

# Noxious Weed Management and Control Plan

## Foxtail Wind Energy Center Foxtail Wind, LLC Dickey County, North Dakota

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## 1.0 INTRODUCTION

Foxtail Wind, a wholly owned, indirect subsidiary of NextEra Energy Resources, LLC (NEER) is proposing to construct the Foxtail Wind Energy Center (Project) in Dickey County, in southeastern North Dakota. NEER has submitted an Application for a Certificate of Site Compatibility (Certificate) to the North Dakota Public Service Commission (Commission). Following receipt of the Certificate, NEER and Northern States Power Company (NSP), doing business as Xcel Energy (Xcel), will seek North Dakota Commission approval to transfer the Certificate to NSP/Xcel. Subject to that approval, the Project will be constructed and operated by NSP/Xcel. The Project will have a nameplate capacity of approximately 150 megawatts (MW), consisting of up to 75 wind turbines. Additional facilities include access roads, underground electrical collection systems and cabling, a collection substation, an operations and maintenance building, a meteorological evaluation tower, a construction laydown area, a batch plant, and a switchyard.

Construction is scheduled to begin as early as May 2018, subject to road restrictions, weather, and permitting. The engineering, procurement, and construction (EPC) contractor will be responsible for completing all proposed Project construction, including roads, wind turbine assembly, electrical, and communications work. Construction will be completed in two phases approximately 15 months after construction activity is initiated with only 10 months of actual construction activity.

### 1.1 Plan Purpose

The purpose of this noxious weed management and control plan is to prescribe methods to prevent and control the spread of noxious weeds during construction of the Project. Noxious weeds may invade areas disturbed by construction and along access roads. Any kind of soil disturbance often stimulates weed seeds already present in the soil seed bank to germinate and establish.

North Dakota Century Code (NDCC § 4.1-47-02) requires every person to do all things necessary and proper to control the spread of noxious weeds and makes it illegal for any person to distribute, sell, or offer for sale within this state a noxious weed (NDCC 2017). At the state and county levels, the State Agricultural Commissioner and County Weed Control Officer respectively, are responsible for the enforcement of the weed laws. It is a class B misdemeanor to anyone who violates the following:

- A person may not willfully transport any material that contains noxious weed seeds or propagating parts, on a public road, in a manner that allows for the dissemination of noxious weeds.
- A person may not willfully drive or transport any equipment, on a public road, in a manner that allows for the dissemination of noxious weeds.
- A person may not willfully dispose of any material that contains noxious weed seeds or propagating parts in a manner that allows for the dissemination of noxious weeds.

### 1.2 Goals and Objectives

The goals and objectives of this noxious weed management and control plan are to implement preventative measures to eliminate the spread of weeds during construction and to implement prescribed treatments to eliminate, to the maximum extent possible, the invasion of weeds from surrounding lands. Monitoring during the construction of the Project will ensure that these goals are achieved.

**2.0 NOXIOUS WEED MANAGEMENT**

Noxious weeds are spread by a variety of means including vehicles, construction equipment, construction activities, farm equipment, livestock, and wildlife. Implementation of preventative measures to control the spread of noxious weeds is the most cost effective management approach. The Project will implement noxious weed control management measures that are consistent with state and county regulations.

**2.1 Noxious Weed Occurrences**

Under NDCC § 4.1-47, North Dakota has designated 11 state noxious weeds and one additional noxious weed is listed for Dickey County. A list of the noxious weed species for the Dickey County noxious weed survey is listed in **Table 1**. Absinth wormwood, Canada thistle, and leafy spurge were observed during surveys, often in invaded grasslands, along roadsides, and on the edge of croplands (NDDA 2016).

**Table 1 - North Dakota Department of Agriculture 2016 Weed List Survey - Dickey County Reported Acres**

<b>Common Name</b>	<b>Scientific Name</b>	<b>Acres</b>
Absinth wormwood	Artemisia absinthium	270
Canada thistle	Cirsium arvense	750
Dalmatian toadflax	Linaria genistifolia	
Diffuse knapweed	Centaurea diffusa	
Leafy spurge	Euphorbia esula	1,600
Musk thistle	Carduus nutans	
Purple loosestrife	Lythrum salicaria	
Russian knapweed	Rhaponticum repens	
Saltcedar	Tamarix ramosissima	
Spotted knapweed	Centaurea maculosa	
Yellow toadflax	Linaria vulgaris	415
Downy brome	Bromus tectorus	

Source: NDDA (2016)

**2.2 Preventive Measures**

The following preventive measures will be used to prevent the spread of noxious weeds within the Project right-of-way:

- All contractor equipment will arrive at the work site clean and weed-free. Prior to being allowed access to the right-of-way, all equipment will be power or high-pressure air washed. In addition, all equipment leaving an area infested with noxious weeds will first be cleaned with an air compressor to limit the spread of noxious weed seeds and propagules.
- The EPC contractor will ensure that equipment is free of soil and debris capable of transporting noxious weed seeds, roots, or rhizomes.
- The right-of-way will be inspected for weeds prior to the clearing of vegetation. Infestations will be recorded on the construction alignment sheets for reference for post construction monitoring.
- The EPC contractor will employ best management practices during construction to monitor soil impacts and segregate topsoil. Final revegetation would occur within the approved seeding window.

