

**BEFORE THE STATE OF NORTH DAKOTA
PUBLIC SERVICE COMMISSION**

**FLICKERTAIL SOLAR PROJECT, LLC
FLICKERTAIL SOLAR PROJECT – RICHLAND COUNTY
SITING APPLICATION**

CASE NO. PU-24-351

**PRE-FILED TESTIMONY OF CHRISTINA MARTENS
ON BEHALF OF FLICKERTAIL SOLAR PROJECT, LLC**

March 10, 2025

I. INTRODUCTION AND QUALIFICATIONS

Q. Please state your name, employer, and business address.

A. My name is Christina Martens. I am employed by Savion, LLC (Savion) and my business address is 422 Admiral Boulevard, Kansas City, MO 64106.

Q. What is your position with Savion?

A. I am a Director of Permitting & Environmental.

Q. Briefly describe your work history and education.

A. I hold a Bachelor of Landscape Architecture (BLA) from Michigan State University and I am currently a Licensed Landscape Architect in the State of Michigan. I have worked in the design and development field designing and permitting housing, commercial, and mixed-use developments, and conducting environmental services for over 23 years. For the past six years, I have focused on renewable energy design and permitting, including working as a consultant for over three years and the last two and a half years on the industry side. Due to my permitting experience, I have also spent the past 16 years working as my township's Zoning Administrator and have permitted numerous houses, agricultural facilities, and two wind farms and associated facilities.

Q. What is your role with respect to the Flickertail Solar Project (Project)?

A. I am responsible for ensuring the Project's compliance with all applicable local, state, and federal permitting requirements and environmental regulations. My role includes overseeing coordination with governmental agencies such as the U.S. Fish and Wildlife Service (USFWS), the North Dakota Game and Fish Department (NDGF), the State Historical Society of North Dakota (SHSND)/North Dakota State Historic Preservation Office (SHPO), and the U.S. Army Corps of Engineers (USACE). In addition, I oversee the selection and work of consultants completing environmental and wildlife studies and surveys for the Project that are used to ensure compliance with applicable requirements and inform siting of Project facilities to avoid or minimize impacts to environmental resources.

32

33 **Q. What proposed hearing exhibits are you sponsoring in your testimony?**

34 A. I am sponsoring the following proposed hearing exhibits:

- 35 • **Exhibit 1**: Application for Certificate of Site Compatibility
- 36 • **Exhibit 2**: Project Update Figure
- 37 • **Exhibit 3**: Updated Application Figures 1-10
- 38 • **Exhibit 4**: Class III Inventory of Architectural Resources Summary
- 39 Memorandum
- 40 • **Exhibit 5**: Additional Agency Correspondence
- 41 • **Exhibit 6**: Summary of Avoidance, Minimization, and Mitigation Measures
- 42 • **Exhibit 9**: Prefiled Testimony of Christina Martens
- 43 • **Exhibit 9-A**: Martens Resume
- 44 • **Exhibit 10**: Updated Class III Cultural Resources Inventory Report (**PUBLIC**
- 45 and **NONPUBLIC** versions)

46

47 **II. UPDATES TO THE PROJECT**

48

49 **Q. In Nick Schuler's Direct Testimony (proposed Exhibit 8), he describes the**
50 **updates made to the Project since the Application for Certificate of Site**
51 **Compatibility (Application) was filed on October 8, 2024. Are you aware of this**
52 **testimony?**

53 A. Yes.

54

55 **Q. Is the layout shown on the updated Application Figures 1-10 (proposed Exhibit**
56 **3) the final layout?**

57 A. Yes.

58

Q. Did the collection line shifts described in Mr. Schuler's Direct Testimony affect resource impact estimates in the Application?

A. There was a slight overall reduction in temporary impacts, including a reduction in impacts to floodplains. Overall, the minor collection line shifts resulted in a similar footprint of facilities compared to the layout submitted with the Application.

III. ENVIRONMENTAL AND SITE ANALYSIS OVERVIEW

Q. Is Figure 1 in proposed Exhibit 3 (Updated Application Figures 1-10) an accurate depiction of the Project Area?

A. Yes.

Q. Please provide a general description of the Project site from a land use perspective.

A. The Project site is located within Abercrombie Township, Richland County in a rural area in southeast North Dakota. The majority of the Project Area is currently comprised of agricultural land (75 percent cultivated crops and 16 percent hay/pasture).

