacement, the new proposed location for the tree/shrub species, and the amount of each type (see Appendix D, Affidavit of D. Johnston).

A planting plan was proposed for each area of removal, which designated a series of 2:1 plantings in locations where trees and shrubs were removed (Table 2; Appendix C). Meadowlark is planting more than a 2:1 ratio, therefore 2,595 trees and shrubs are estimated to be planted to improve the likelihood of reaching the 75 percent survival rate. The appropriateness of tree and shrub requests were reviewed by Tetra Tech, North Dakota Forest Service, and the South McHenry County SCD. Requested species were suitable to North Dakota growing conditions and are commonly recommended for tree plantings by the North Dakota Forest Service and the South McHenry County SCD. Same or similar replacement plantings have been discussed between the South McHenry County SCD and the landowners. The South McHenry County SCD prepared tree plans for all landowners below except J. Olson who will have 29 hand plantings, therefore, a tree plan was not prepared.

**Table 2. Landowner Preferences for Tree Replacement**

Landowner	Number of Trees/Shrubs Removed (Actual Count)	Number of Replacement Trees/Shrubs	Tree/Shrub Species Requested	Comments
C. Legg	23	84	American plum, Common chokecherry	The South McHenry County SCD has been in contact with the landowner.
C. Nelson	269	543	Common lilac, Scotch pine	The South McHenry County SCD has been in contact with the landowner.
D. Baluski	121	358	American plum, Black currant, Green ash, Scotch pine, Black Hills spruce, Rocky Mountain juniper	The South McHenry County SCD has been in contact with the landowner.
The Jerry G. Nurnberger Facility Trust	15	--	--	Waived plantings.
F. Baluski	109	224 / 191	Scotch pine, American plum, Late lilac, Amur maple Golden currant, Late lilac, Common lilac, Rose species	The South McHenry County SCD has been in contact with the landowner.
J. Olson	1	29	--	The South McHenry County SCD has been in contact with the landowner. Landowner only wants 29 trees and they will be handplanted (a tree plan was not prepared).
J. Ganje	15	--	--	Waived plantings.
M. Shattuck	22	--	--	Waived plantings.
L. Anderson	116	--	--	Waived plantings.
M. Berg	1	--	--	Waived plantings.
R. Hauf	200	--	--	Waived plantings.
R. Anderson	29	--	--	Waived plantings.
W. Berg	85	--	--	Waived plantings.

**Table 2. Landowner Preferences for Tree Replacement**

Landowner	Number of Trees/Shrubs Removed (Actual Count)	Number of Replacement Trees/Shrubs	Tree/Shrub Species Requested	Comments
D. Drovdal	--	250	Rocky Mountain juniper, American plum	Newly identified landowner to take trees and shrubs being waived by landowners in the Project Area.
P. Kimple	--	388	Rocky Mountain juniper, Ponderosa pine, American plum, Black currant	Newly identified landowner to take trees and shrubs being waived by landowners in the Project Area.
Johnston Ranch	--	528	Rocky Mountain pine, Scotch pine, Ponderosa pine, Eastern redcedar	Newly identified landowner to take trees and shrubs being waived by landowners in the Project Area.
<b>TOTAL</b>	<b>1,006</b>	<b>2,595</b>		

## 4. PLANTING SCHEDULES

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### 4.1 Spring 2020

The planting for the Project will begin in spring or early summer 2020 (Appendix C). The planting will be in sections, townships, and ranges listed in Appendix C. Meadowlark and the South McHenry County SCD will be responsible for making arrangements to cultivate the area and prepare the soil for planting. Conservation grade trees will be purchased from the South McHenry County SCD.

The South McHenry County SCD will plant replacement trees. Generally, replacement trees are 2-year-old saplings and shrubs are stem cuttings (conservation grade trees).

## 5. FOLLOW-UP DOCUMENTATION AND MONITORING

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After the trees have been planted, the number, species, location, and date of planting will be documented and filed with the PSC.

Replacement plantings will be inspected annually each year for 3 years in September of 2021, 2022, and 2023. The number and type of each surviving tree or shrub will be recorded. Notes on the condition of the saplings will be taken. Survival rates will be calculated and a report will be submitted to the PSC before October 1 of each year documenting the condition of plantings and the woodlands work completed as of September of each year. If after the third annual report the survival rate is less than 75 percent (1,509), additional plantings may be ordered based on consideration by the PSC.

