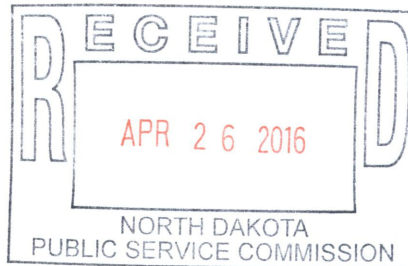


April 26, 2016

**Hand Delivery**

Mr. Darrell Nitschke  
Executive Director  
NORTH DAKOTA PUBLIC  
SERVICE COMMISSION  
600 E. Boulevard Avenue, Dept. 408  
Bismarck, ND 58505-0480



In re: Oliver Wind III, LLC  
Case Nos. PU-16-122 and PU-16-123  
Our File No. 35-218-029

Dear Mr. Nitschke:

Please find enclosed for filing eleven copies of the interim eagle use survey memo in the captioned cases.

Please let me know if you have any questions. Thank you.

Sincerely,

Wade C. Mann

WCM/lh  
enc.

cc: Sara Cardwell (via email)  
Mitchell D. Armstrong (via email)  
Brian Schmidt (via email)  
Patrick J. Ward (via email)

21 PU-16-123 Filed 04/26/2016 Pages: 6  
Interim Eagle Use Survey Memo  
Oliver Wind III, LLC  
Wade Mann, Crowley Fleck, PLLP

21 PU-16-122 Filed 04/26/2016 Pages: 6  
Interim Eagle Use Survey Memo  
Oliver Wind III, LLC  
Wade Mann, Crowley Fleck, PLLP



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TO: NextEra Energy Resources, LLC  
FROM: Tetra Tech, Inc.  
DATE: April 15, 2016  
SUBJECT: Oliver III Wind Energy Center Eagle Use Report, July 2015 – March 2016

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## Introduction

NextEra Energy Resources, LLC (NextEra) is developing the Oliver III Wind Energy Center (Project) located in Morton and Oliver counties, North Dakota (Figure 1). NextEra is committed to environmental due diligence and has contracted Tetra Tech, Inc. (Tetra Tech) to conduct eagle use surveys in the proposed Project Area. The objective of the eagle use surveys was to document eagle movements and behavior within and adjacent to the proposed Project Area. Tetra Tech used standardized protocols for the eagle use surveys that were designed to be responsive to the level of effort recommended in Tier 3 of the voluntary Land-Based Wind Energy Guidelines (WEG; USFWS 2012) and Stage 2 of the Eagle Conservation Plan Guidance (ECP Guidance; USFWS 2013). This report describes eagle use surveys conducted from July 16, 2015 through March 9, 2016.

## Methods

### Eagle Use Surveys

Once the preliminary Project boundary and turbine locations were provided, 9 point-count locations were setup in July 2015 within the proposed Project Area (Figure 1). The 9 point-count locations provide spatial coverage of approximately 30 percent of a 1-kilometer buffer around the proposed turbine locations (dated March 7, 2016), consistent with recommendations in the ECP Guidance (USFWS 2013).

Eagle use surveys were conducted over two days every 2 weeks, totaling 18 rounds, from July 16, 2015 to March 9, 2016. From August 25 to October 8, 2015 surveys included 20 minutes of general fall avian surveys followed by 60 minutes of eagle use surveys (total of 1 hour and 20 minutes of survey time at each point-count location; Table 1). The fall avian surveys ended on October 15, 2015. The total eagle survey time at the proposed Project Area was 174 hours (Table 1). Surveys were conducted during daylight hours and the order in which the points were surveyed was altered between subsequent survey weeks so that each point was surveyed at different times of the day over the course of the season. Surveys were not conducted if fog or low cloud-cover reduced visibility to less than 400 meters of horizontal distance or less than 200 meters of vertical distance.

During each eagle use survey, the biologist continuously scanned the surrounding landscape for eagle activity using an unlimited viewshed. For each eagle observed, the biologist recorded the

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species, age class (Adult, Immature, or Unknown), time first and last observed, minimum and maximum flight heights, and flight behavior. Eagle flights were recorded in two height categories (less than or equal to 200 meters and greater than 200 meters above ground), based on the ECP Guidance. The time an observed eagle spent flying within the 800-meter-radius circular plot around the count location at each of these height categories was recorded and rounded up, in one-minute intervals, so that these data could then be translated into eagle exposure minutes for projected fatality modeling. In accordance with the ECP Guidance, exposure minutes were defined as the number of minutes that an eagle was observed below 200 meters within the 800-meter-radius circular plot. Flight paths were drawn for each eagle within the viewshed on a topographic map of the proposed Project Area, and later digitized using a geographic information system (GIS) software.

### **Incidental Observations**

Eagles observed during the surveys outside the 800-meter-radius circular plot, as well as eagles observed within or near the proposed Project Area but outside of the survey period (such as when the biologist was traveling between observation points), were recorded as incidental observations. Flight paths of eagles observed during the surveys outside the 800-meter-radius circular plot were collected; however, flight paths were not recorded for incidental eagles observed while in transit. Exposure minutes were not recorded for the incidental eagle observations. Therefore, incidental observations were not included in the analysis and are presented in this report as supplemental information to the eagle use and point-count data to describe the overall activity by eagles within the proposed Project Area. The biologist also noted incidental observations of other raptors, large birds, and avian species that were uncommon or unusual within the Project Area.

