330 2nd Avenue South, Suite 820
Minneapolis, MN 55401, United States

612 746 4028
info.US@res-group.com
www.res-group.com

August 2, 2016



Mr. Darrell Nitschke
Executive Director
North Dakota Public Service Commission
600 E. Boulevard Avenue, Dept. 408
Bismarck, ND 58505-0480

Submitted via email to ndpsc@nd.gov

Re: Glacier Ridge Wind Farm Application for Certificate of Site Compatibility
Case No. PU-16-539

Dear Mr. Nitschke:

In support of Glacier Ridge Wind Farm, LLC's application for a Certificate of Site Compatibility for the Glacier Ridge Wind Farm in Barnes County, attached is the response dated July 28, 2016 from the National Weather Service Radar Operations Center to our request for review of our proposed wind turbine layout. They concurred that no impacts are anticipated. Also attached is a memo summarizing the habitat mapping results for the Project.

We request that these two items be added to the case docket. A hard copy will be sent to your office as well.

Please do not hesitate to contact me with any questions at 512-213-8501 or anne-marie.griger@res-group.com.

Sincerely,

Anne-Marie Griger
Permitting Specialist

## Anne-Marie Griger

**From:** Jessica Schultz - NOAA Federal <jessica.a.schultz@noaa.gov>
**Sent:** Thursday, July 28, 2016 3:18 PM
**To:** Anne-Marie Griger
**Cc:** wind.energy.matters@noaa.gov
**Subject:** Re: Glacier Ridge Wind Project

Ms. Griger,

Thank you for the follow-up and additional information. The updated proposal takes the turbines outside of the radar's notification zone. We do not request any further contact on this project unless there are changes to turbine height or location.

Best Regards,

Jessica Schultz
National Weather Service
Radar Operations Center
405-573-8808

On Mon, Jul 25, 2016 at 2:50 PM, Anne-Marie Griger <Anne-Marie.Griger@res-group.com> wrote:

Hello,

We received the attached notification regarding our proposed Glacier Ridge Wind Project in Barnes County, North Dakota. Also attached is a spreadsheet with the proposed turbine locations. There are a total of 99 proposed locations, although only 87 turbines will be constructed. Can you please review these locations and let us know if you anticipate any impacts to radar at these locations?

Thank you,

Anne-Marie

**Anne-Marie Griger**
Permitting Specialist

D +1 512 617 2894 | C +1 512 213 8501
anne-marie.griger@res-group.com | http://www.res-group.com

WEST Inc.

**ENVIRONMENTAL & STATISTICAL CONSULTANTS**

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

August 2, 2016

Sean Flannery
Glacier Ridge Wind Farm, LLC
330 2nd Avenue South, Suite 820
Minneapolis, Minnesota 55401 USA

**RE: Glacier Ridge Wind Farm Land Cover Mapping**

Dear Mr. Flannery,

Land cover types (or "habitat") were delineated using ArcGIS, ArcMap 10.3 within the Glacier Ridge Wind Farm (Project). Using 2015 USDA NAIP aerial imagery and National Wetlands Inventory (NWI), all land within the Project area was delineated and assigned one of 11 land cover types, that were then collapsed down to six types (e.g., different types of NWI wetlands were collapsed into "wetland"; Table 1 and Figure 1).

The Project area, as described, contained approximately 34,450 acres. Cultivated crop made up the majority of land cover in the Project area (87%). Grassland had the next highest percentage of land cover with 6%. This includes areas used for pasture, grassed waterways, planted grasslands, including potential Conservation Reserve Program areas, and possibly some native prairie. There are two areas of somewhat larger grasslands, one in the southeastern to south-central portion of the Project and the other in the northwestern portion of the Project. Based on a review of historic aerial photographs as well as the land use/land cover identified in the 2010 North Dakota Gap Analysis Land Cover, these areas have been previously tilled and are not comprised of larger blocks of native grasslands. In descending order, the following land cover types made up the remaining area of the Project: wetlands, tree/shrubs, farmsteads, and developed areas.

Land cover types were dispersed across the Project area with no significant concentration of wetlands, grasslands, or other types in any general area (Figure 1).

Let me know if you have any questions or need further details.