Q. What was the overall approach to environmental analysis of the Project site?

A. Our analysis of the Project site included the Project Area itself, as well as a Study Area that consisted of a one-mile buffer around the Project Area. Flickertail Solar Project, LLC (Flickertail) conducted a desktop analysis of available land use and environmental information to identify North Dakota Public Service Commission (PSC) exclusion and avoidance areas, as well as other potentially sensitive resources. Flickertail also conducted several site-specific field surveys, including:

- a ground-based eagle nest survey for the Project Area plus a 660-foot buffer,
- a sharp-tailed grouse lek survey,
- an unbroken grassland assessment,
- a wetlands and waterbodies survey,
- cultural resources surveys, and

- an architectural history inventory.

Flickertail used the desktop data and the site-specific survey data, along with agency and other stakeholder input, to design the Project to avoid or minimize environmental impacts. This analysis is generally described in the various sections of the Application (proposed **Exhibit 1**).

Q. What environmental and site analysis reports were filed with the Application for the Project?

A. The following environmental and site analysis reports were filed with the Application (proposed **Exhibit 1**):

- Appendix E: Glare Analysis
- Appendix F: Cultural Resource Inventory Report
- Appendix G: Cultural Resource Unanticipated Discoveries Plan
- Appendix H: SSURGO Soil Types for the Study and Project Areas
- Appendix I: Wetland Delineation Report
- Appendix J: Unbroken Grassland Assessment
- Appendix K: Vegetation Management Plan
- Appendix L: Ground-Based Eagle Nest Survey Memo
- Appendix M: Lek Survey

Q. Since the Application was filed, have any additional or updated reports been completed?

A. Yes. Based on comments from SHSND, the Class III cultural resources inventory report (Appendix F to the Application) has been revised; the revised report is provided as proposed **Exhibit 10** and has been submitted to SHSND. Once received, the SHSND response will be provided to the PSC. In addition, a Class III inventory of architectural resources has been completed at the request of SHSND. A memorandum summarizing the preliminary results of that inventory is included as proposed **Exhibit 4**. The report is in progress and will be submitted to SHSND for review once final. The SHSND response will be provided to the PSC once received.

Q. Based on the preliminary design, what are the estimated land requirements for the Project components within the fenced array areas?

A. As discussed in Section 4.3 and shown in Table 4.2 of the Application, of the 3,464-acre Project Area, a total of 1,766.8 acres will host the arrays and other components within fenced areas. Specifically, approximately 18.4 of the 1,766.8 acres will host access roads, inverters, and meteorological stations (METs). The remaining 1,748.4 acres will be vegetated with a seed mix characteristic of the region, including under the photovoltaic (PV) panels, and above buried electrical collection cables.

Q. What are the estimated land requirements for the Project components outside the fenced array areas?

A. Of the approximately 1,697.2 acres outside the fenced array areas, approximately 11.5 acres will host the collector substation, the operations and maintenance (O&M) facility, and access roads. Other Project facilities outside the fenced array areas include stormwater basins (as needed), buried electrical collection cables, and laydown areas; these areas will be revegetated after the installation of the facilities. The remaining approximately 1,620.8 acres of the Project Area will be seeded, as needed, and maintained throughout the life of the Project.

Q. Are the Project disturbance calculations in the Application conservative?

A. Yes, the actual disturbance is expected to be less than what is presented in the Application.

Q. What stormwater/drainage control measures may be implemented for the Project?

A. The Project may include construction (temporary) stormwater measures that could consist of silt fence, rock construction entrances, rock check dams, compost filter sock, seeding, mulching, etc. At this time, Flickertail does not anticipate needing to construct permanent stormwater basins in or around the solar arrays due to relatively flat grade, minimal amount of proposed impervious surfaces, and shallow topography. Flickertail may install stormwater/drainage management measures (such as basins)

near the substation and/or O&M facility, as needed, due to the impervious surfaces created by those components. Flickertail will determine the appropriate stormwater/drainage measures for the Project once the design is finalized.