## **Results**

### **Eagle Use Surveys**

No bald or golden eagles were observed within the 800-meter-radius circular plots during 174 hours of monitoring during eagle use surveys (Table 1). Therefore, no eagle exposure minutes were recorded during the surveys and overall mean use, calculated as the total number of eagles observed divided by the total number of observation hours, was 0.0 eagles per hour.

### **Incidental Observations**

Three bald eagles were observed incidentally during the eagle use surveys (Figure 1); all three eagles were observed on December 27, 2015. Two of the bald eagles (both Adults) were observed within the proposed Project Area, perched in shelterbelts to the north of point-count location 4. The third bald eagle (an Immature) was observed perched in a shelterbelt to the south of point-count location 5, outside the Project Area. None of the bald eagle observations accrued any exposure minutes. During the entire survey period, the biologist documented six other raptor species of interest as incidental observations to eagle use surveys: Swainson's hawk (16 individuals), red-tailed hawk (13 individuals), northern harrier (8 individuals), snowy owl (2 individuals), great-horned owl (1 individual), and rough-legged hawk (1 individual). Along with the

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bald eagle, the Swainson's hawk and northern harrier are designated species of conservation priority by the North Dakota Game and Fish Department (Dyke et al. 2015). There were no other eagle observations for the July 2015 to March 2016 survey period.

## References

- Dyke, S.R., S.K. Johnson, and P.T. Isakson. 2015. North Dakota State Wildlife Action Plan. North Dakota Game and Fish Department, Bismarck, ND.
- USFWS (United States Fish and Wildlife Service). 2012. Land-based Wind Energy Guidelines. Available online at: [http://www.fws.gov/windenergy/docs/WEG\\_final.pdf](http://www.fws.gov/windenergy/docs/WEG_final.pdf)
- USFWS. 2013. Eagle Conservation Plan Guidance. Module 1 – land-based wind energy, version 2. U.S. Fish and Wildlife Service, Division of Migratory Bird Management, Washington D.C., USA.
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Table 1 Eagles Observed Within 800-meter Radius Circular Plots During Eagle Use Surveys at the proposed Oliver III Wind Energy Center, July 16, 2015 to March 9, 2016.

Survey Week	Dates	Number of points surveyed	Length of surveys (Hours) <sup>1</sup>	Number of Eagles	Flights observed		Minutes of eagle flight below 200 meters and within 800 meters of observation Point		Minutes of eagle flight above 200 meters and within 800 meters of observation Point	
					Bald Eagle	Golden Eagle	Bald Eagle	Golden Eagle	Bald Eagle	Golden Eagle
1	July 16-17, 2015 <sup>1</sup>	9	9	0	0	0	0	0	0	0
2	July 29-30, 2015 <sup>1</sup>	9	9	0	0	0	0	0	0	0
3	August 13-14, 2015 <sup>1</sup>	9	9	0	0	0	0	0	0	0
4	August 25-26, 2015 <sup>2</sup>	9	12	0	0	0	0	0	0	0
5	September 9-10, 2015 <sup>2</sup>	9	12	0	0	0	0	0	0	0
6	September 23-24, 2015 <sup>2</sup>	9	12	0	0	0	0	0	0	0
7	October 7-8, 2015 <sup>2</sup>	9	12	0	0	0	0	0	0	0
8	October 22, 24, 2015 <sup>1,3</sup>	9	9	0	0	0	0	0	0	0
9	November 5-6, 2015 <sup>1</sup>	9	9	0	0	0	0	0	0	0
10	November 20-21, 2015 <sup>1</sup>	9	9	0	0	0	0	0	0	0
11	December 4-5, 2015 <sup>1</sup>	9	9	0	0	0	0	0	0	0
12	December 17-18, 2015 <sup>1</sup>	9	9	0	0	0	0	0	0	0
13	December 26-27, 2015 <sup>1</sup>	9	9	0	0	0	0	0	0	0
14	January 12-13, 2016 <sup>1</sup>	9	9	0	0	0	0	0	0	0
15	January 26-27, 2016 <sup>1</sup>	9	9	0	0	0	0	0	0	0
16	February 9-10, 2016 <sup>1</sup>	9	9	0	0	0	0	0	0	0
17	February 20-21, 2016 <sup>1</sup>	9	9	0	0	0	0	0	0	0
18	March 8-9, 2016 <sup>1</sup>	9	9	0	0	0	0	0	0	0
<b>TOTAL</b>		<b>162</b>	<b>174</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

<sup>1</sup> Survey Weeks 1-3 and 8-18 were 1-hour surveys at each survey point.

<sup>2</sup> Survey Weeks 4-7 were 1:20 minute surveys (includes 20-minute general fall avian point-count surveys) at each survey point.

<sup>3</sup> No surveys occurred on October 23 due to weather.

