APPENDIX L – GROUND-BASED EAGLE NEST SURVEY MEMO

TETRA TECH

MEMO

To:	Christina Martens, Flickertail Solar Project, LLC
From:	Adam Holven, Tetra Tech, Inc.
Date:	September 25, 2024
Subject:	Ground-based Eagle Nest Survey at the Flickertail Solar Project in Richland County, North Dakota

INTRODUCTION

On behalf of Flickertail Solar Project, LLC, Tetra Tech, Inc. (Tetra Tech) completed a ground-based eagle nest survey at the proposed Flickertail Solar Project (Project) in Richland County, North Dakota (Attachment A: Figure 1). Bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*) and their nests are federally protected under the Bald and Golden Eagle Protection Act. The U.S. Fish and Wildlife (USFWS) Information for Planning and Conservation (IPaC) tool indicated that there is the potential for bald and/or golden eagles to occur in the Project Area, and that there is the potential for bald eagles to breed from December 1 through August 31 in the Project Area (Attachment A). Per the NDGF (2022), Richland County is not within the known golden eagle nesting range.

The U.S. Fish and Wildlife Service (USFWS) has provided guidance concerning construction-related activities near bald eagle nests and recommends a minimum buffer of 660 feet around bald eagle nests during the nesting season of mid-January through July (USFWS 2024). Additionally, no tree clearing can occur within 330 feet of a bald eagle nest at any time of the year (USFWS 2024). If these minimum buffers can be maintained between a bald eagle nest and construction or tree removal activities, then no further consultation with the USFWS would be recommended. If these minimum buffers cannot be maintained or if a bald eagle nest needs to be removed, then further consultation with USFWS on the need for take permit would be necessary.

METHODS

In November 2023, Tetra Tech completed a desktop review to identify potential eagle nesting habitat within the Project Area plus a 660-foot buffer (Eagle Nest Survey Area) (Attachment B: Figure 1). Potential nesting habitat within the Eagle Survey Area was identified using 2021 National Agriculture Imagery Program (NAIP) aerial photographs. All wooded areas (e.g., forests/woodlots, tree rows, isolated clusters of trees, and individual trees) were classified as potential eagle nesting habitat.

Ground-based surveys were completed by a Tetra Tech avian biologist on October 31, 2023. The biologist reviewed all potential eagle nesting habitat identified through desktop review and noted the presence or absence of eagle nests within each area. Potential nesting habitat was reviewed from public rights-of way or accessed on foot if participating parcel access was available. Potential nesting habitat within the Eagle Survey Area, but outside of the participating parcels, was surveyed from the nearest public right-of-way or from an adjacent participating parcel using binoculars and a spotting scope, as needed. The biologist additionally noted whether any area could not be fully reviewed due to visual obstructions.

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Data recorded during the ground-based eagle nest surveys included the following.

- Presence or absence of eagle nests within each reviewed area.
- Visibility of the potential nesting habitat within each reviewed area.

In the event an eagle nest was observed, the following information was collected.

- GPS coordinates of the eagle nest location.
  - For nests located on a participating parcel, the GPS location would be collected at the closest point to the nest without disturbing eagles, if present.
  - For nests located on non-participating parcel, a GPS point would be placed in the approximate location of the nest.
- Nest condition and substrate.
- Presence or absence of adults.
- Photographs of each nest.

Tetra Tech also requested the locations of known eagle nests from the North Dakota Game and Fish (NDGF) in September 2024.

RESULTS

The desktop review identified approximately 158 acres of potential eagle nesting habitat within the Eagle Survey Area (Attachment B: Figure 2).

No eagle nests were identified within the Eagle Survey Area during field surveys. Leaves were not present on deciduous trees and weather conditions were conducive for the survey (Attachment C: Photo Points 1 through 18).

All potential eagle nesting habitat within the Project Area was visible during field surveys (Table 1; Attachment A: Figure 2).

Table 1. Bald Eagle Survey Area - Eagle Nesting Habitat Visibility

Nesting Habitat Visibility	Acres	Percent of Surveyed Nesting Habitat
Visible	158	100
Partially Visible	0	0
Total	**158**	**100**

On September 12, 2024, Tetra Tech received information from the NDGF that no known eagle nests have been identified within 2 miles of the Project Area. The closest known eagle nest was for a bald eagle and is more than 3 miles from the Project Area (Attachment D).

