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April 27, 2016

**Lindahl Wind Project, LLC**
**Updated Wetlands and Waters Survey Technical Memorandum**
**Case No. PU-15-482**

This Tech Memo is intended to act as an update to the Tech Memo submitted as PSC Hearing Exhibit No. 15, dated October 7, 2015. Results reported in this Tech Memo include all wetland work completed for this project. KLJ was contracted by Lindahl Wind Project, LLC, to conduct a field wetlands delineation for the proposed Lindahl Wind Farm project in Williams County, North Dakota. The field wetlands delineation was conducted by KLJ on May 4-6, September 16-18, September 23, October 2 and 5, and December 10, 2015, as well as April 13-14, 2016. The wetland delineation area spanned a total of 2,433 acres.

The field wetlands delineation was conducted in accordance with the 1987 United States Army Corps of Engineers (USACE) Wetland Delineation Manual and the USACE March 2010 Regional Supplement: Great Plains Region (Version 2.0). The routine approach with onsite inspection was utilized, including the standard multi-parameter approach (vegetation, hydrology and soils) for wetland identification. An area is considered to be a wetland if hydrophytic vegetation, wetland hydrology and hydric soils are all present. Sample locations were determined using United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) data, wetland signatures on aerial imagery; as well as, visually identifying any sites in the field that exhibited a hydrophytic plant community, hydrology and hydric soil indicators. Wetlands that extended beyond the project area boundary were not delineated to their full extents.

Results indicated in the previous Tech Memo included a total of 109 wetlands covering 29.19 acres within the survey area. With inclusion of recent field studies to previous impact numbers, the new total includes 113 wetlands spanning a total area of 29.45 acres delineated within the wetland delineation area. The natural wetlands were associated with depressions, basins or drainages; artificial wetlands were associated with stock ponds or road ditches. All wetlands were determined to be Palustrine Emergent (PEM) wetlands based on the Cowardin Classification System. Impacts to wetlands were minimized to the extents practicable based on constructability of the project and landowner preference. The developer intends to construct the project under the United States Army Corps of Engineers regulatory thresholds for Nationwide Permits 12, 14, and 33 under Section 404 of the Clean Water Act. Coordination with the USFWS indicated the project will have no impacts on USFWS wetland easement basins within the project area. A formal wetland delineation report is currently being drafted.

Sincerely,

**KLJ**

Grady Wolf
Environmental Scientist

# Lindahl Wind Farm ~ Williams County, North Dakota

## Delineated Wetlands Overview