- The EPC contractor will ensure that straw bales, used on the Project for sediment barrier installations, or mulch are certified weed-free.
- Equipment will not be sprayed with pre-emergent chemicals as a preventive measure as these chemicals target a wide range of vegetation. As a result, the use of such chemicals could affect the success of revegetation efforts.

Field wash stations with water are not proposed as a preventive measure as they have not proven to be an effective means of noxious weed control. In order for a wash station to be effective, high-pressure steam cleaners and controlled drainage are essential. These criteria cannot be met in the field. As a result, field wash stations run the risk of creating conditions favorable to seed germination (e.g., presence of seeds or rhizomes, presence of disturbed soils, water from uncontrolled drainage).

### **2.3 Treatment Methods**

Noxious weed controls will be used in accordance with existing regulations and landowner or agency agreements. Prior to clearing and grading operations, pre-treatment of noxious weed infestations may be conducted if it is determined that pre-treatment will aid in controlling the spread of weeds during construction. The noxious weed control measures to be implemented at these locations may include the application of herbicide or mechanical measures. The weed control measure chosen will be the best method available for the time, location, and species of weed.

- Herbicide application is an effective means of reducing the size of noxious weed populations.
- Mechanical methods such as mowing or disking are reliant on the use of equipment to disk or excavate weed populations.

During construction, the EPC contractor will periodically monitor the Project right-of-way to allow for early detection of noxious weed species infestations. If such species are found in numbers that are significantly different from existing nearby off right of-way locations, appropriate control measures will be implemented in an attempt to eradicate the identified noxious weed infestations along the right-of-way and to reduce the spread or proliferation of weeds.

## **3.0 HERBICIDE TREATMENTS**

Herbicide selection (if required) would be based on information gathered from local county weed control districts and/or the North Dakota Department of Agriculture.

### **3.1 Herbicide Application and Handling**

Prior to herbicide application, the EPC contractor will obtain any required permits or approvals from the local weed district and landowner. The chemical application will be done by a licensed contractor in accordance with all applicable laws and regulations.

Herbicide label instructions and manufacture guidelines will be strictly adhered to. For example, manufacturer's guidelines recommend that herbicides only be applied under appropriate weather conditions (i.e., periods of low wind speeds, when precipitation is not imminent, etc.), that application sprayers be mounted low to the ground, and that sprayer booms incorporate specialized nozzles designed to produce large droplet sizes with limited drift potential. Adherence to these specifications and manufacturer label directions would minimize the potential for drift or transport of herbicides to off right-of-way areas.

Vehicle-mounted sprayers (e.g., handgun, boom, and injector) will be used primarily in open areas that are readily accessible by vehicle. Hand application methods (e.g., backpack spraying) that target individual plants will be used to treat small scattered noxious weed populations in rough terrain.

Calibration checks of equipment will be conducted at the beginning of spraying and periodically thereafter to ensure proper application rates are being achieved. Herbicides will be transported daily to the Project site with the provisions listed below.

- Herbicides will be premixed and delivered in returnable/refillable containers and transferred by closed system to application tanks to limit worker and environmental exposure and eliminate the need for disposal of herbicide containers in area landfills.
- Herbicides will be transported in a manner that will prevent tipping or spilling.
- Mixing of surfactants or other additives with water or other carriers and refilling of containers will typically be conducted at road crossings, and no mixing or filling will occur within 100 feet of open or flowing water, wetlands, or other sensitive resources, greater than 200 feet from private wells, and greater than 400 feet from public wells.
- Mixing and application procedures will be supervised by a licensed commercial applicator, and monitoring will be conducted to ensure that proper mixing, application, cleanup, personal protection and safety procedures are followed.
- All herbicide equipment and containers will be inspected daily for leaks.

### **3.2 Herbicide Spills and Cleanup**

All reasonable precautions will be taken to avoid herbicide spills. In the event of a spill, clean-up will be immediate. Contractors will be responsible for keeping spill kits in their vehicles and in herbicide storage areas to allow for quick and effective response to spills.

Response to herbicide spills will vary with the size and location of the spill. The order of priorities after discovering a spill are to protect the safety of personnel and the public, minimize damage to the environment, and conduct cleanup and remediation activities.

### **3.3 Worker Safety and Spill Reporting**

The contractors will obtain and carry with them, copies of the appropriate product labels and Safety Data Sheets for the herbicides used. All herbicide spills will be reported in accordance with applicable laws and requirements.

## **4.0 MONITORING AND OPERATION**

Following construction, on-site operations staff will manage, monitor, and treat noxious weeds as a part of its normal operations and maintenance activities. Infestation areas identified prior to construction will be inspected for weed growth until final reclamation is achieved. In areas with noxious weed growth, the noxious weed control measure chosen will be the best method available for the time, location, and species of noxious weed. Mechanical treatments will be conducted prior to seed maturation if needed. In addition, subsequent reseeding will be conducted, if necessary, to re-establish a desirable vegetative cover that will stabilize the soils and slow the potential of reinvasion of noxious weeds. If appropriate, further consultation with the county weed board regarding the use of biological and other alternate noxious weed control methods will be conducted.

## 5.0 REFERENCES

NDCC (North Dakota Century Code). 2017. Chapter 4.1-47: Noxious Weed Control. Accessed November 22, 2017. Available online at: <http://www.legis.nd.gov/cencode/t04-1c47.pdf>

NDDA (North Dakota Department of Agriculture). 2016. Weed Survey Report. Accessed November 22, 2017. Available online at: <http://agdepartment.vision-technology.com/weedsurvey/report.asp>