

**NORTH DAKOTA PUBLIC SERVICE COMMISSION**

**BASIN ELECTRIC POWER COOPERATIVE  
PRAIRIEWINDS REPOWER PROJECT  
CERTIFICATION AND APPLICATION TO AMEND ORDER AND CERTIFICATE  
PRAIRIEWINDS – ND 1 PROJECT  
WARD COUNTY, NORTH DAKOTA**

**CASE NO. PU-26-164**

**AUGUST 11, 2026  
PART II**

**PREPARED TESTIMONY OF  
RYAN KING**

**Q1. Please state your name, employer, and business address.**

A. My name is Ryan King. I am employed by Basin Electric Power Cooperative (“Basin Electric”) as an Environmental Coordinator. My business address is 1717 East Interstate Avenue, Bismarck, ND 58501.

**Q2. In what capacity are you providing this testimony?**

A. I am providing this testimony on behalf of Basin Electric in my role as Environmental Coordinator for the PrairieWinds – ND 1 Project (the “Upgrade Project”). Basin Electric has submitted a Certification for activities associated with the Upgrade Project and an application requesting an amendment to the Commission’s August 12, 2009 Findings of Fact, Conclusions of Law, and Order and Certificate of Site Compatibility No. 14 (Case No. PU-08-075) (the “2009 Order”) issued for the PrairieWinds – ND 1 Wind Energy Facility (the “Existing Project”) in Ward County, North Dakota.

**Q3. Briefly describe your educational background and professional experience.**

A. I received a Bachelor of Science in Construction Management and a Masters of Natural Resources Management from North Dakota State University. I have 13 years of environmental permitting experience. I was hired by Basin Electric in September 2023 and have worked on a variety of transmission and energy conversion facility siting applications.

**Q4. What is your role with respect to the Upgrade Project?**

A. I am responsible for the overall preparation and coordination of the environmental analysis of the Upgrade Project within Basin Electric and through our consultants.

**Q5. Are you familiar with the contents of Basin Electric's Certification for the Upgrade Project as well as the Application to Amend the 2009 Order?**

A. Yes. I am familiar with the contents of the Certification document (the "Certification") and the Application to Amend the 2009 Order (the "Application").

**Q6. Please briefly summarize the purpose of your testimony.**

A. I will testify regarding Basin Electric's environmental and regulatory compliance and the avoidance, minimization and mitigation measures that were implemented for the Upgrade Project. My testimony and supporting evidence demonstrate that the Upgrade Project will have minimal environmental and human effects and meet the Commission's siting criteria. I will also testify regarding the outreach and coordination Basin Electric has undertaken with relevant agencies.

**Q7. Do you have any updates to make regarding the Upgrade Project?**

A. Yes. In the Certification, it states that no wetland impacts will occur as a result of Upgrade Project activities. After further review of turning radii and approaches, to allow for large deliveries, seven wetlands will temporarily be impacted during construction. These minor, temporary impacts to wetlands all occur within ditches along existing roads.

**Q8. Describe the environmental studies and site assessments filed as part of the Upgrade Project's Certification.**

A. Basin Electric conducted the following studies in support of the Certification:

- Natural Resources Inventory Report
  - Federally Listed Wildlife Species and Habitat Evaluation
  - Wetlands and Other Waters Mapping Report
- Sound Study
- Shadow Flicker Analysis

**Q9. Are there any additional environmental studies and/or surveys yet to be completed for the Upgrade Project?**

A. No, all environmental studies have been completed.

**Q10. Please describe Basin Electric’s assessment regarding threatened and endangered species and designated critical habitat occurring within the Upgrade Project.**

- A. Basin Electric used the United States Fish and Wildlife Service (USFWS) Information for Planning and Conservation (“IPaC”) tool to identify threatened or endangered species with the potential for occurrence and designated critical habitat within the Upgrade Project. This tool identified five threatened and endangered species that could potentially occur within the Upgrade Project area: the endangered northern long-eared bat and whooping crane, the threatened piping plover, rufa red knot, and Dakota skipper. No designated critical habitat for any threatened or endangered species or candidate species is located within the Upgrade Project.

**Q11. What are the results of Basin Electric’s analysis regarding Northern Long-eared Bat?**

- A. Potential northern long-eared bat roosting and foraging habitat in the Survey Area<sup>1</sup> is limited, accounting for less than 0.2% of the Upgrade Project Area and consists of trees associated with homestead shelterbelts and small patches of forest. These areas are small and fragmented on the landscape and, therefore, provide limited, low-quality roosting habitat for northern long-eared bats. To reduce the potential for impacts to roosting bats, no tree clearing will occur between April 15 and October 31. Adverse impacts to the northern long-eared bat are not anticipated.