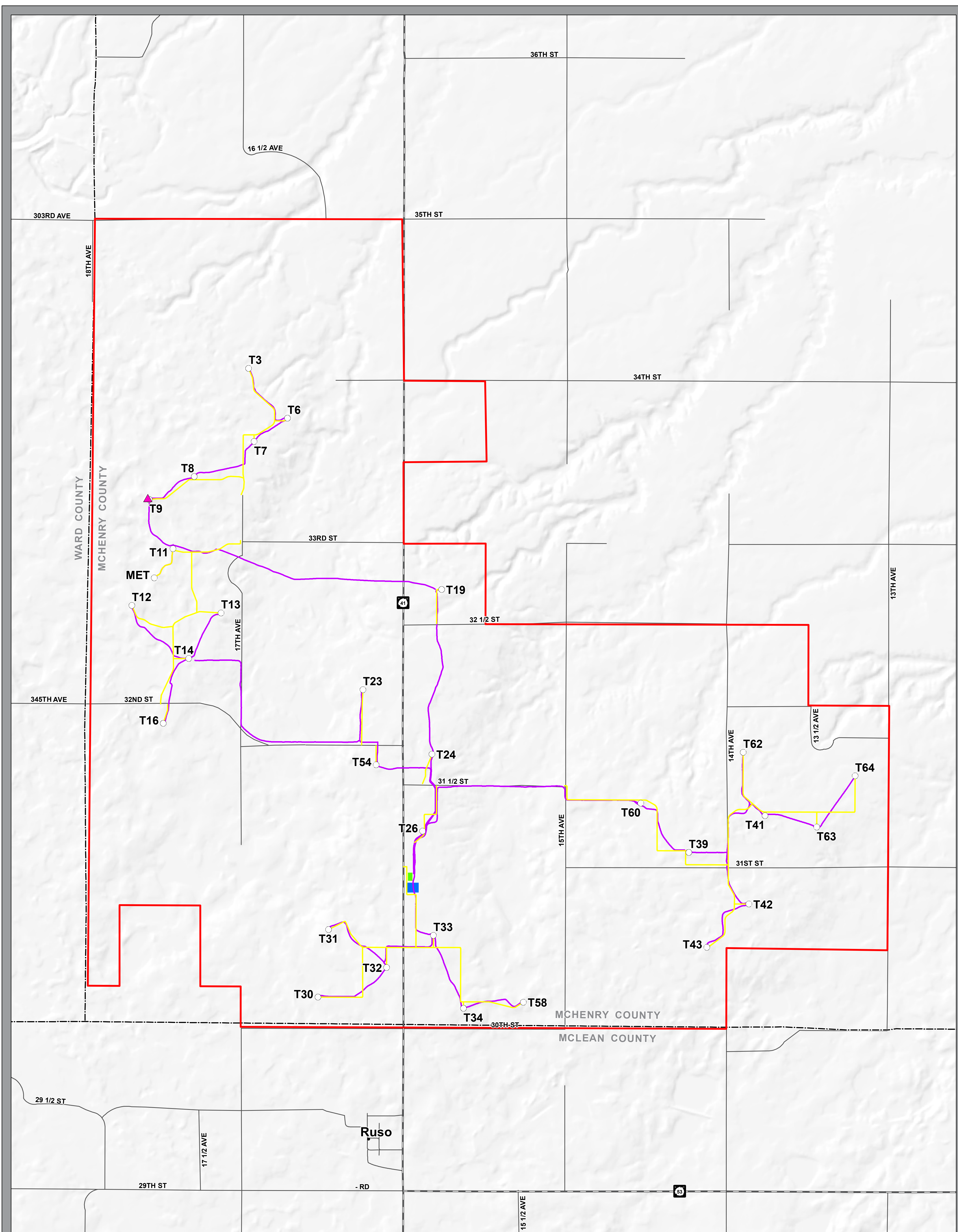
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# Figures

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Tree and Shrub Inventory and Mitigation/Replacement Plan  
New Frontier Wind Energy Project

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# NEW FRONTIER WIND ENERGY PROJECT

