ENVIRONMENTAL & STATISTICAL CONSULTANTS

4007 State Street, Suite 109, Bismarck, ND 58503
Phone: 701-250-1756 ◆ www.west-inc.com ◆ Fax: 701-250-1761

June 29, 2016

Roland Jurgens III
Prevailing Winds, LLC
101 Second Street West
P.O. Box 321
Chokio, Minnesota 56221

RE: Prevailing Winds Raptor Nest Survey

Dear Mr. Jurgens,

As part of agency approved baseline survey efforts, one aerial raptor nest survey was conducted by a biologist from Western EcoSystems Technology, Inc. (WEST) on April 21, 2016, at the Prevailing Winds Wind Energy Project (Project) near Avon, South Dakota. Surveys were completed from the air in a helicopter before trees had leaves and when most raptors would be actively tending to a nest or incubating eggs. Aerial surveys were conducted in accordance with the guidance provided in the U.S. Fish and Wildlife Service Inventory and Monitoring Protocols[1]. Raptors are defined here as kites, accipiters, buteos, harriers, eagles, falcons, and owls. Surveys focused on locating large, stick nest structures in suitable raptor nesting substrate (trees, cliffs, etc.) within the proposed Project and 10-mi buffer. All raptor nests were recorded within the Project boundary with only eagle or potential eagle nests located out to the 10-mi buffer.

Known historic eagle nests locations were surveyed for nest status and condition as well as a survey for new or unknown nest locations. In general, all potential eagle and raptor nest habitat was surveyed by flying meandering transects at speeds of 60 - 75 miles per hour (mph) throughout the proposed Project area and associated 10-mi buffer. To the greatest extent possible, care was taken to minimize disturbance to raptors at nest sites during surveys.

All potential and confirmed raptor nests detected during surveys, regardless of their activity status, were assigned a unique identification number and their locations were recorded using a hand-held Global Positioning System (GPS). Data on raptor species, nest type, nest status, nest condition, and substrate, were recorded at each nest location to the extent possible. To determine the status of a nest, the biologist relied on clues that included behavior of adults and presence of eggs, young, or whitewash. Unoccupied raptor nests, including old nests or nests that could become suitable for raptors, were

[1] Pagel, J.E., D.M. Whittington, and G.T. Allen. 2010. Interim Golden Eagle Technical Guidance: Inventory and Monitoring Protocols; and Other Recommendations in Support of Golden Eagle Management and Permit Issuance. US Fish and Wildlife Service (USFWS). February 2010. Available online at: http://steinadlerschutz.lbv.de/fileadmin/www.steinadlerschutz.de/terimGoldenEagleTechnicalGuidanceProtocols25March2010_1_.pdf

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documented in order to populate a nest database to ensure that future surveys include all potentially suitable nest sites. Photographs were taken of eagle nests and potential eagle nests and are available to you upon request.

Nest status was categorized consistent with definitions in the USFWS Eagle Conservation Plan Guidance.[2] Nests were classified as occupied if any of the following were observed at the nest structure: (1) an adult in an incubating position; (2) eggs; (3) nestlings or fledglings; (4) occurrence of a pair of adults (or, sometimes sub-adults); (5) a newly constructed or refurbished stick nest in the area where territorial behavior of a raptor was observed or had been observed early in the breeding season; or (6) a recently repaired nest with fresh sticks (clean breaks) or fresh boughs on top, and/or droppings and/or molted feathers on its rim or underneath. When possible, occupied nests were further classified as active if an egg or eggs had been laid or nestlings were observed, or inactive if no eggs or chicks were present. A nest that did not meet the above criteria for "occupied" was classified as "unoccupied.

A total of 50 occupied and/or unoccupied raptor nests representing three species were documented within the Project area and associated 10-mi buffer (Figures 1 and 2, Tables 1 and 2). Excluding eagles, 44 non-eagle raptor nests were documented within the Project area (Figure 1; Table 1). The identified raptor nests were categorized as follows: three occupied great horned owl (*Bubo virginianus*) nests; 10 occupied red-tailed hawk (*Buteo jamaicensis*) nests; and 31 unknown raptor nests (two occupied; 29 unoccupied). A total of six bald eagle (*Haliaeethus leucocephalus*) nests (three occupied; three unoccupied) were documented during the survey; with three occupied bald eagle nests corresponded to known historic nests (Figure 2; Table 2).

If you have any questions or require additional information, please call me at 701-250-1756.