**Q12. What are the results of Basin Electric’s analysis regarding Whooping Crane?**

- A. A field survey conducted November 11, 2025, documented 16.31 acres of potentially suitable stopover habitat, including freshwater emergent wetlands and freshwater ponds within the Survey Area (WEST 2025). No whooping crane observations have been documented in the Survey Area; however, the closest confirmed sighting to the Survey Area was of one adult crane in 1989, 0.25 mi south of the Survey Area. Adverse impacts to whooping cranes from repowering construction are not anticipated. While areas of potentially suitable habitat are present in the Survey Area, none of these areas will be removed during the Upgrade Project repowering construction. Continuing our current

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<sup>1</sup> The “Survey Area” referred to herein is the Study Area depicted in Appendix E to the Certification at Figure 2, p. 3.

practice, during construction and operation, if a whooping crane is spotted within one mile of the Upgrade Project Area, activities will cease, and the USFWS will be notified.

**Q13. What are the results of Basin Electric’s analysis regarding Dakota skipper?**

- A. There is no USFWS designated Dakota skipper critical habitat in the Upgrade Project. The Survey Area contains 52.43 acres of potentially suitable habitat and 175.71 acres of dispersal habitat, totaling approximately 28% of the Survey Area. Due to the presence of suitable habitat, the Dakota skipper may potentially be present within the Survey Area, however anticipated impacts to suitable habitat are minimal and only anticipated within the temporary disturbance area shown in Appendix E to the Certification. No adverse impacts to the Dakota skipper are anticipated. While it is acknowledged that the Dakota skipper is not known to reproduce on restored habitat, utilizing an approved native seed mixture after construction will minimize the permanent loss of functional grassland habitat.

**Q14. What are the results of Basin Electric’s analysis regarding piping plover?**

- A. The nearest designated critical habitat for the Piping plover is Rush Lake, located 3.85 miles west of the Survey Area. Small areas of potentially suitable stopover habitat exist within the Survey Area; however, no wetlands will be permanently affected from construction activities. Thus, adverse impacts to piping plover are not anticipated.

**Q15. What are the results of Basin Electric’s analysis regarding rufa red knot?**

- A. Designated critical habitat for the rufa red knot is not located within the Survey Area. The Survey Area does not contain potential shoreline habitat suitable for migrating rufa red knots. Small freshwater wetlands, freshwater ponds, and lakes are scattered throughout the Survey Area; however, these areas will not be permanently impacted during the Upgrade Project repowering. The nearest reported rufa red knot, detected in 2022, was over 50 mi northwest of the Survey Area. Adverse impacts to the rufa red knot are not anticipated.

**Q16. Please describe Basin Electric’s coordination with NDGFD and USFWS regarding the Upgrade Project.**

- A. Agency notification letters were sent to both NDGFD and USFWS. NDGFD did not respond or identify any concerns with the Upgrade Project. Basin Electric coordinated with USFWS regarding potential wetland impacts and avoiding USFWS managed wetland easements.

**Q17. Will the Upgrade Project exclude areas where animal or plant species that are unique or rare to the state would be irreversibly damaged?**

A. Yes. The Upgrade Project utilizes existing foundations and towers and will be constructed entirely within the previously designated site. As such, the land use associated with the Upgrade Project is largely unchanged and areas where animal or plant species that are unique or rare to the state are not anticipated to be impacted.

**Q18. Has Basin Electric conducted an evaluation of the Upgrade Project's potential impacts to wetlands?**

A. Yes. Basin Electric contracted Western EcoSystems Technology, Inc. ("WEST") to conduct a desktop review of wetland and waterbody features identified within the Upgrade Project area. Additionally, WEST conducted a field survey to verify wetland and waterbody locations and sizes.

**Q19. Are impacts to wetlands associated with the Upgrade Project anticipated?**

A. Yes. To allow for large deliveries, minor temporary impacts to seven wetlands will occur, totaling 0.14 acres. These minor, temporary impacts to wetlands all occur within ditches along existing roads. A map set attached hereto as Exhibit 1 depicts the seven locations where temporary wetland impacts will occur.