Q. How will the site be restored post-construction?

A. Following construction, areas disturbed by construction activities that will not contain permanent aboveground facilities will be stabilized and revegetated and maintained according to the Vegetation Management Plan (VMP) provided in Appendix K to the Application (proposed Exhibit 1).

IV. CULTURAL RESOURCES

Q. Please describe the cultural and architectural resource investigations conducted for the Project to-date.

A. Flickertail retained Tetra Tech, Inc. (Tetra Tech) to conduct a Class I cultural resources literature review, Class III cultural resources inventory, and a Class III inventory of architectural resources.

Q. Please describe the Class I and III cultural resource investigations conducted for the Project.

A. The Class I cultural resources literature review of the Project Area plus a one-mile buffer identified one previously recorded historic archaeological site lead (Site Lead 32RIX0061) in the center of the Project Area; this site lead is currently unevaluated for listing on the National Register of Historic Places (NRHP). Seven additional resources, including five architectural, one historical archaeological, and one archaeological, were recorded in the one-mile buffer outside the Project Area; these resources are unevaluated for listing on the NRHP.

Class III cultural resource inventories of all locations in the Project Area that will host facilities or will be disturbed by construction activities were conducted in late October/early November 2023 and in May 2024. Shovel probing was also undertaken

during the May 2024 survey effort to assess the presence or absence of cultural material at isolated finds recorded in 2023.

The location of the one previously identified site lead (32RIX61; unevaluated) was visited during the pedestrian surveys; evidence of this site lead was not observed in the Project Area, likely due to previous development in the area. Since this site lead has not been fully evaluated for NRHP listing, avoidance or full evaluation is recommended. Although the resource appears to no longer be present, Flickertail has sited Project facilities to avoid the boundary of this site lead.

Additionally, field surveys identified one new site (32RI931) located within the Project Area that has not been fully evaluated for listing in the NRHP. Since this site lead has not been fully evaluated for NRHP listing, avoidance or full evaluation is recommended. Flickertail has sited the Project facilities to avoid this unevaluated archaeological site.

Q. Have the Class I and III results been submitted to the SHSND?

A. Yes. A report including the Class I cultural resources literature review and Class III cultural resources inventory was submitted to the SHSND in September 2024. Based on comments from SHSND, the report was revised. The revised report has been completed and submitted to SHSND. Once received, the SHSND response will be provided to the PSC.

Q. Does the Project avoid impacts to the potential cultural resource sites identified?

A. Yes. As noted above, although the one previously identified site lead (32RIX61; unevaluated) appears to no longer be present, Flickertail has sited Project facilities to avoid the boundary of this site lead. Additionally, Flickertail has sited the Project facilities to avoid the unevaluated archaeological site 32RI931 identified during field surveys.

Q. Will there be procedures in place to address previously unidentified cultural resources encountered during Project construction?

A. Yes. Flickertail prepared an Unanticipated Discoveries Plan (UDP) (proposed Exhibit 1, Appendix G). The UDP details a process for prompt communication and action regarding the discovery of previously unknown archaeological resources or human remains, should they be encountered during construction. Flickertail has provided a copy of the UDP to SHSND.

Q. Was an inventory of architectural resources conducted for the Project?

A. Yes. At the request of SHSND, a Class III inventory of architectural resources was completed in November 2024 for areas within 0.5 mile of the solar arrays. A memorandum summarizing the preliminary results of this inventory is included as proposed Exhibit 4.

Q. Please describe the preliminary results of the architectural inventory.

A. A total of 14 locations (properties) with one or more structures were identified within the surveyed area during the desktop review. Of the total 123 structures identified on these properties, six structures were identified for further assessment for NRHP eligibility. These six structures ranged from approximately 1,010 feet (0.2 mile) to 2,645 feet (0.5 mile) from the Project's solar arrays. Mature tree lines (i.e., shelter belts) are present between each of the six structures and the Project's arrays. Due to the presence of the shelter belts and the distance between the Project's solar arrays and the structures, the Project is not anticipated to diminish the historical integrity of the six structures identified during the inventory.