Sincerely,

Clayton Derby
Senior Manager

| Table 1. Land Cover within the Glacier Ridge Wind Farm. | | |
|---|---|---|
| **Land Cover Type** | **Acres** | **% of Total** |
| Cultivated Crop | 29,995 | 87.07 |
| Developed | 11 | 0.03 |
| Farmstead | 230 | 0.67 |
| Grassland | 2,049 | 5.95 |
| Tree/Shrub | 561 | 1.63 |
| Wetland | 1,604 | 4.66 |
| **Total** | **34,450** | **100.00** |

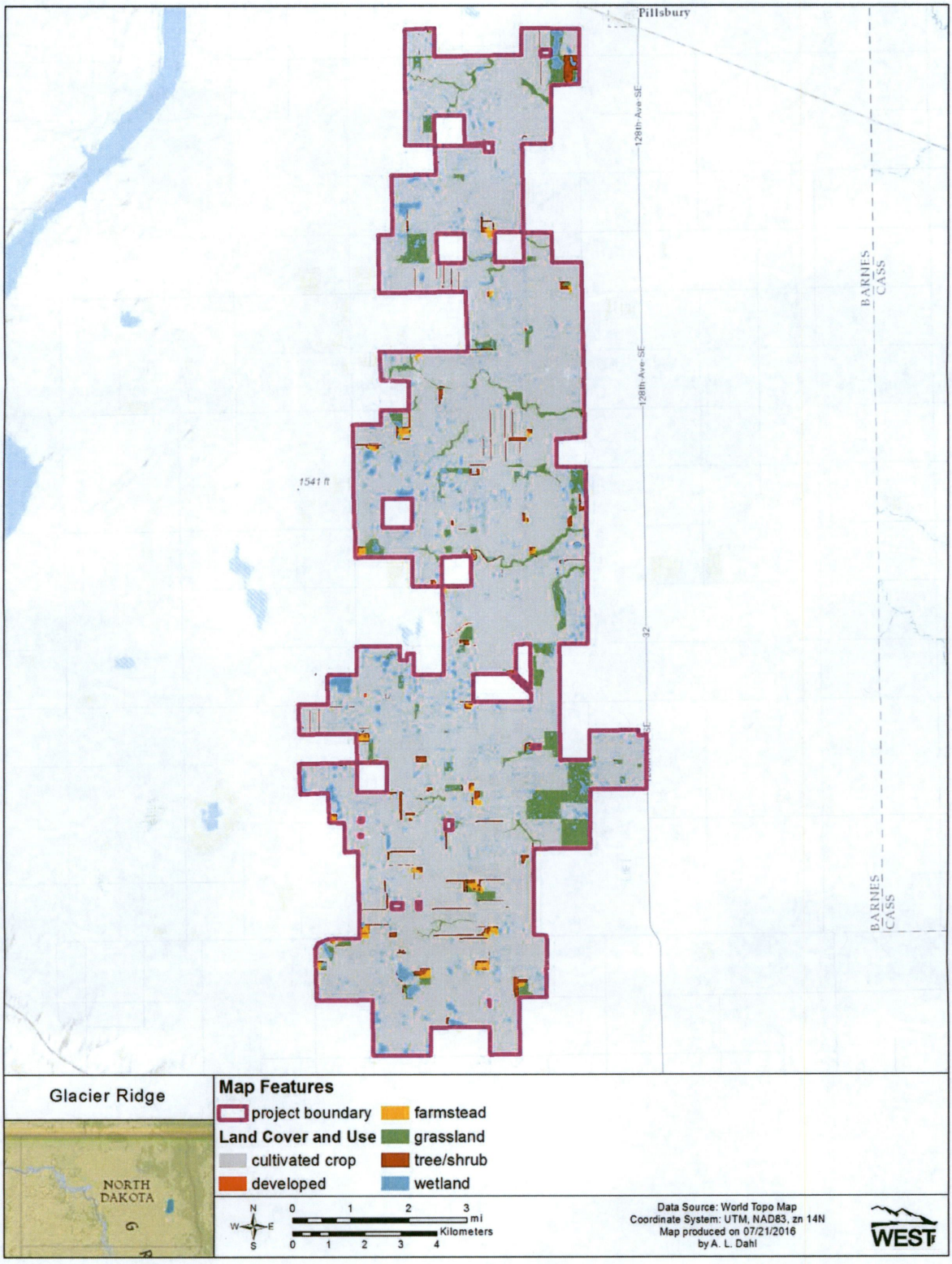


**Figure 1. Land cover within the Glacier Ridge Wind Farm.**