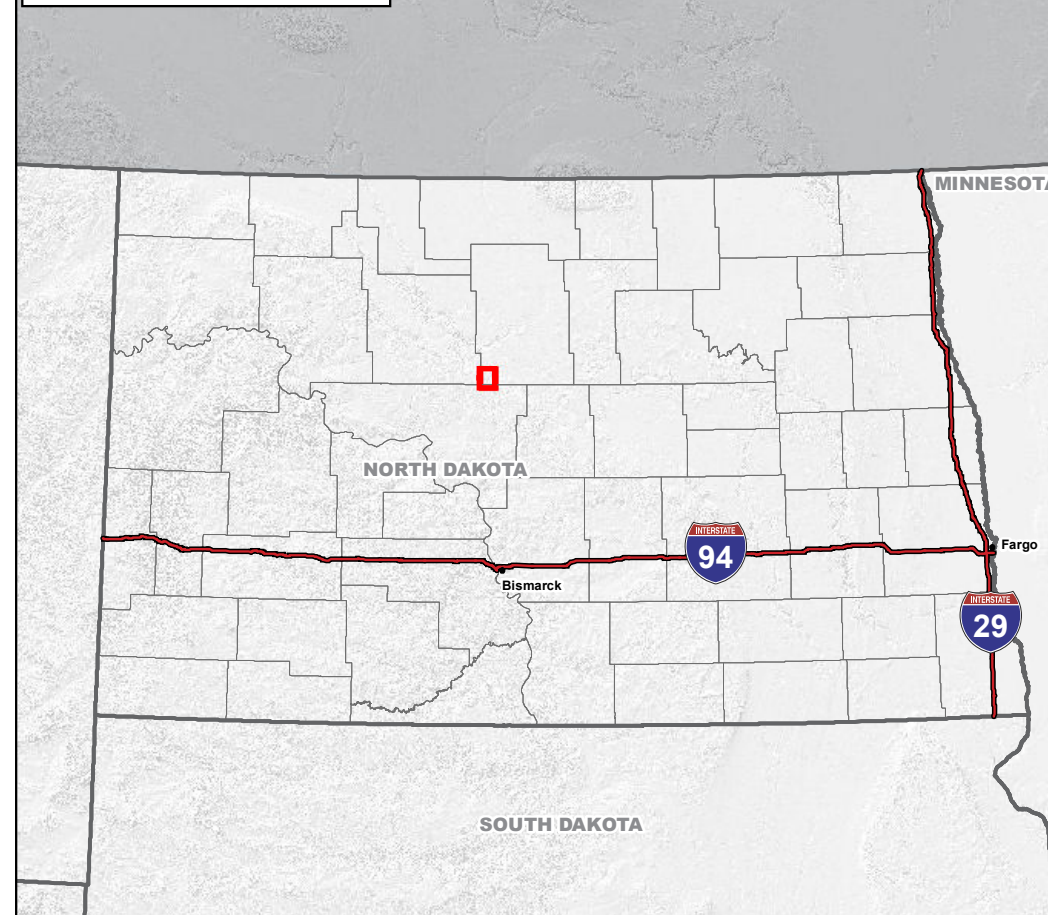
Figure 1. Project Location

- Project Area
  - Turbine
  - Met Tower
  - Access Road
  - Collector Line
  - Crane Path
  - O & M Building
  - Substation
- Hydrology**
- Perennial Stream
  - Intermittent Stream
  - Waterbody

0 0.25 0.5 Miles  
Scale is 1:36,000 when printed at 11"x17"



## Vicinity Map



# **Appendix A: North Dakota Public Service Commission Order**

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Tree and Shrub Inventory and Mitigation/Replacement Plan  
New Frontier Wind Energy Project

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MAY 15 2017

STATE OF NORTH DAKOTA  
PUBLIC SERVICE COMMISSION

Meadowlark Wind I, LLC  
New Frontier Wind Energy Project – McHenry County  
Siting Application

Case No. PU-11-69

AFFIDAVIT OF SERVICE BY CERTIFIED MAIL

STATE OF NORTH DAKOTA  
COUNTY OF BURLEIGH

Geralyn R. Schmaltz deposes and says that:

she is over the age of 18 years and not a party to this action and, on the **11th day of May, 2017**, she deposited in the United States Mail, at Bismarck, North Dakota, **one** envelope with certified postage, return receipt requested, fully prepaid, securely sealed and containing photocopy of:

- **Order on Continuing Suitability**

The envelope was addressed as follows:

Mollie Smith  
Fredrikson & Byron, P. A.  
200 South Sixth Street Suite 4000  
Minneapolis, MN 55402-1425  
**Cert. No. 7016 1970 0001 1484 4146**

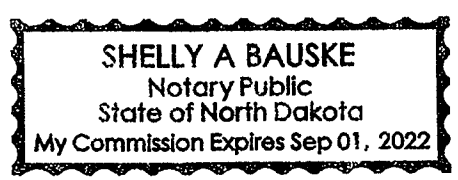
The addresses shown are the respective addressee's last reasonably ascertainable mailing address.

*Geralyn R. Schmaltz*

Subscribed and sworn to before me  
this **11th day of May, 2017**.

*Shelly A. Bauske*  
Notary Public

SEAL



**STATE OF NORTH DAKOTA**  
**PUBLIC SERVICE COMMISSION**

**Meadowlark Wind I LLC  
New Frontier Wind Project – McHenry County  
Siting Application**

**Case No. PU-11-69**

**ORDER OF CONTINUING SUITABILITY**  
**May 10, 2017**

**Preliminary Statement**

On April 25, 2012, the North Dakota Public Service Commission (Commission) issued Certificate of Site Compatibility No. 29 to Meadowlark Wind I LLC (Meadowlark) for the New Frontier Wind Project (Project), in McHenry County, North Dakota.

On November 22, 2016, Meadowlark filed with the Commission a Certification of Continuing Suitability with supporting documentation (Certification), certifying that the site designated for the Project continues to meet the conditions upon which Certificate of Site Compatibility No. 29 was issued.

On December 14, 2016, the Commission issued a Notice of Opportunity for Hearing (Notice), which provided until January 31, 2017 for receiving written comments or hearing requests. No requests for hearing were received. The Notice identified the issues to be considered in this matter are whether the site continues to meet the evaluation requirements and conditions under which Certificate of Site Compatibility Number 29 was issued and if so then during what time period should construction be authorized to begin.

The Commission held an informal hearing at 1:30 pm on February 7, 2017 CST in the Commission Hearing Room, State Capitol, 12th Floor, Bismarck, North Dakota 58505.

Having considered this matter, the Commission finds the site designated in Certificate of Site Compatibility No. 29 for the New Frontier Wind Project continues to meet the conditions upon which the Certificate was issued and the evaluation requirements of Chapter 49-22 of the North Dakota Century Code and Article 69-06 of the North Dakota Administrative Code.