Sincerely,

Clayton Derby
CSO/Senior Manager

[2] US Fish and Wildlife Service (USFWS). 2013. Eagle Conservation Plan Guidance. Module 1 - Land-Based Wind Energy. Version 2. Division of Migratory Bird Management, USFWS. April 2013. Available online at: http://www.fws.gov/migratorybirds/Eagle_Conservation_Plan_Guidance-Module%201.pdf

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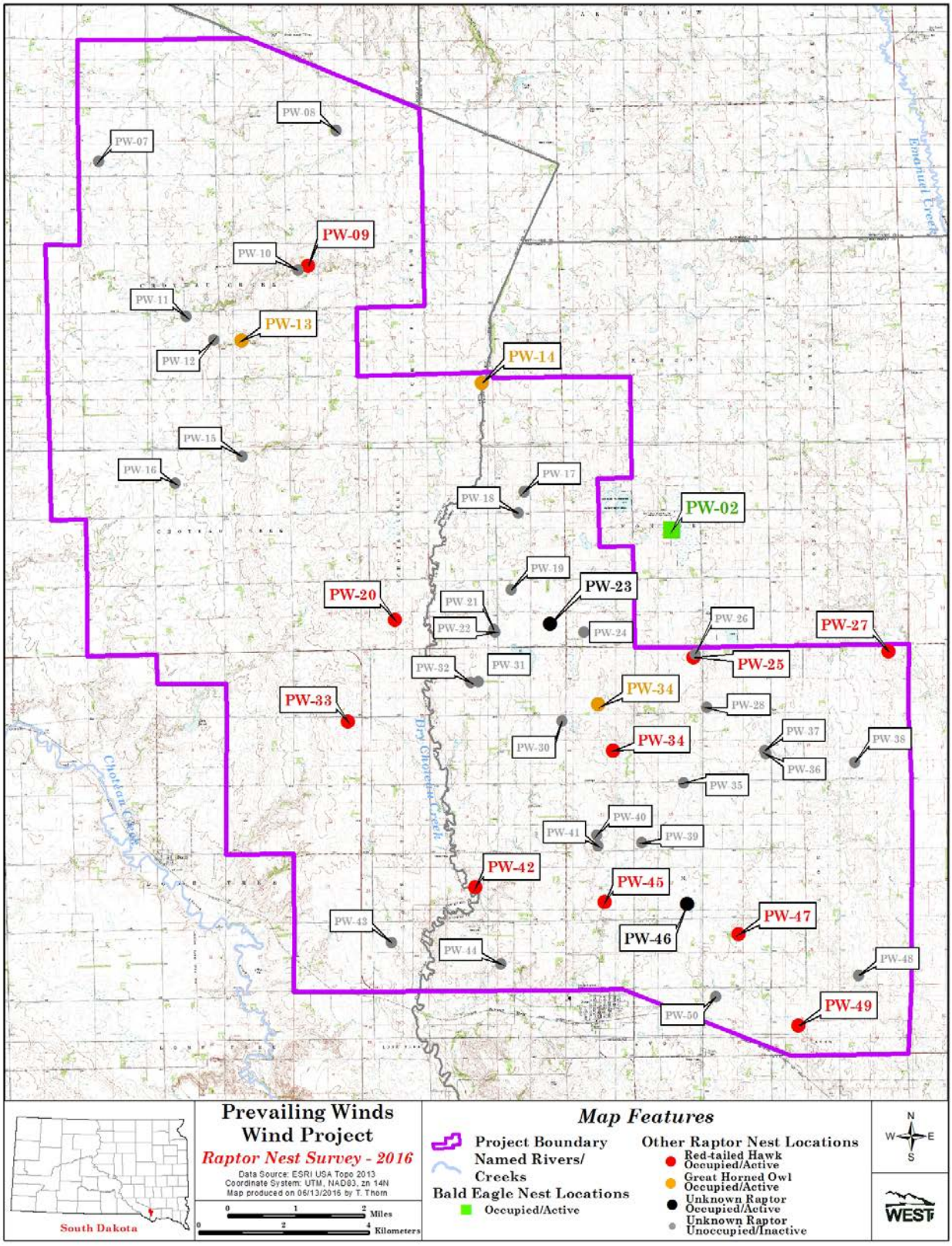

Figure 1. Locations of raptor nests (excluding eagles) recorded during the aerial survey conducted on April 21, 2016, within the Prevailing Winds Wind Energy Project, South Dakota.