**Q20. Has Basin Electric assessed whether there are any reasonable alternatives to avoid the temporary wetland impacts depicted in Exhibit 1?**

A. Yes, Basin Electric assessed potential alternatives and determined there are no reasonable alternatives to avoid the temporary wetland impacts depicted in Exhibit 1. As previously stated, the 0.14 acres of temporary wetland impacts all occur within ditches along existing roads. These temporary impacts are all associated with temporary turning radii that will be added to existing roads/intersections. The alternative would be to build new roads that would significantly increase impacts to agricultural lands and other previously undisturbed areas.

**Q21. Has the Upgrade Project avoided areas that are geologically unstable?**

A. Yes. By utilizing existing foundations and towers, the Upgrade Project will avoid areas that are geologically unstable.

**Q22. Please briefly explain the Upgrade Project’s potential impact on woodlands.**

A. The Upgrade Project site lacks large and contiguous woodlands and adverse impacts to woodlands are not anticipated.

**Q23. Please briefly explain the Upgrade Project’s potential impact on trees and shrubs.**

A. While not anticipated, trees may need to be trimmed or removed for large deliveries, on an as needed basis. If trees need to be removed, Basin Electric will comply with the Commission’s Tree and Shrub Mitigation Specifications, and an inventory and replacement plan will be submitted to the Commission for approval. Adverse impacts to trees and shrubs are not anticipated.

**Q24. Please describe the types of grasslands located within the Upgrade Project area.**

A. The Upgrade Project is located in rural North Dakota in an area predominately comprised of cultivated land, hayfields, pasturelands, and grasslands.

**Q25. Will the Upgrade Project avoid and minimize impacts to grasslands.**

A. The Upgrade Project will remain within the areas previously disturbed by the original construction and impacts to grasslands are anticipated to be minimal. Topsoil will be cleared and stockpiled around each turbine location for temporary construction workspace. Additionally, portions of existing roads will be temporarily widened to accommodate delivery and staging of equipment. Once construction is completed, these areas will be restored to pre-construction grade and revegetated.

**Q26. Will temporarily disturbed areas be restored?**

A. Yes. Basin Electric will restore temporarily disturbed areas in compliance with applicable portions of the Commission’s 2009 Order.

**Q27. Please briefly describe the cultural and historic resource assessments conducted for the Upgrade Project.**

A. Basin Electric contracted Metcalf Archaeological Consultants (“Metcalf”) to conduct the Class III cultural resource inventory and the Class II reconnaissance survey for the Upgrade Project. The architectural Class II survey comprises all areas within a two-mile buffer of all turbines. The Class III pedestrian inventory was conducted in areas around roads and turbines. A redacted version of the Cultural Resources Report is in Appendix D to the Certification.

**Q28. Is there any additional cultural or historic resource work that needs to be completed?**

A. Yes, eight sites are within the planned temporary workspace around turbines. Four sites will need to be avoided; however, Metcalf is working with the ND State Historic Preservation Office to determine if recommended buffer zones around the sites can be worked within provided a cultural monitor is present. Additionally, Metcalf will conduct evaluative testing on the other four sites to determine State Historic Sites Registry (SHSR) eligibility to potentially work within site boundaries.

**Q29. Will the Upgrade Project avoid impacts to the identified cultural and historic sites?**

A. Yes. All cultural resources that are eligible or unevaluated for significance will be avoided during construction with appropriate fencing and buffers. No impacts to SHSR eligible or unevaluated cultural resources are anticipated.

**Q30. Does Basin Electric have procedures in place to address previously unidentified cultural resources encountered during construction?**

A. Yes. An Unanticipated Discovery Plan (“UDP”) will be implemented to guide activities if cultural resources are identified during construction.

**Q31. Please describe the results of the Sound Study conducted for the Upgrade Project.**

A. When the Existing Project was permitted, the Commission had no codified sound regulations applicable to wind facilities. Specifically, the Commission’s current avoidance area requiring sound levels within 100 feet of an inhabited residence to not exceed 45 decibels (dBA) (N.D. Admin. Code § 69-06-08-01(4)), had not been enacted. Basin Electric engaged Burns & McDonnell to conduct a Sound Study for the Upgrade Project. The Sound Study is in Appendix A to the Certification. Modeling for the Upgrade Project concluded that 40 receptors have sound levels exceeding 45 dBA at 100 feet from the receptor. After reviewing the receptors, 17 were either duplicate or non-inhabited residences, leaving 23 inhabited residences over the 45 dBA threshold at 100 feet. Six of the inhabited residences are currently over the 45 dBA limit within 100 feet, twelve are currently at the 45 dBA limit within 100 feet. Although the Commission’s sound criteria does not govern the Upgrade Project and Basin Electric’s existing easements already permit the sound levels at residences shown in the Sound Study, Basin Electric is voluntarily working to obtain waivers from each landowner with an exceedance. Of the 23 inhabited residences, 11 are non-participating landowners and 12 are participating. Basin

Electric has obtained all 11 waivers from the non-participating landowners and 9 waivers from the participating landowners.