Therefore, the Commission makes the following:

## Order

The Commission orders:

1. Meadowlark Wind I LLC is authorized to begin construction of the New Frontier Wind Project pursuant to Certificate of Site Compatibility No. 29 as early as the Third Quarter 2017 and no later than the Second Quarter 2020.
2. The site designated under Certificate of Site Compatibility No. 29 is modified to correspond to the updated Figure 1 (Docket Entry #88) presented by Meadowlark at the February 7, 2017 informal hearing.
3. Within the designated site, Meadowlark is authorized to site, construct, operate, and maintain wind turbines and associated equipment, electrical collection and communication lines, access roads, an operations and maintenance building, a Project substation, meteorological towers, and any other associated facilities identified in the Certification and documents referenced therein, at the informal hearing, and in any supplemental filings.
4. Meadowlark shall comply with the following requirements:
  - a. Meadowlark shall construct no more than 49 turbines and no more than 102 MW within the designated site.
  - b. Meadowlark shall comply with the siting criteria set forth in the version of Section 69-06-08-01 of the North Dakota Administrative Code in effect as of the date of this Order.
  - c. Meadowlark shall site turbines at least 1,400 feet from currently occupied residences.
  - d. Meadowlark shall site Project turbines so as to meet a shadow flicker goal of 30 hours per year or less at each currently occupied residence, considering site-specific conditions, unless a written acknowledgment is obtained from the landowner.
  - e. Meadowlark shall use commercially reasonable efforts to install an aircraft detection and lighting system or other suitable lighting technology on the Project by December 31, 2019 or upon commencement of operation, whichever is later.
  - f. Meadowlark has executed and shall comply with the March 10, 2017 Certification Relating to Order Provisions – Wind Energy Conversion Facility, with accompanying Tree and Shrub Mitigation Specifications.

5. If modifications are made to the Project layout, Meadowlark shall complete a Class III cultural resource survey for any previously un-surveyed portions of the designated site affected by Project-related construction activities, in accordance with SHPO guidance; shall submit cultural resource findings to SHPO for review; and shall obtain and file a copy of SHPO's response with the Commission prior to beginning construction in said areas.

6. If modifications are made to the Project layout, Meadowlark shall complete a wetland delineation of any previously un-surveyed areas affected by Project-related activities, as necessary, and file the report with the Commission.




7. In the event Project modifications occur that are not covered by its current sound analysis, Meadowlark shall conduct a sound analysis and file a report with the Commission to ensure that the Project complies with the Commission's Avoidance Area Sound Requirement.

8. In the event Project modifications occur that are not covered by its current shadow flicker analysis, Meadowlark shall conduct a shadow flicker analysis and file a report with the Commission to ensure that the Project complies with the commitment in Order Paragraph No. 4(d).

9. The December 8, 2011 Certification Relating to Order Provisions – Energy Conversion Facility Siting, with accompanying Tree and Shrub Mitigation Specifications, is superseded in its entirety by the March 10, 2017 Certification Relating to Order Provisions – Wind Energy Conversion Facility Siting, with accompanying Tree and Shrub Mitigation Specifications, and the latter is incorporated by reference and attached to this Order.

10. Except to the extent superseded or modified by this Order, the Conclusions of Law and Order provisions of the Commission's April 25, 2012 Order issuing Certificate of Site Compatibility No. 29 remain in effect.

**PUBLIC SERVICE COMMISSION**

 _____ <b>Brian Kroshus</b> Commissioner	 _____ <b>Randy Christmann</b> Chairman	 _____ <b>Julie Fedorchak</b> Commissioner
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STATE OF NORTH DAKOTA  
PUBLIC SERVICE COMMISSION

Meadowlark Wind I LLC  
New Frontier Wind Project – McHenry County  
Siting Application

Case No. PU-11-69

**CERTIFICATION RELATING TO ORDER PROVISIONS  
WIND ENERGY CONVERSION FACILITY SITING**

I am William R. Behling, a representative of Meadowlark Wind I LLC (“Company”) with authority to bind Company to requirements to be set forth by the Commission in its Order and I certify the following:

1. Company understands and agrees that the Certificate of Site Compatibility will be issued by the Commission 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 proposed energy conversion 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 energy conversion facility that requires said license or permit.
4. Company understands and agrees that the Certificate of Site Compatibility 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 and the Certificate of Site Compatibility, 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 the Certificate of Site Compatibility for the energy conversion facility are subject to modification by

order of the Commission if deemed necessary to protect further the public or the environment.

7. Company is aware that under North Dakota Century Code section 49-02-27 the Commission has rules for decommissioning of wind energy conversion facilities. Company agrees to comply with all decommissioning rules adopted by the Commission.

**Construction:**

8. 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.
9. Company understands and agrees that all cultural resource mitigation plans must be approved by the North Dakota State Historic Preservation Office prior to the start of any fieldwork and construction activity in the affected area.
10. 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.
11. Company agrees to inform the Commission and the Commission's third-party construction inspector of its intent to start construction on the energy conversion 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 of construction activities on a monthly basis.
12. Company is aware that North Dakota law requires that all companies that own or operate electric generation of any size for the primary purpose of resale must comply with the standards of the National Electrical Safety Code in effect at the time of construction of the generation facility, and agrees to comply with that requirement.
13. Company agrees to construct and operate the energy conversion facility in accordance with all applicable safety requirements.
14. Company understands and agrees that it shall bury all underground collection and feeder lines to a depth of at least 48 inches to the top of the lines.