Q. Have the results of the Class III inventory of architectural resources been submitted to SHSND?

A. The report is in progress and will be submitted to SHSND for review once final. A copy of the report and the SHSND response will be provided to the PSC once received.

V. WETLANDS AND WATERBODIES**Q. How has Flickertail identified wetlands and waterbodies within the Project Area?**

A. Wetlands within the Project Area were initially identified using the National Wetlands Inventory (NWI) data. Field wetland and waterbody delineations were then completed in April and May 2024 for 3,315 acres of the Project Area, which includes all areas that would be impacted by Project construction. A Wetland Delineation Report was included as Appendix I to the Application (proposed **Exhibit 1**).

Q. Please describe the wetlands and waterbodies identified within the Project Area.

A. Approximately 73.4 acres of wetlands were delineated within the Project field survey area. The field surveys identified two sections of Pitcairn Creek within the Project Area – an approximately 1.5-mile section through the west-central part of the Project Area, and an approximately 0.7-mile section through the east-central part of the Project Area. Four unnamed tributaries to Pitcairn Creek are also present in the Project Area. These tributaries are all man-made excavated ditches.

Q. How has Flickertail considered wetlands in the Project layout design?

A. The Project has been designed to avoid permanent and temporary impacts to wetlands. In limited locations where underground electrical collection cables intersect wetlands, Flickertail plans to install the electrical collection cables via horizontal directional drill/bore under the wetlands, thereby avoiding impacts. Wetlands located within the fenced perimeters containing solar panels have been avoided and will remain as vegetated or be seeded with wet prairie species characteristic of the region, if currently farmed. Based on these measures, no impacts to wetlands are anticipated.

Q. How has Flickertail considered surface waters in the Project layout design?

A. The Project has been sited to avoid impacts (both permanent and temporary) to surface waters. No Project facilities will be placed in Pitcairn Creek or its tributaries.

Electrical collection cables intersecting Pitcairn Creek or its tributaries will be horizontal directionally drilled/bored under the creek, thereby avoiding impacts.

Q. If the discharge of dredge or fill material into the Waters of the U.S. occurs, will the Project qualify for coverage under a USACE Nationwide Permit (NWP)?

A. Yes. If there are unavoidable impacts to USACE jurisdictional waters, it is anticipated that the Project will be under the impact thresholds established for coverage under one or more USACE NWPs.

Q. Are there any 100-year floodplains within the Project Area?

A. Yes. There are approximately 307 acres of Federal Emergency Management Agency (FEMA) Zone A flood hazard area (i.e., 100-year floodplain) mapped within the Project Area. The flood hazard areas are located in the central part of the Project Area along Pitcairn Creek.

Q. How has Flickertail considered the 100-year floodplain in the Project layout design?

A. Project facilities have been sited to avoid and/or minimize impacts to the 100-year floodplain to the extent practical. Electrical collection cables cross the 100-year floodplain but will be trenched or horizontal directionally drilled/bored in the floodplain, resulting in up to 5.3 acres of temporary impacts. The placement of buried electrical collection cables in the 100-year floodplain is not anticipated to have any impact on base flood elevation.

Two access roads are proposed to be placed within the 100-year floodplain, resulting in a permanent impact to the floodplain of 0.23 acre. The southern of the two access roads has no alternative but to cross the 100-year floodplain because the floodplain extends between the adjacent public roads and the array on the participating parcel. The northern of the two access roads aligns with an existing driveway to avoid impacts to a stream, which necessitates crossing the 100-year floodplain. The siting of these segments of access roads in the 100-year floodplain also avoid impacts to wetlands,

treed areas, and streams. Since the access roads will have a gravel base and be constructed at grade, no increase to the base flood elevation in these areas is anticipated.

VI. AVIAN AND BAT ANALYSES

Q. Please discuss the eagle nest survey conducted for the Project.

A. In 2023, Flickertail conducted a desktop review to identify potential eagle nesting habitat within the Project Area plus a 660-foot buffer (the Eagle Nest Survey Area). All treed areas (e.g., forests/woodlots, tree rows, isolated clusters of trees, and individual trees) were classified as potential eagle nesting habitat.