**Q32. Please describe the results of the shadow flicker assessment for the Upgrade Project.**

- A. When the Existing Project was permitted, the Commission did not specifically address shadow flicker. The Commission now assesses wind energy conversion facilities under the generally accepted industry standard of no more than 30 hours per year of shadow flicker at an occupied receptor. Basin Electric engaged Burns & McDonnell to conduct a shadow flicker analysis for the Upgrade Project. The shadow flicker analysis is located in Appendix B to the Certification. The shadow flicker analysis identifies one non-participating receptor as exceeding 30 hours of shadow flicker per year. Although shadow flicker was not assessed as part of the Existing Project's siting, Basin Electric has obtained a waiver from this landowner.

**Q33. Will the Upgrade Project continue to comply with the Commission's Exclusion and Avoidance Criteria in effect at the time the Project was sited?**

- A. Yes. The Upgrade Project is governed by the Commission's Exclusion and Avoidance Criteria in effect in 2009 when the Order was issued. With the exception of the minor temporary wetland impacts noted above, the Upgrade Project will continue to comply with this criteria, a copy of which is attached hereto as Exhibit 2. As previously discussed, there are no reasonable alternatives to avoid the temporary wetland impacts identified.

**Q34. Are you familiar with the Commission's current Exclusion and Avoidance Area Criteria identified in Section 69-06-08-01 of the North Dakota Administrative Code?**

- A. Yes. The studies and surveys conducted for the Upgrade Project include an assessment of the Commission's current criteria.

**Q35. Under the Commission's current siting criteria, are there any Exclusion Areas located within the Upgrade Project?**

- A. Yes. Archaeological sites are within the Upgrade Project Area; however, no SHSR eligible or unevaluated sites will be impacted by construction activities. The other Exclusion Areas located within the site are associated with statutory setback requirements that were not in place when the Existing Project was sited by the Commission, and were discussed in more detail in my colleague Kyle Weisbeck's testimony.

**Q36. Under the Commission's current siting criteria, are there any Avoidance Areas located within the Upgrade Project?**

A. Yes. The following Avoidance Areas currently identified in N.D. Admin. Code §§ 69-06-08-01(3)-(4) are present within the Upgrade Project: 1) wetlands; and 2) areas where, due to the operation of the Upgrade Project, sound levels within 100 feet of an inhabited residence may exceed 45 decibels.

1) Wetlands: As previously discussed, seven wetlands will be temporarily impacted by expanding turning radii for large deliveries.

2) Sound Levels: As previously stated, at the time the Existing Project was permitted, the Commission's existing 45 dBA sound regulation was not enacted and did not apply. Although not required, Basin Electric is voluntarily working to obtain waivers from each landowner with an exceedance.

**Q37. Are any remaining local, state, or federal environmental permits or approvals needed for the Upgrade Project?**

A. Yes, we are awaiting no hazard determinations from the Federal Aviation Administration and NDSHPO concurrence for the additional work being completed for the sites within the temporary workspaces.

**Q38. Will the Upgrade Activities continue to comply with the Order and Certificate previously issued by the Commission for the Project?**

A. Yes.

**Q39. Has Basin Electric designed the Upgrade Project to avoid, minimize, and mitigate environmental impacts to the greatest extent possible?**

A. Yes.

**Q40. Has Basin Electric sited the Upgrade Project in a manner so that the location and operation will produce minimal adverse effects on the environment, wildlife, and upon the welfare of the citizens of North Dakota?**