15. Company understands and agrees that topsoil, up to 12 inches, or topsoil to the depth of cultivation, whichever is greater, over and along trench areas, roadways, tower locations, and locations of associated facilities must be carefully stripped and segregated from the subsoil. Any area on which excavated subsoil will be placed must first 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.
16. Company understands and agrees that all buried facility crossings of graded roads shall be bored unless the responsible governing agency specifically permits Company to open cut the road.
17. 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.
18. 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 by the State Historical Society, a report of such examination is filed with the Commission.
19. 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.
20. Company agrees that the Commission's third-party construction inspector will be allowed to stop Project construction activities to prevent an imminent hazard from occurring before the Commission could take formal action with respect to said activities. For purposes of this provision, "imminent hazard" means a condition that presents a substantial likelihood of death, serious illness, severe personal injury, or a substantial endangerment to health, property, or the environment. Other Project construction activities would be allowed to continue.~~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:**

21. Company agrees that it shall, as soon as practicable upon the completion of the construction of the energy conversion 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.
22. 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 energy conversion 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.
23. 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.
24. Company will fulfil its obligation for reclamation and maintenance of the approved site continuing throughout the life of the energy conversion facility.
25. Company will repair all fences and gates removed or damaged during all phases of construction and operation of the proposed energy conversion facility.
26. Company will repair or replace all drainage tile broken or damaged as a result of construction and operation of the proposed energy conversion facility.
27. Company agrees to comply with the Tree and Shrub Mitigation Specifications, attached.
28. 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 energy conversion facility.
29. 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.
30. Company understands and agrees that it shall provide any necessary safety measures for traffic control or to restrict public access to the energy conversion facility.

**Communication with Landowners and PSC:**

31. Company agrees to provide the Commission with engineering design drawings showing surveyed structure and collection substation locations prior to construction.
32. 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 energy conversion facility, including injuries to any person, a tower collapse, or a catastrophic turbine failure.
33. Company agrees to report to the Commission, as soon as reasonably possible, the presence in or near the approved site of any critical habitat of threatened or endangered species that Company becomes aware of and which were not previously reported to the Commission.
34. Company agrees to provide the Commission with both an electronic and a paper copy of the site approved by the Commission and the facility design specifications for the construction of the energy conversion facility showing the location of the energy conversion 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 site approved by the Commission and the facility design specifications for the construction of the energy conversion facility showing the location of the energy conversion 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.
35. 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.
36. Company agrees that it shall provide, if requested, educational material for landowners within the site boundaries about the proposed energy conversion facility and any restriction or danger concerning the proposed energy conversion facility.

37. Company understands and agrees that it shall implement a procedure for how complaints concerning the proposed energy conversion facility will be handled by Company


**Modification of Energy Conversion Facility or Energy Conversion Site Plan:**

38. Before conducting any construction activities for any modification within the designated site, the Company will file the name and contact information for a key contact person for the purposes of notice and communication during the site modification application and will use the following procedures:
- A. Before conducting any construction activities for any modification within the designated site, and such construction activities will not affect any known exclusion or avoidance areas within the designated site, the Company will file certification and supporting documentation:
1. Affirming that construction activities will not affect any known exclusion or avoidance areas within the designated site;
  2. Including a map meeting the requirements of N.D. Admin. Code § 69-06-04-01(2)(n) identifying the designated site and site modification(s); and
  3. Affirming that Company will comply with the Commission's order, law and rules designating the site.
- B. Before conducting any construction activities for any modification within the designated site, and such construction activities will not affect any known exclusion but may affect an avoidance area within the designated site, the Company will file:
1. A specific description of the avoidance area expected to be impacted, including a map meeting the requirements of N.D. Admin. Code § 69-06-04-01(2)(n) identifying:
    - a. the designated site and the site modification;
    - b. all exclusion and avoidance areas within the portion of the designated site containing the site modification.
  2. Certification and supporting documentation affirming that construction activities will not affect any known exclusion area.
  3. All field studies performed on the portion of the designated site containing the site modification;
  4. Specific information about any mitigation measures Company will take within the modification area;
  5. Certification that each owner of real property on which the modification is to be located and any applicable governmental entity with an interest in the same modification area do not oppose the modification;
  6. Certification that unless the Commission previously authorized the impact to the same avoidance area, that the Company utility has good cause and a specific reason to impact the avoidance area and a reasonable alternative does not exist;
  7. Certification that Company will comply with the Commission's order, law and rules designating the site.

39. Company acknowledges and agrees that written authorization from the Commission for impacting the avoidance area is necessary prior to commencement of construction activity.

Dated this 10<sup>th</sup> day of March, 2017.

Meadowlark Wind I LLC



By William R. Behling

Its Project Manager

STATE OF NORTH DAKOTA  
PUBLIC SERVICE COMMISSION

Meadowlark Wind I LLC  
New Frontier Wind Project – McHenry County  
Siting Application

Case No. PU-11-69

**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 the Commission for approval.
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).