In October 2023, Flickertail conducted a ground-based eagle nest survey of all the areas identified in the desktop review as potential eagle nesting habitat to document eagle nest locations within the Eagle Nest Survey Area. No eagle nests were identified within the Eagle Nest Survey Area. Based on information provided by NDGF in September 2024, no known eagle nests have been identified within two miles of the Project Area. The closest known eagle nest is located more than three miles from the Project Area.

Q. Is there a potential for the northern long-eared bat (NLEB) to occur in the Project Area?

A. The USFWS Information for Planning and Consultation (IPaC) identified the NLEB as having the potential to occur in the Project Area. Approximately 118.1 acres of potentially suitable NLEB habitat comprised of clusters of trees, individual trees, riparian corridors, small woodlots, tree rows, and forested wetlands are located in the Project Area. A Determination Key review through the USFWS IPaC for potential effects of the Project on the NLEB resulted in a “may affect, but not likely to effect” finding.

Q. How will the Project avoid and/or minimize potential impacts to NLEB?

A. Flickertail designed the Project to minimize tree clearing to the extent practicable. Additionally, for those areas that do require tree clearing, Flickertail is committed to clearing between November 1 and April 14, when most bats are hibernating or inactive.

Q. Please discuss the lek surveys conducted for the Project.

A. In coordination with NDGF, Flickertail conducted sharp-tailed grouse and greater prairie chicken lek surveys in April and May 2024. Per the request of NDGF, the survey area included all portions of the Project Area that are not cultivated (i.e., pastures, hay/alfalfa fields, grassy ditches, and planted grassy fields) plus a buffer of one mile of those areas. No active sharp-tailed grouse or greater prairie chicken leks were identified. A lone female sharp-tailed grouse was observed once during the lek surveys in a hayfield outside of the Project Area.

Q. You indicate that an unbroken grassland assessment was conducted for the Project Area. Based on that assessment, are there any unbroken grasslands within the Project Area?

A. No. While a majority of the Project Area is cultivated cropland (75 percent), Flickertail conducted an unbroken grassland assessment in coordination with NDGF (proposed **Exhibit 1**, Appendix J) to identify potential areas of unbroken grassland within the Project Area. Based on this assessment, there is no unbroken grassland present in the Project Area.

Q. During operations, is the Project Area anticipated to provide potential habitat for grassland species?

A. The ground cover under, between, and within the fenced array areas around the solar panels will be seeded with native grasses, forb species, and/or pollinator-friendly habitat (see the VMP included as Appendix K to the Application, proposed **Exhibit 1**). Outside the fenced areas, the current use may continue, or the areas will be seeded

with native and/or pollinator-friendly habitat, planted with trees/shrubs, or some combination of the aforementioned.

Q. How will the Project avoid and minimize potential impacts to waterfowl and waterbirds?

A. As discussed above, the Project has been designed to avoid permanent and temporary impacts to wetlands. Farmed wetlands within the fenced perimeters will be revegetated with wetland species characteristic of the region. Additionally, portions of Pitcairn Creek and the adjacent riparian corridor within the Project Area will not be fenced, allowing wildlife to continue to use this area.

VII. SETBACKS

Q. Is the Project designed to comply with all the setback requirements in the Siting Act and the PSC's rules?

A. Yes. The Project is designed to comply with all setbacks outlined in Table 4.1 in the Application (proposed Exhibit 1).

Q. Is the Project also designed to comply with all applicable local setback requirements?

A. Yes. Flickertail has designed the Project to comply with all applicable Abercrombie Township setback and design requirements (see Table 4.1 in the Application, proposed Exhibit 1).

Q. Has Flickertail prepared a figure that depicts setbacks and other siting constraints for the Project?

A. Yes, that information is depicted in the Project Setbacks Map provided as Figure 4 in proposed Exhibit 3 (Updated Application Figures 1-10).

Q. Does the setbacks map show occupied residences?

A. Yes.

396

397 **Q. How were occupied residences identified?**

398 A. Flickertail applied multiple strategies to identify occupied residences, such as
399 reviewing publicly available aerial imagery, county tax records and property report
400 cards, conducting field reconnaissance on the site, and getting feedback from
401 landowners.