A. Yes.

**Q41. Is the Upgrade Project compatible with the environmental preservation and the efficient use of resources?**

A. Yes.

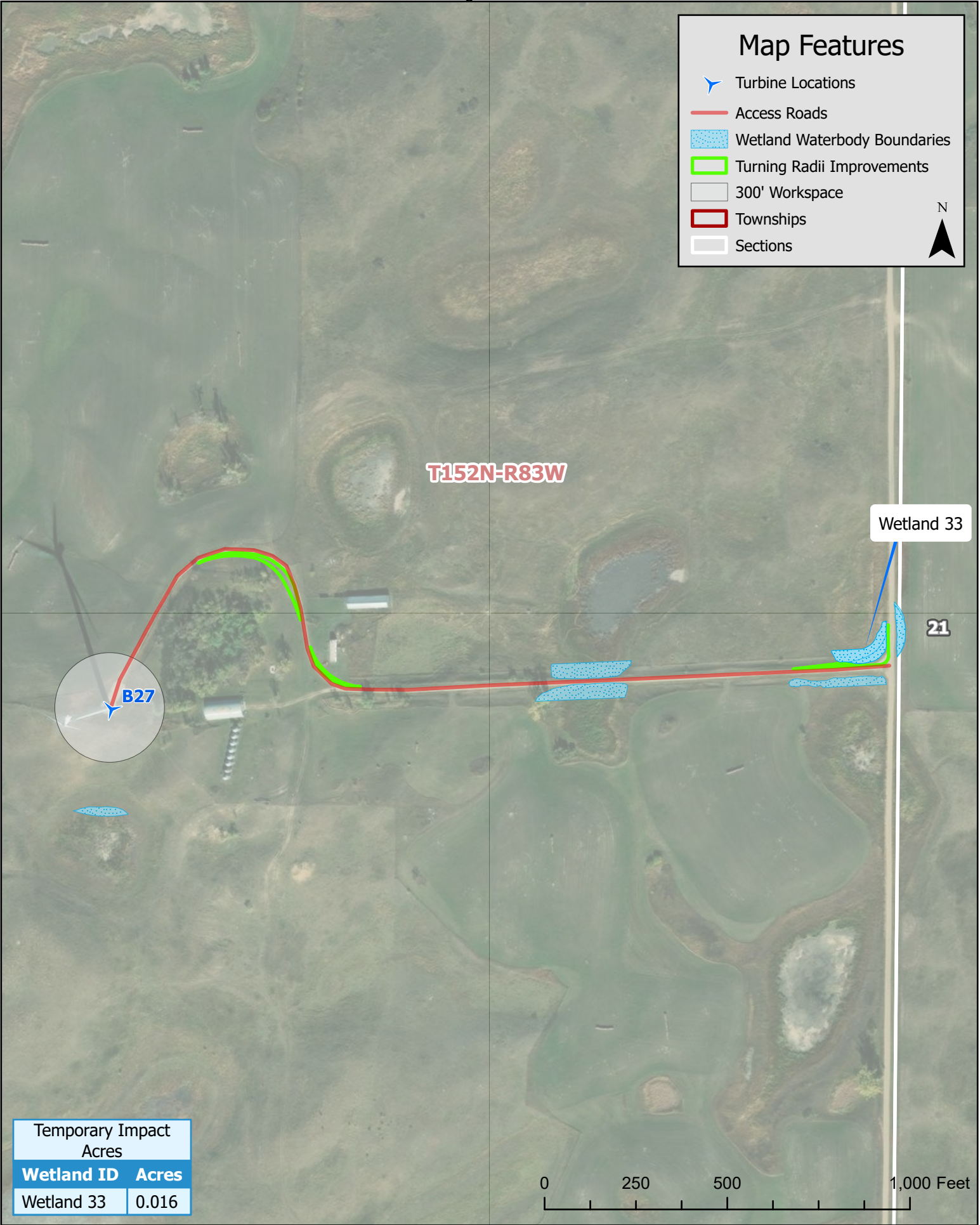
**Q42. Does this conclude your direct testimony?**