CONCLUSION

No eagle nests were identified within the Eagle Survey Area during the ground-based eagle nest surveys conducted on October 31, 2023. As of September 12, 2024, no known eagle nests have been identified within 2 miles of the Project Area.

Bald eagles in North Dakota begin nest construction as early as December and begin egg laying and incubation in mid-January (USFWS 2007). If bald eagle nest construction activity or a bald eagle nest is detected within 660 feet of the Project Area after construction begins, Tetra Tech recommends the Project avoid nest disturbance and follow USFWS guidance (USFWS 2024). If minimum buffers cannot be maintained or if a bald eagle nest needs to be removed, then further consultation with USFWS would be necessary. As Richland County is not within the golden eagle nesting range, golden eagles are not anticipated to nest within the Project Area.

ATTACHMENTS

Attachment A: USFWS IPAC
Attachment B: Figures
Attachment C: Site Photographs
Attachment D: NDGF Eagle Nest Review

REFERENCES

North Dakota Information Technology (NDIT) North Dakota Geographic Information Systems (NDGIS). 2022. NDGISHUB Golden Eagle Nesting Habitat. Electronic document, https://gishubdata-ndgov.hub.arcgis.com/datasets/NDGOV::ndgishub-golden-eagle-nesting-habitat-1/about, accessed September 23, 2024.

United States Fish and Wildlife Service (USFWS). 2007. National Bald Eagle Management Guidelines. Retrieved August 15, 2024 from https://www.fws.gov/sites/default/files/documents/national-bald-eagle-management-guidelines.pdf

USFWS. 2024. Do I need a take permit? Retrieved August 15, 2024 from https://www.fws.gov/story/do-i-need-eagle-take-permit

Attachment A: USFWS IPAC

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Richland County, North Dakota

Local office

North Dakota Ecological Services Field Office

(701) 250-4481
(701) 355-8513

3425 Miriam Avenue
Bismarck, ND 58501-7926

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Northern Long-eared Bat Myotis septentrionalis Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9045	Endangered

Insects

NAME	STATUS
Dakota Skipper Hesperia dacotae Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/1028	Threatened
Monarch Butterfly Danaus plexippus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743	Candidate

Flowering Plants

NAME	STATUS

Western Prairie Fringed Orchid *Platanthera praeclara* Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1669	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act[1] and the Migratory Bird Treaty Act[2].

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats[3], should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

Additional information can be found using the following links:

- Eagle Managment https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

There are bald and/or golden eagles in your project area.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Dec 1 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

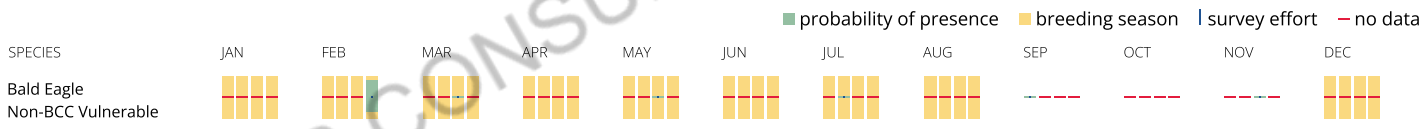
Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply). To see a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats[3] should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/ documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Dec 1 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (▪)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

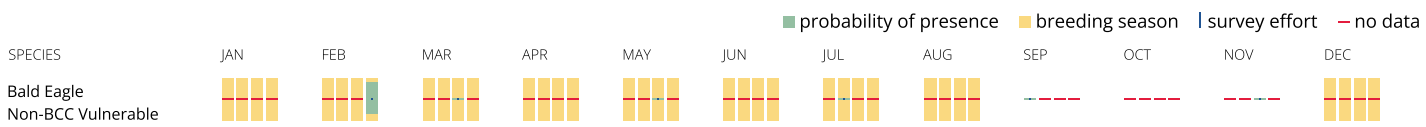
Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND
- PEM1C
- PEM1Cx
- PEM1A
- PEM1E
- PEM1Cd
- PEM1B
- PEM1Ad

FRESHWATER POND
- PABFx
- PABF

RIVERINE
- R4SBCx
- R4SBC
- R4SBA

A full description for each wetland code can be found at the National Wetlands Inventory website