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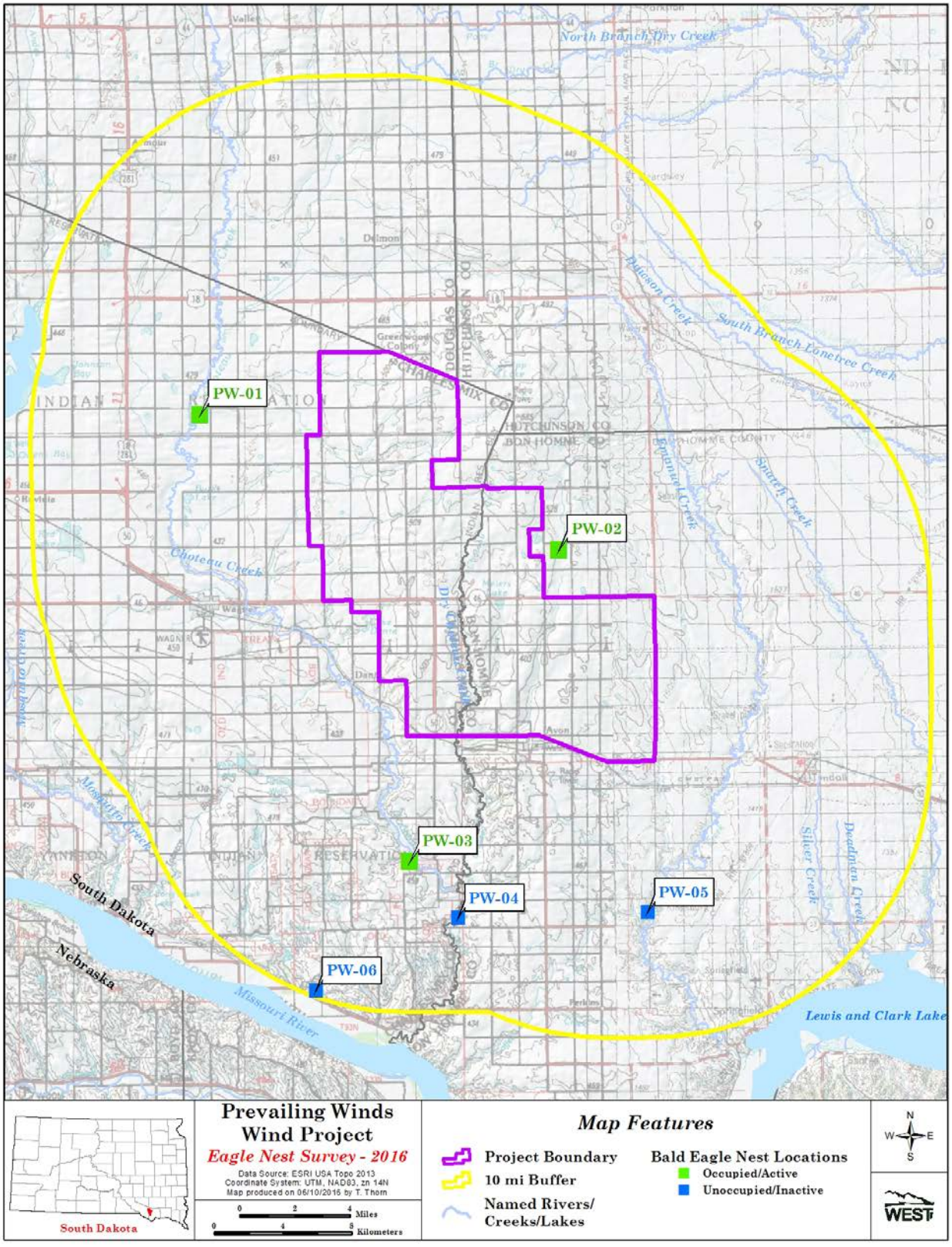

Figure 2. Locations of eagle nests recorded during the aerial survey conducted on April 21, 2016, within the Prevailing Winds Wind Energy Project area, South Dakota, and associated 10-mile buffer.

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Table 1. Raptor nests (excluding eagle nests) identified during aerial surveys conducted on April 21, 2016, within the Prevailing Winds Wind Energy Project area, South Dakota. Raptor nest Unique ID (ID), locations (NAD83, Zone 14), and nest features are included.