402

403 **Q. Are there any other features to be considered in siting that are not depicted on**
404 **the map?**

405 A. Yes. This map does not show the location of cultural resources, which are confidential.
406 Additionally, avoidance areas are shown on Figure 3 in the updated Application figures
407 (proposed **Exhibit 3**). As noted on Figure 3, there are no exclusion areas in the Study
408 Area or Project Area.

409

410 **VIII. NOISE**

411

412 **Q. What components of a solar energy facility emit sound?**

413 A. The main sources of sound from the Project during operation will be from the inverters
414 (located throughout the Project), the main power transformers (at the Project
415 substation), and to a lesser extent, rotation of the tracking system. The solar energy
416 facility will not generate sound when the PV panels are not generating electricity, such
417 as overnight.

418

419 **Q. Are there any federal, state, or local sound standards for the Project?**

420 A. No. There are no sound level regulations specific to solar energy facilities at the
421 federal, state, or local level.

422

423 **Q. Since there are not any solar-specific sound regulations for the Project, what**
424 **did Flickertail use as a guide when analyzing sound from the Project?**

425 A. Although the PSC does not have a sound limit for solar projects, the PSC requires
426 that sound produced by wind energy conversion facilities not exceed 45 A-weighted

decibels (dBA) within 100 feet of an occupied residence or community building. Flickertail analyzed the potential sound from Project components against the PSC's sound requirement for wind energy conversion facilities.

Q. What are the expected sound levels from Project equipment?

A. Expected sound levels from the Project were analyzed using sound output specifications provided by the technology manufacturers for the inverter, tracker, and main power transformer (MPT) equipment currently being considered for the Project. The sound level attributed to the Project's tracking system will be less than 45 dBA at distances greater than five feet from a tracker. The sound level attributable to the Project's inverters will be less than 45 dBA between 450 to 524 feet from an inverter, depending on which inverter model is selected. The sound level attributable to the Project's MTPs will be less than 45 dBA at distances greater than 700 feet from the MTPs, depending on which MTP model(s) are selected. The nearest residence is located approximately 588 feet from the nearest tracker, more than 1,100 feet from the nearest inverter, and more than 3,500 feet from the MTPs on the proposed layout depicted in the updated Application figures (proposed **Exhibit 3**). Because the inverters are typically located within the middle of the solar arrays and the MTPs are located within the middle of the substation parcel, the sound levels from the Project are not expected to be discernible from background noise levels at nearby homes.

IX. GLARE ANALYSIS REPORT

Q. Was a glare analysis conducted for the Project?

A. Yes. Flickertail retained Tetra Tech, Inc. to conduct a glare analysis to evaluate potential impacts to road traffic and receptors (i.e., the 31 residences and one church) in the Project and Study Areas. The associated report was submitted as Appendix E to the Application (proposed **Exhibit 1**). The methodology used and the results are detailed in the report.

Q. Please summarize the results of the glare analysis.

A. The analysis did not identify any glare at nearby residences/community buildings or at roads in the Study Area.

Q. Does the design of the solar panels minimize the potential for glare?

A. Yes. PV panels, including the ones proposed for this Project, are constructed of dark, light-absorbing materials. Today's panels reflect as little as two percent of the incoming sunlight depending on the angle of the sun and assuming the use of anti-reflective coatings (which is anticipated to be used for the Project).

X. SAFETY/EMERGENCY RESPONSE

Q. What steps will the Project take to prepare for a potential emergency situation at the Project site?

A. Flickertail will coordinate with local emergency management and the local fire department to develop an emergency response plan. Further, during Project operations, Flickertail will coordinate with local emergency management and the local fire department regarding emergency response procedures and training. Additionally, established industry safety procedures will be followed during construction and operations.

XI. AGENCY COORDINATION

Q. Prior to filing its Application, did Flickertail contact all agencies and entities identified in Section 69-06-01-05 of the North Dakota Administrative Code (NDAC)?