# **Appendix B:**

# **Tree and Shrub Inventory**

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Tree and Shrub Inventory and Mitigation/Replacement Plan  
New Frontier Wind Energy Project

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Landowner	Scientific Name*	Common Name	Tree or Shrub	Total Stem Count Removed
CHAD LEGG AND TIFFANY HOFFNER	Amelanchier alnifolia	Saskatoon serviceberry	Shrub	10
	Prunus virginiana	chokecherry	Shrub	284
	Symphoricarpos occidentalis	western snowberry	Shrub	284
<i>Totals</i>				
CURTIS NELSON AND DIANA L. NELSON	Acer negundo	boxelder	Tree	1
	Fraxinus pennsylvanica	green ash	Tree	1
	Populus deltoides	cottonwood	Tree	1
	<b>Caragana arborescens</b>	<b>Siberian peashrub</b>	Shrub	60
	Prunus americana	American plum	Shrub	88
	Prunus virginiana	chokecherry	Shrub	18
<i>Totals</i>				
DAVID A. BALUSKI & WADE E. BALUSKI	<b>Ulmus pumila</b>	<b>Siberian elm</b>	Tree	1
	Amelanchier alnifolia	Saskatoon serviceberry	Shrub	6
	Crataegus sp.	hawthorn	Shrub	15
	Prunus virginiana	chokecherry	Shrub	34
	Elaeagnus commutata	silverberry	Shrub	602
	Symphoricarpos occidentalis	western snowberry	Shrub	1204
<i>Totals</i>				
DAVID L. NEWMAN, VICKI JOHNSONS AND MARILYN A NURNBERGER	Crataegus sp.	hawthorn	Shrub	1
	Symphoricarpos occidentalis	western snowberry	Shrub	175
<i>Totals</i>				
FRED BALUSKI	Amelanchier alnifolia	Saskatoon serviceberry	Shrub	17
	Crataegus sp.	hawthorn	Shrub	17
	Prunus americana	American plum	Shrub	48
	Prunus virginiana	chokecherry	Shrub	17
	Symphoricarpos occidentalis	western snowberry	Shrub	173
<i>Totals</i>				
JAMES L. OLSON AND JOY E. OLSON	Crataegus sp.	hawthorn	Shrub	9
<i>Totals</i>				
JOHN D. GANJE AND LORETTA GANJE	Fraxinus pennsylvanica	green ash	Tree	1
	<b>Ulmus pumila</b>	<b>Siberian elm</b>	Tree	1
	Populus deltoides	cottonwood	Tree	1
	Prunus virginiana	chokecherry	Shrub	30
<i>Totals</i>				
LIFE ESTATE OF MARIAN SHATTUCK	Fraxinus pennsylvanica	green ash	Tree	4
	<b>Ulmus pumila</b>	<b>Siberian elm</b>	Tree	12
	Crataegus sp.	hawthorn	Shrub	23

	Symphoricarpos occidentalis	western snowberry	Shrub	68
	<i>Totals</i>			
LOUELLA B. ANDERSON	Fraxinus pennsylvanica	green ash	Tree	1
	Crataegus sp.	hawthorn	Shrub	1918
	Symphoricarpos occidentalis	western snowberry	Shrub	15
	<i>Totals</i>			
MARVIN BERG	Symphoricarpos occidentalis	western snowberry	Shrub	98
	<i>Totals</i>			
RICKI HAUF AND TAMMY HAUF	Salix amygdaloides	peachleaf willow	Tree	1
	Elaeagnus commutata	silverberry	Shrub	101
	Symphoricarpos occidentalis	western snowberry	Shrub	1834
	<i>Totals</i>			
ROBERT H. ANDERSON AND MARY DIANA ANDERSON	Populus deltoides	cottonwood	Tree	9
	Ulmus pumila	Siberian elm	Tree	5
	Prunus virginiana	chokecherry	Shrub	7
	<i>Totals</i>			
WAYNE BERG	Fraxinus pennsylvanica	green ash	Tree	63
	Populus deltoides	cottonwood	Tree	1
	<b>Lonicera tatarica</b>	<b>Tatarian honeysuckle</b>	Shrub	180
	Prunus americana	American plum	Shrub	3

Scientific Name*	Common Name	Tree or Shrub	Total Stem
			Count Removed
<b>Trees</b>			
Acer negundo	boxelder	Tree	
Fraxinus pennsylvanica	green ash	Tree	
Populus deltoides	cottonwood	Tree	
Salix amygdaloides	peachleaf willow	Tree	
<b>Ulmus pumila</b>	<b>Siberian elm</b>	Tree	
<b>Subtotals</b>			--
<b>Shrubs</b>			
Amelanchier alnifolia	Saskatoon serviceberry	Shrub	17
<b>Caragana arborescens</b>	<b>Siberian peashrub</b>	Shrub	60
Crataegus sp.	hawthorn	Shrub	1918
Elaeagnus commutata	silverberry	Shrub	101
<b>Lonicera tatarica</b>	<b>Tatarian honeysuckle</b>	Shrub	180
Prunus americana	American plum	Shrub	3
Prunus virginiana	chokecherry	Shrub	7
Symphoricarpos occidentalis	western snowberry	Shrub	1834

# Appendix C: Planting Plan

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Tree and Shrub Inventory and Mitigation/Replacement Plan  
New Frontier Wind Energy Project

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# Appendix D: Affidavit

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Tree and Shrub Inventory and Mitigation/Replacement Plan  
New Frontier Wind Energy Project

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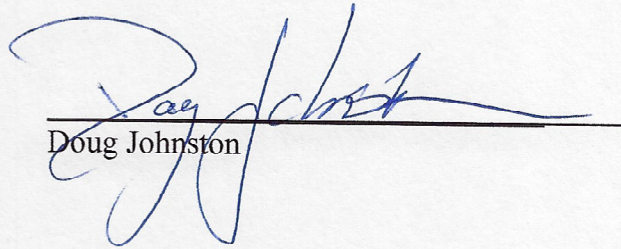
5. On behalf of Meadowlark, I spoke with 10 of the remaining 11 sets of landowners between approximately June 30 2019 and March 10 2020 to determine their preference regarding the location of replacement plantings.