ID	Species	Easting	Northing	Nest Type	Status at Time of Survey	Condition	Substrate
PW-07	UNKN	564811	4781827	stick/medium	unoccupied	good	tree
PW-08	UNKN	570395	4782547	stick/medium	unoccupied	fair	tree
PW-09	RTHA	569739	4779367	stick/medium	occupied	excellent	tree
PW-10	UNKN	569502	4779268	stick/medium	unoccupied	good	tree
PW-11	UNKN	566861	4778176	stick/medium	unoccupied	fair	tree
PW-12	UNKN	567520	4777624	stick/medium	unoccupied	good	tree
PW-13	GHOW	568181	4777616	stick/medium	occupied	excellent	tree
PW-14	GHOW	573826	4776621	stick/medium	occupied	excellent	tree
PW-15	UNKN	568182	4774885	stick/medium	unoccupied	fair	tree
PW-16	UNKN	566612	4774253	stick/medium	unoccupied	excellent	tree
PW-17	UNKN	574813	4774054	stick/medium	unoccupied	good	tree
PW-18	UNKN	574674	4773552	stick/medium	unoccupied	fair	tree
PW-19	UNKN	574516	4771760	stick/medium	unoccupied	good	tree
PW-20	RTHA	571792	4771048	stick/medium	occupied	excellent	tree
PW-21	UNKN	574105	4770818	stick/small	unoccupied	good	tree
PW-22	UNKN	574140	4770757	stick/small	unoccupied	good	tree
PW-23	UNKN	575444	4770951	stick/medium	occupied	excellent	tree
PW-24	UNKN	576219	4770748	stick/medium	unoccupied	fair	tree
PW-25	RTHA	578806	4770170	stick/medium	occupied	excellent	tree
PW-26	UNKN	578846	4770235	stick/medium	unoccupied	good	tree
PW-27	RTHA	583400	4770300	stick/medium	occupied	excellent	tree
PW-28	UNKN	579119	4768991	stick/medium	unoccupied	poor	tree
PW-29	GHOW	576574	4769059	stick/medium	occupied	excellent	tree
PW-30	UNKN	575714	4768671	stick/medium	unoccupied	dilapidated	tree
PW-31	UNKN	573746	4769595	stick/medium	unoccupied	poor	tree
PW-32	UNKN	573555	4769572	stick/medium	unoccupied	excellent	tree
PW-33	RTHA	570679	4768649	stick/medium	occupied	excellent	tree
PW-34	RTHA	576918	4767976	stick/medium	occupied	excellent	tree
PW-35	UNKN	578572	4767214	stick/medium	unoccupied	good	tree
PW-36	UNKN	580501	4767890	stick/medium	unoccupied	fair	tree
PW-37	UNKN	580485	4767967	stick/medium	unoccupied	fair	tree
PW-38	UNKN	582594	4767702	stick/medium	unoccupied	fair	tree
PW-39	UNKN	577594	4765802	stick/medium	unoccupied	poor	tree
PW-40	UNKN	576525	4765992	stick/medium	unoccupied	good	tree
PW-41	UNKN	576556	4765731	stick/medium	unoccupied	fair	tree
PW-42	RTHA	573679	4764757	stick/medium	occupied	excellent	tree
PW-43	UNKN	571701	4763454	stick/medium	unoccupied	fair	tree
PW-44	UNKN	574264	4762960	stick/medium	unoccupied	excellent	tree
PW-45	RTHA	576728	4764411	stick/medium	occupied	excellent	tree
PW-46	UNKN	578657	4764367	stick/medium	occupied	excellent	tree
PW-47	RTHA	579872	4763654	stick/medium	occupied	excellent	tree
PW-48	UNKN	582691	4762686	stick/medium	unoccupied	good	tree
PW-49	RTHA	581273	4761506	stick/medium	occupied	excellent	tree
PW-50	UNKN	579326	4762188	stick/medium	unoccupied	good	tree

GHOW = great-horned owl; RTHA = red-tailed hawk; UNKN = unknown.

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Table 2. Bald eagle nests identified during the aerial surveys conducted on April 21, 2016, within the Prevailing Winds Wind Energy Project area, South Dakota, and associated 10-mile buffer. Raptor nest Unique ID (ID), locations (NAD83, Zone 14), and nest features are included.

ID	Species	Easting	Northing	Nest Type	Status at Time of Survey	Condition	Substrate
PW-01	BAEA*	557360	4781031	stick	occupied	excellent	tree
PW-02	BAEA*	578296	4773142	stick	occupied	excellent	tree
PW-03	BAEA*	569596	4754952	stick	occupied	excellent	tree
PW-04	BAEA	572404	4751687	stick	unoccupied	good	tree
PW-05	BAEA	583471	4752028	stick	unoccupied	excellent	tree
PW-06	BAEA	564112	4747459	stick	unoccupied	good	tree

BAEA = bald eagle; * Denotes historical BAEA nest