A. Yes.

Q. What agencies/entities has Flickertail received correspondence from or consulted with?

A. Flickertail received comments from or otherwise consulted with the following agencies/entities:

- USACE
- U.S. Department of Agriculture, Natural Resources Conservation Service (USDA – NRCS)
- U.S. Department of Defense
- USFWS
- North Dakota Department of Environmental Quality
- North Dakota Department of Transportation
- North Dakota Department of Trust Lands
- North Dakota Department of Water Resources
- NDGF
- North Dakota Geological Survey
- North Dakota Parks and Recreation Department
- North Dakota Soil Conservation Committee
- SHSND
- Richland County Soil Conservation District
- Richland County Weed Board
- Abercrombie Township

Documentation of Flickertail's agency correspondence up to the filing of the Application is included in Appendix D to the Application (proposed **Exhibit 1**).

Q. Since the Application was filed, has Flickertail received any additional agency correspondence?

A. Yes. After the Application was filed, Flickertail received additional comments and correspondence from NDGF, SHSND, the Richland County Floodplain Administrator, and the organization managing the Southern Valley Snowmobile Trail. The additional agency correspondence is included in proposed **Exhibit 5**.

516

517 **Q. Please provide an overview of Flickertail's consultation with USFWS and NDGF**
518 **on the Project.**

519 A. Flickertail began coordinating with USFWS in 2022 and with NDGF in 2023. Flickertail
520 has engaged in extensive coordination with USFWS and NDGF on surveys and
521 protocols, Project design and layout, and avoidance and minimization measures. That
522 history is outlined in Section 8.11.8 of the Application (proposed **Exhibit 1**).
523

524 **Q. Did Flickertail conduct the pre-construction wildlife studies recommended by**
525 **USFWS and NDGF in accordance with the agreed-up protocols?**

526 A. Yes.
527

528 **Q. Did USFWS and NDGF have any comments or recommendations regarding the**
529 **Project?**

530 A. The agencies recommended avoiding unbroken grasslands and wetlands, as those
531 are potential habitats for grassland breeding birds and waterfowl/waterbirds,
532 respectively. The agencies noted uncertainty regarding the potential impacts of solar
533 projects on wildlife and habitat. Due to the uncertainty, there was discussion of
534 conducting voluntary post-construction surveys.
535

536 **Q. How has Flickertail minimized potential impacts to wildlife habitat in response**
537 **to the comments received from USFWS and NDGF?**

538 A. Flickertail conducted a lek survey for the Project which confirmed there are no active
539 leks within the survey area. Additionally, Flickertail conducted an unbroken grassland
540 assessment. No unbroken grasslands were identified within the Project Area and
541 therefore no impacts to unbroken grasslands are anticipated.
542

543 Flickertail also conducted desktop and field surveys to identify wetlands and sited
544 Project facilities to avoid permanent and temporary impacts to wetlands. Accordingly,
545 no impacts to wetlands are anticipated.
546

Q. Is Flickertail proposing to conduct any post-construction surveys?

A. Yes. Flickertail is developing a site-specific post-construction mortality monitoring plan for the Project focused on waterfowl-sized birds. Given the current land cover is cultivated and the overall low fatality rates of songbirds at PV solar facilities, the study's objective will focus on waterfowl-sized birds to provide data on potential effects on these species groups. The monitoring will be proposed for one year during the fall migration season, after which Flickertail will coordinate with both NDGF and USFWS on the results. While Flickertail anticipates that the results will confirm low levels of impact, Flickertail will consider adjustments to monitoring (which may include an additional year of monitoring) in coordination with NDGF and USFWS should the results not align with expectations.

In addition to the proposed fatality monitoring study, Flickertail is proposing to conduct a pre- and post-construction bird use study. How PV solar facilities function as bird habitat is an important research question and Flickertail is voluntarily proposing to help fill that data gap. We hypothesize the post-construction bird use surveys will demonstrate the revegetation of the solar facility increases bird use and diversity in an agricultural landscape, which will help inform future wildlife agency guidance for solar development and provide a better understanding of the potential impacts and/or benefits of solar development on wildlife.

Our understanding is that this aligns with the proposed post-construction surveys for the Harmony Solar Project; these will provide two sets of data at two sites following similar survey methodology.

Q. Please discuss Flickertail's coordination with the USDA – NRCS, the Richland County Soil Conservation District, and the Richland County Weed Board regarding the Project's VMP.