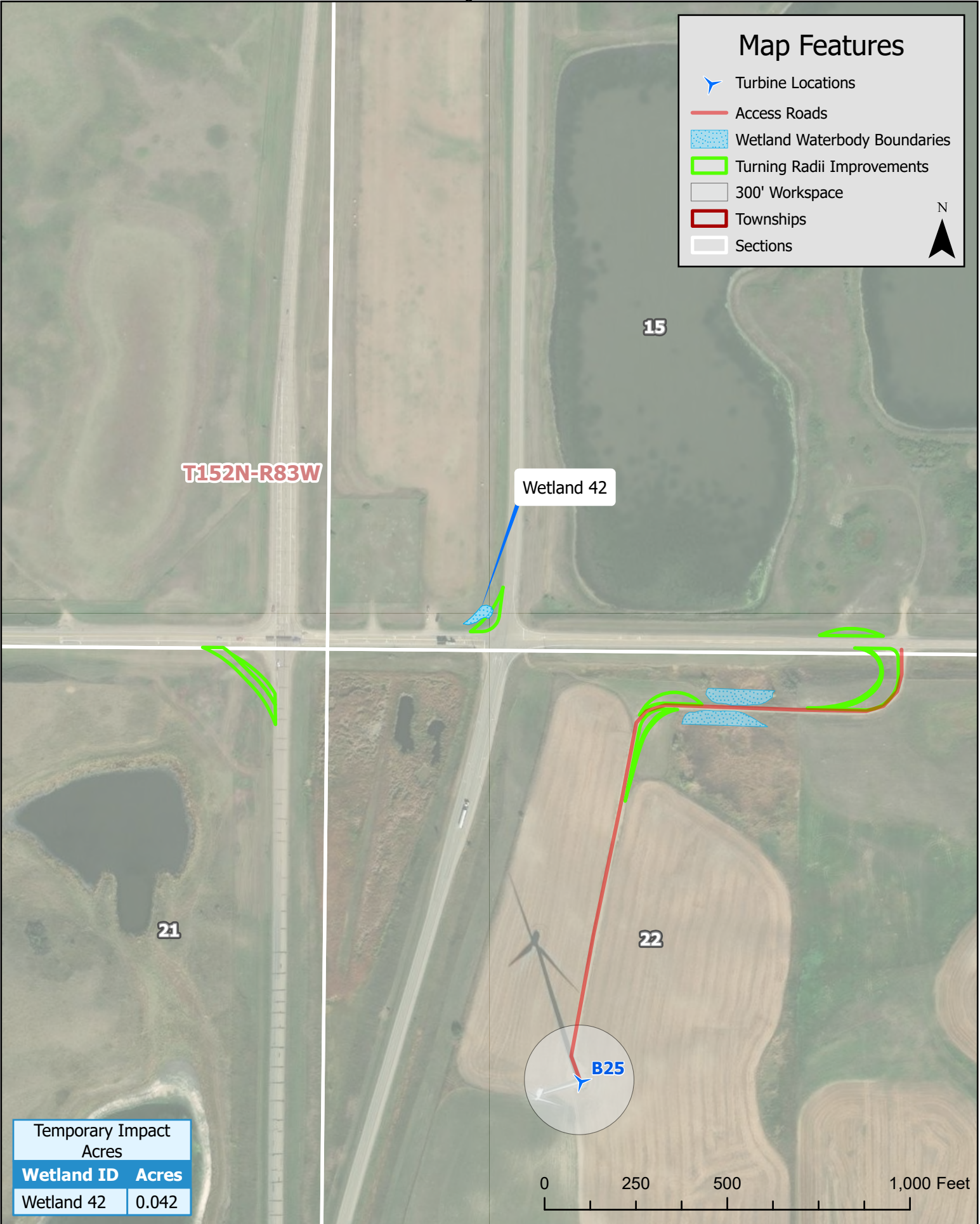
A. Yes

# **EXHIBIT 1**

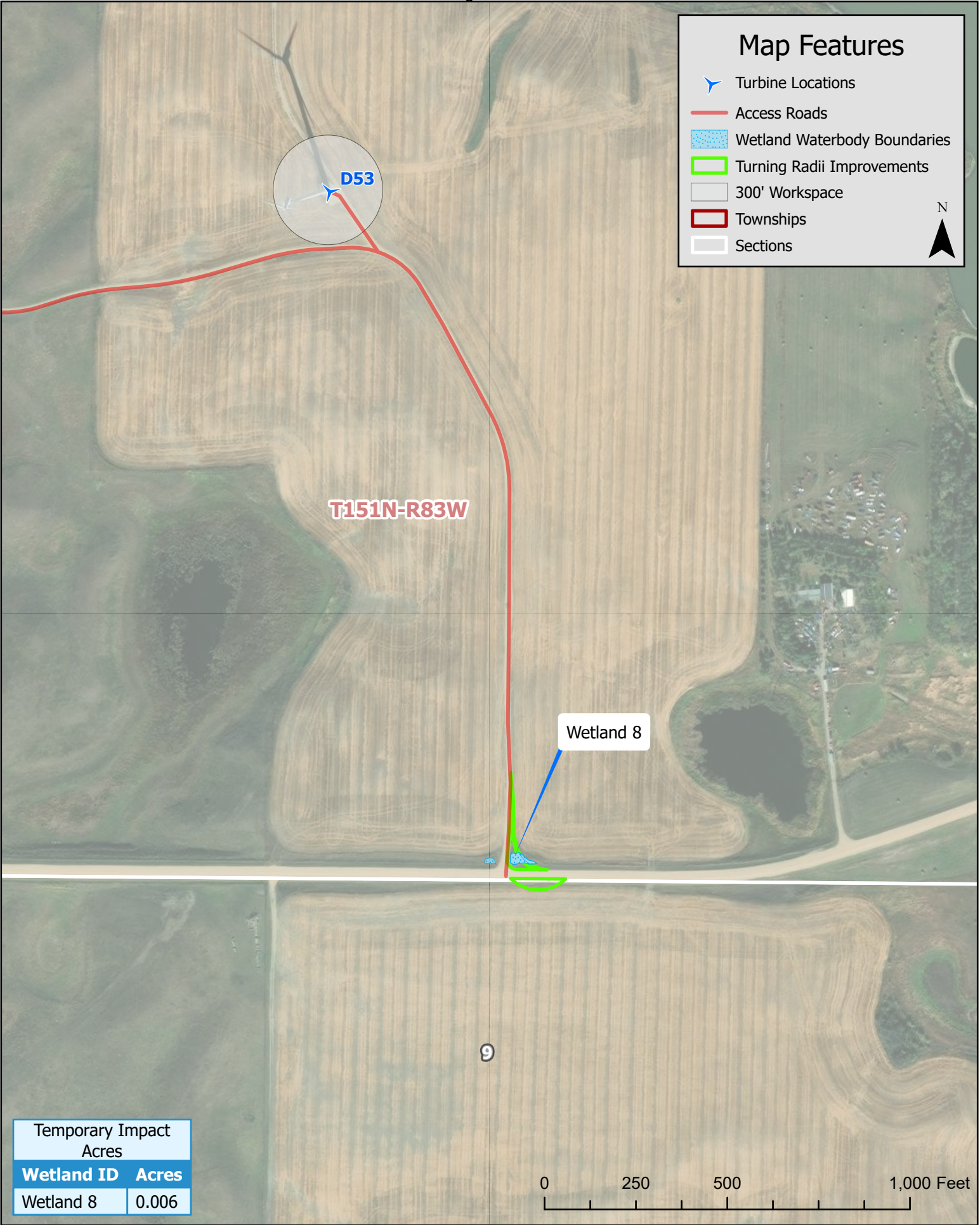


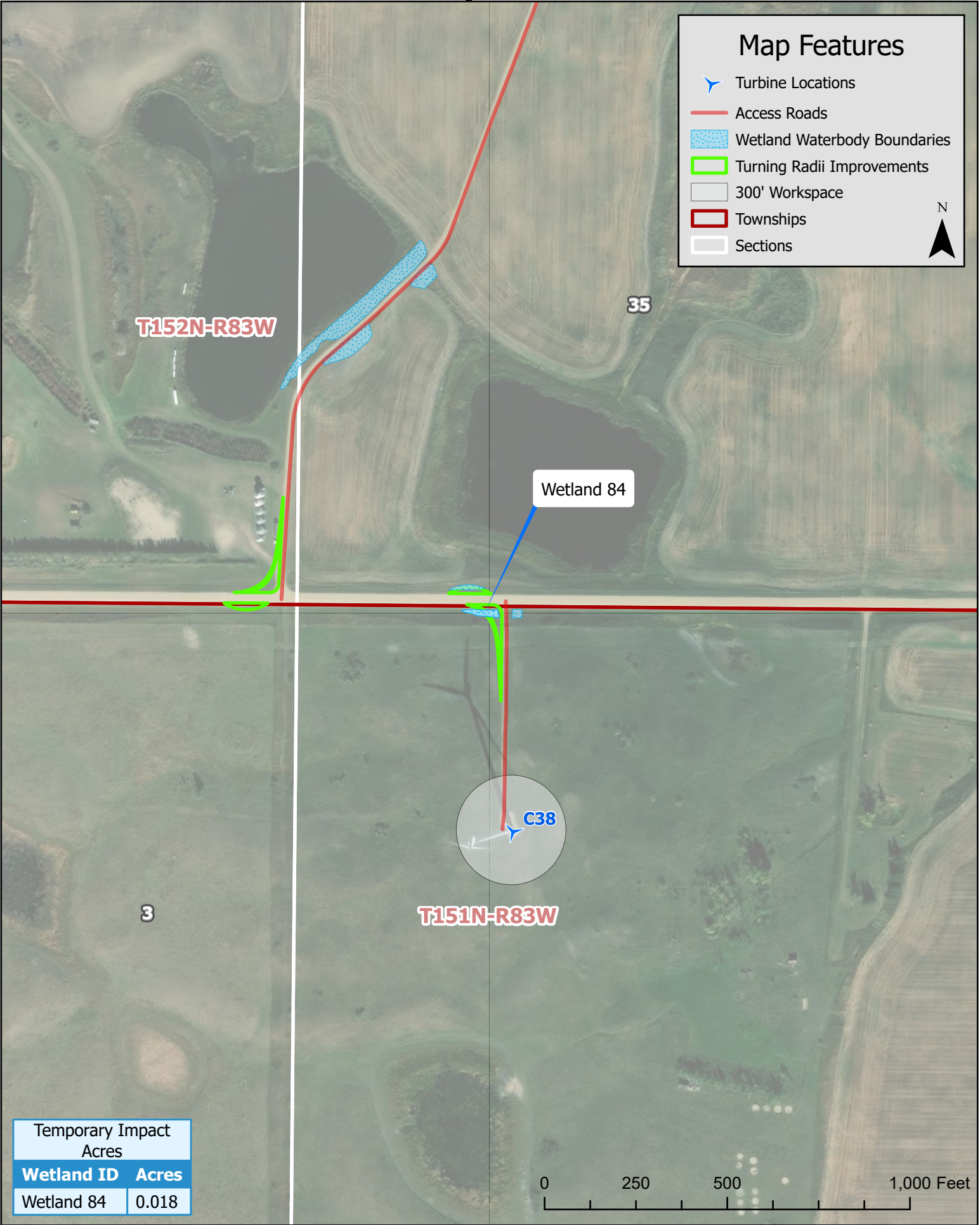












## **EXHIBIT 2**

**JULY 2006**

**CHAPTER 69-06-08**

**69-06-08-01. Energy conversion facility siting criteria.** The following criteria shall guide and govern the preparation of the inventory of exclusion and avoidance areas, and the site suitability evaluation process.

1. **Exclusion areas.** The following geographical areas shall be excluded in the consideration of a site for an energy conversion facility, and shall include a buffer zone of a reasonable width to protect the integrity of the area. Natural screening may be considered in determining the width of the buffer zone.
  - a. Designated or registered national: parks; memorial parks; historic sites and landmarks; natural landmarks; historic districts; monuments; wilderness areas; wildlife areas; wild, scenic, or recreational rivers; wildlife refuges; and grasslands.