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

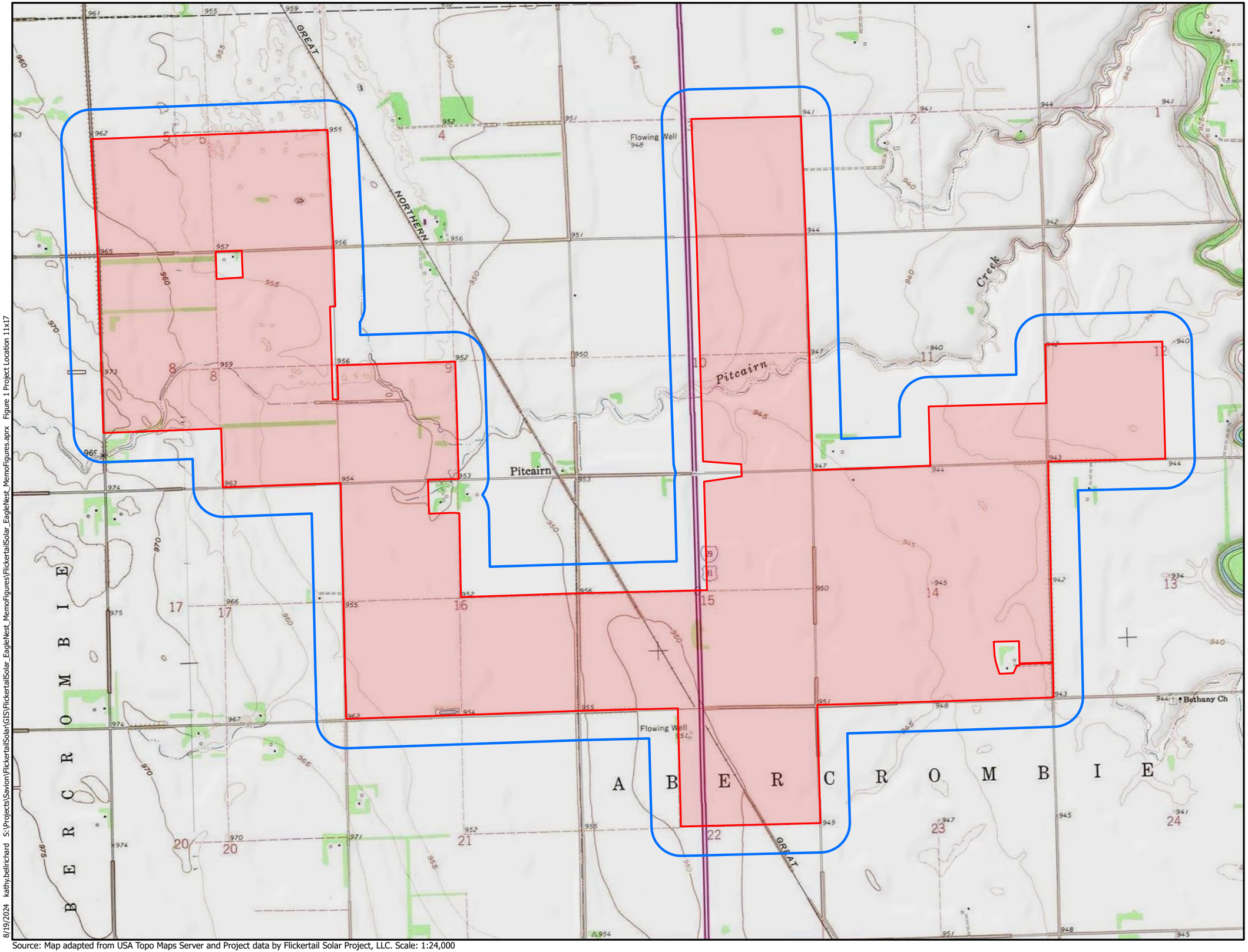
Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Attachment B: Figures



Project Area

Eagle Nest Survey Area (660-foot Buffer of Project Area)