A. Flickertail developed the Project's VMP based on consultation with and guidance from the USDA – NRCS, the Richland County Soil Conservation District, and the Richland County Weed Board. The USDA – NRCS and the Richland County Soil Conservation

District provided comments regarding the anticipated seed mix and seeding specifications as well as noxious weed control measures and considerations. The Richland County Weed Board also provided input on noxious weeds. The VMP included as Appendix K to the Application (proposed **Exhibit 1**) incorporates comments and recommendations from these agencies. Flickertail also provided the VMP to the North Dakota Department of Agriculture for comment; to date, no response has been received.

Q. Please discuss Flickertail's coordination with the Southern Valley Trail Riders Association that manages the Southern Valley Snowmobile Trail located along the western edge of the Project Area.

A. Flickertail contacted the Southern Valley Trail Riders Association, which is a member of the Snowmobile North Dakota (SND) Trail Program and manages the Southern Valley Snowmobile Trail, regarding the one driveway access that is proposed to cross the trail. They confirmed that they have no concerns with the proposed driveway. This correspondence is included in proposed **Exhibit 5**.

XII. COMPLIANCE WITH PSC SITING RULES

Q. Are you familiar with the exclusion areas, avoidance areas, selection criteria, and policy criteria identified in NDAC Section 69-06-08-01?

A. Yes.

Q. Please discuss whether there are any exclusion areas located within the Project or Study Areas.

A. There are no categories of exclusion areas within the Project or Study Areas.

Q. Are there any avoidance areas present within the Project Area?

A. Yes. The following avoidance areas are present within the Project Area:

- Historical resources not designated as exclusion areas: Although the one previously identified unevaluated site lead appears to no longer be present,

Flickertail has sited Project facilities to avoid the boundary of this site lead. Additionally, Flickertail has sited the Project facilities to avoid the unevaluated archaeological site identified during field surveys.

- Areas within known floodplains as defined by the geographical boundaries of the 100-year flood: Floodplains associated with Pitcairn Creek are present in the Project Area but permanent impacts have been avoided to the extent feasible. As currently designed, up to approximately 5.3 acres of temporary impacts and 0.23 acres of permanent impacts (associated with access roads) in the floodplain could occur as a result of Project construction. As discussed above, there is not a reasonable alternative to these proposed permanent floodplain impacts, as the access roads are sited to avoid impacts to other features (wetlands, treed areas, and streams) and to align with existing infrastructure. The access roads will have a gravel base and be constructed at grade; therefore, no increase to the base flood elevation in the area is anticipated.
- Woodlands and wetlands: Wetlands, woodlands, and shelterbelts are present within the Project Area. As discussed above, the Project avoids temporary and permanent impacts to wetlands. The Project has been designed to avoid and/or minimize impacts to woodlands to the extent practicable. As currently designed, three tree rows totaling approximately 12 acres (including tree canopy) and approximately 75 feet of a fourth tree row totaling 0.06 acre located in the south-central portion of the Project Area are proposed to be removed to allow for continuous development in the parcels. The landowners support removal of these tree rows to facilitate development, and Flickertail will comply with the PSC tree and shrub mitigation specifications with respect to tree/shrub removal.

Q. Will any significant adverse effects resulting from the location, construction, and operation of the Project as they relate to the selection criteria set forth in

638 the PSC's rules be at an acceptable minimum or managed and maintained at an
639 acceptable minimum?

640 A. Yes.

641

642 **Q. Were the policy criteria set forth in the PSC's siting rules considered and utilized**
643 **to the extent possible by Flickertail when designing the proposed Project?**

644 A. Yes.

645

646 **Q. Were the factors set forth in North Dakota Century Code Section 49-22-09**
647 **considered by Flickertail when designing the proposed Project?**

648 A. Yes.

649

650 **IV. CONCLUSION**

651

652 **Q. Based on the analysis conducted by Flickertail, as set forth in the proposed**
353 **hearing exhibits, will construction of the proposed Project produce minimal**
654 **adverse human and environmental effects?**

655 A. Yes.

656

657 **Q. Does this conclude your Testimony?**

658 A. Yes.

659