  - b. Designated or registered state: parks; forests; forest management lands; historic sites; monuments; historical markers; archaeological sites; grasslands; wild, scenic, or recreational rivers; game refuges; game management areas; management areas; and nature preserves.
  - c. County parks and recreational areas; municipal parks; parks owned or administered by other governmental subdivisions; hardwood draws; and enrolled woodlands.
  - d. Prime farmland and unique farmland, as defined by the land inventory and monitoring division of the soil conservation service, United States department of agriculture, in 7 C.F.R. part 657; provided, however, that if the commission finds that the prime farmland and unique farmland that will be removed from use for the life of the facility is of such small acreage as to be of negligible impact on agricultural productions, such exclusion shall not apply.
  - e. Irrigated land.

- f. Areas critical to the life stages of threatened or endangered animal or plant species.
  - g. Areas where animal or plant species that are unique or rare to this state would be irreversibly damaged.
2. **Avoidance areas.** The following geographical areas shall not be approved as a site for an energy conversion facility unless the applicant shows that under the circumstances there is no reasonable alternative. In determining whether an avoidance area should be designated for a facility the commission may consider, among other things, the proposed management of adverse impacts; the orderly siting of facilities; system reliability and integrity; the efficient use of resources; and alternative sites. Economic considerations alone shall not justify approval of these areas. A buffer zone of a reasonable width to protect the integrity of the area shall be included. Natural screening may be considered in determining the width of the buffer zone.
- a. Historical resources which are not designated as exclusion areas.
  - b. Areas within the city limits of a city or the boundaries of a military installation.
  - c. Areas within known floodplains as defined by the geographical boundaries of the hundred-year flood.
  - d. Areas that are geologically unstable.
  - e. Woodlands and wetlands.
  - f. Areas of recreational significance which are not designated as exclusion areas.