6. Six of the 10 sets of landowners I spoke with confirmed they wanted replacement trees/shrubs planted on their land: Curtis and Diana Nelson; Fredrick W. Baluski, Jr.; Wade Baluski; David A. Baluski; James and Joy Olson (want only 29 replacement trees); and George Legg. Therefore, the Plan proposes to plant trees/shrubs on land owned by these landowners.

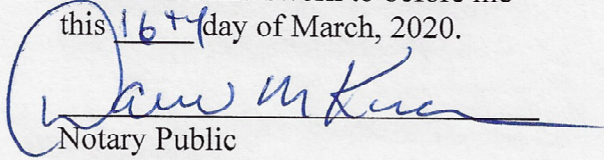
7. Four of the 10 sets of landowners I spoke with confirmed they do not want replacement trees or shrubs planted on their land: the Jerry G. Nurnberger Family Trust, U/W Dated October 27, 2004; Wayne Berg; Mary Diana Anderson; and Marvin and Lorraine Berg. In accordance with their stated preference, the Plan does not propose to plant trees/shrubs on land owned by these landowners.

8. Between approximately June 30 2019 and March 10 2020, I made four attempts on Meadowlark's behalf to contact the remaining set of landowners, Ricki and Tammy Hauf, but was not able to speak with them. Therefore, on February 24, 2020, Meadowlark sent a letter to the Haufs indicating that Meadowlark would presume the Haufs did not want replacement trees/shrubs planted on their land if no response was received by March 13, 2020. A copy of the letter is attached as **Exhibit B**. No response was received by the deadline provided and, therefore, the Plan does not propose to plant any trees/shrubs on the Haufs' land.

FURTHER AFFIANT SAYETH NOT.

  
\_\_\_\_\_  
Doug Johnston

Subscribed and sworn to before me  
this 16<sup>th</sup> day of March, 2020.

  
\_\_\_\_\_  
Notary Public

69437381 v1

**DAVID M KRAMER**  
Notary Public  
State of North Dakota  
My commission expires Oct 3, 2021

**TREE AND SHRUB REPLACEMENT WAIVER**

In accordance with the North Dakota Public Service Commission's May 10, 2017 Order of Continuing Suitability for the New Frontier Wind Project ("Project"), Meadowlark Wind I LLC ("Meadowlark") must inventory and replace in a ratio of 2 to 1 trees and shrubs removed in conjunction with construction of the Project. The owners of a parcel from which trees and/or shrubs are removed have the option of having replacement trees and shrubs planted on their property, either on the parcel from which the trees/shrubs were removed or on other property they own. However, landowners may waive these options, allowing the replacement trees and/or shrubs to be planted off of their property.

*(recorded May 16, 2013)*

The undersigned own property leased to Meadowlark and within the designated Project site, which is described in Agreement No. 313061 (the "Property"). Trees and/or shrubs were removed from the Property in conjunction with the Project. The undersigned hereby waive the option of having the replacement trees and/or shrubs planted on the Property or on other property owned by the undersigned.

Dated this 18 day of April, 2019.

*Louisa P. Anderson*

**[INSERT NAME OF  
LANDOWNER]**

**[INSERT NAME OF  
LANDOWNER]**

**TREE AND SHRUB REPLACEMENT WAIVER**

In accordance with the North Dakota Public Service Commission's May 10, 2017 Order of Continuing Suitability for the New Frontier Wind Project ("Project"), Meadowlark Wind I LLC ("Meadowlark") must inventory and replace in a ratio of 2 to 1 trees and shrubs removed in conjunction with construction of the Project. The owners of a parcel from which trees and/or shrubs are removed have the option of having replacement trees and shrubs planted on their property, either on the parcel from which the trees/shrubs were removed or on other property they own. However, landowners may waive these options, allowing the replacement trees and/or shrubs to be planted off of their property.

The undersigned own property leased to Meadowlark and within the designated Project site, which is described in Agreement No. \_\_\_\_\_ (the "Property"). Trees and/or shrubs were removed from the Property in conjunction with the Project. The undersigned hereby waive the option of having the replacement trees and/or shrubs planted on the Property or on other property owned by the undersigned.

Dated this 22 day of April, 2019.

  
\_\_\_\_\_  
[INSERT NAME OF  
LANDOWNER]

  
\_\_\_\_\_  
[INSERT NAME OF  
LANDOWNER]

**TREE AND SHRUB REPLACEMENT WAIVER**

In accordance with the North Dakota Public Service Commission's May 10, 2017 Order of Continuing Suitability for the New Frontier Wind Project ("Project"), Meadowlark Wind I LLC ("Meadowlark") must inventory and replace in a ratio of 2 to 1 trees and shrubs removed in conjunction with construction of the Project. The owners of a parcel from which trees and/or shrubs are removed have the option of having replacement trees and shrubs planted on their property, either on the parcel from which the trees/shrubs were removed or on other property they own. However, landowners may waive these options, allowing the replacement trees and/or shrubs to be planted off of their property.

The undersigned own property leased to Meadowlark and within the designated Project site, which is described in Agreement No. see below (the "Property"). Trees and/or shrubs were removed from the Property in conjunction with the Project. The undersigned hereby waive the option of having the replacement trees and/or shrubs planted on the Property or on other property owned by the undersigned.

Dated this 8 day of June, 2019.

*Mariani Shattuck*

[INSERT NAME OF  
LANDOWNER]

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[INSERT NAME OF  
LANDOWNER]

66424035.1

\*Land Lease and Wind Easement dated March 1, 2013, a Memorandum of which was recorded as Document #313059 on May 16, 2013.

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February 24, 2020

Ricki and Tammy Hauf  
2994 14th Avenue NW  
Ruso, ND 58778-9427

Dear Mr. and Mrs. Hauf:

Capital Power Corporation (Capital Power), owner of project entity Meadowlark Wind I LLC (Meadowlark), is finishing construction reclamation this upcoming spring and summer of the New Frontier Wind Energy Project (Project) in McHenry County, North Dakota. The North Dakota Public Service Commission issued a permit for the Project that requires Meadowlark to replace trees and shrubs that were removed during Project construction. Landowners are given the option of having replacement trees and shrubs planted on the landowner's property, either on or off the right-of-way. Each tree or shrub removed is required to be replaced at a 2-to-1 ratio (e.g., 2 trees for every 1 tree removed or 2 shrubs for every 1 shrub removed). The attached table contains the trees and shrubs removed from your property and the proposed trees/shrubs to be replaced. You, the landowner, also have the option to decline/waive such replacement of trees and shrubs. If that is your preference, the attached waiver must be signed and returned to Capital Power to decline replacement trees and shrubs.

A representative of the Soil Conservation District, Doug Johnston, attempted to contact you last year regarding this matter but was not successful. We also have not received a signed waiver from you. The ND Public Service Commission requires us to document outreach; therefore, we are following up with you regarding the waiver. We would appreciate it if you can sign the waiver and return it to us within 15 days of receipt of this letter via mail (using enclosed envelope) or by scanning and emailing a copy to me. If we do not hear from you by March 13, 2020, we will assume that you have opted out of the replacement program, per your right to do so.

If you have questions about the tree and shrub replacement program, please contact the local Soil Conservation District Manager, Doug Johnston, via phone at (701) 509-9066 or e-mail at [smscd@srt.com](mailto:smscd@srt.com). Other questions may be directed to me via the phone number or e-mail address below.

Sincerely,



Cyrus Tingley  
Manager, Business Development  
Capital Power  
Phone: 617-274-7718  
E-mail: [ctingley@capitalpower.com](mailto:ctingley@capitalpower.com)

Attachments: Trees and Shrubs Removed; Waiver to Decline Replacement Trees and Shrubs

<b>Landowner</b>	<b>Scientific Name*</b>	<b>Common Name</b>	<b>Tree or Shrub</b>	<b>Total Stem Count Removed</b>	<b>Total Individual Count Removed**</b>	<b>Total Number to be Replace</b>
RICKI HAUF AND TAMMY HAUF	<i>Salix amygdaloides</i>	peachleaf willow	Tree	1	8	16
	<i>Elaeagnus commutata</i>	silverberry	Shrub	101	1	2
	<i>Symphoricarpos occidentalis</i>	western snowberry	Shrub	1834	191	382
<i>Totals</i>					200	400

\*Species in **bold** are considered invasive species and must be replaced with similar non-invasive species.

\*\*Low shrubs - 100 stems per individual; Tall shrubs - 10 stems per individual (Determined by in situ height and whether in native growth of shelterbelt)

**TREE AND SHRUB REPLACEMENT WAIVER**

In accordance with the North Dakota Public Service Commission’s May 10, 2017 Order of Continuing Suitability for the New Frontier Wind Project (“Project”), Meadowlark Wind I LLC (“Meadowlark”) must inventory and replace in a ratio of 2 to 1 trees and shrubs removed in conjunction with construction of the Project. The owners of a parcel from which trees and/or shrubs are removed have the option of having replacement trees and shrubs planted on their property, either on the parcel from which the trees/shrubs were removed or on other property they own. However, landowners may waive these options, allowing the replacement trees and/or shrubs to be planted off of their property.

The undersigned own property leased to Meadowlark and within the designated Project site, which is described in Agreement No. \_\_\_\_\_ (the “Property”). Trees and/or shrubs were removed from the Property in conjunction with the Project. The undersigned hereby waive the option of having the replacement trees and/or shrubs planted on the Property or on other property owned by the undersigned.

Dated this \_\_\_\_ day of \_\_\_\_\_, 2020.

\_\_\_\_\_  
**[INSERT NAME OF  
LANDOWNER]**

\_\_\_\_\_  
**[INSERT NAME OF  
LANDOWNER]**