0 0.25 0.5 Mile

N

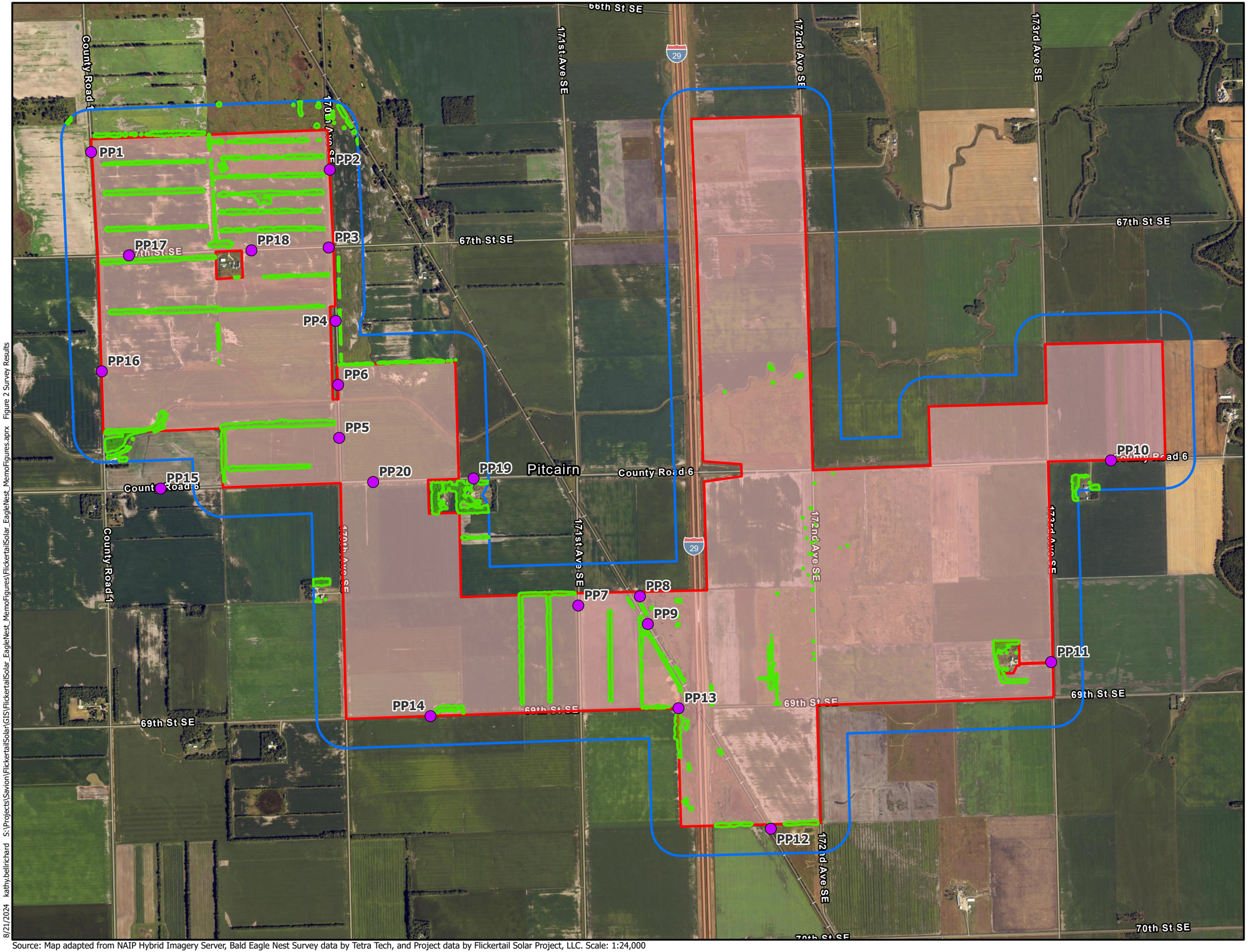
Figure 1
Project Location

Flickertail Solar Project
Richland County
North Dakota

TETRA TECH

8/19/2024 kathy.bellrichard S:\Projects\Savion\FlickertailSolar\GIS\FlickertailSolar_EagleNest_MemoFigures\FlickertailSolar_EagleNest_MemoFigures.aprx Figure 1 Project Location 11x17

Source: Map adapted from USA Topo Maps Server and Project data by Flickertail Solar Project, LLC. Scale: 1:24,000



- Project Area
- Eagle Nest Survey Area (660-foot Buffer of Project Area)
- Surveyed Potential Eagle Nest Habitat
- Photo Point

0 0.25 0.5 Mile

N

Figure 2
Ground-Based Eagle Nest Survey Results

Flickertail Solar Project
Richland County
North Dakota

TETRA TECH

Source: Map adapted from NAIP Hybrid Imagery Server, Bald Eagle Nest Survey data by Tetra Tech, and Project data by Flickertail Solar Project, LLC. Scale: 1:24,000

8/21/2024 kathy.bell\richard S:\Projects\Savion\FlickertailSolar\GIS\FlickertailSolar_EagleNest_MemoFigures\FlickertailSolar_EagleNest_MemoFigures.aprx Figure 2 Survey Results

Attachment C: Site Photographs

Photographic Documentation
Flickertail Solar Eagle Stick Nest Survey
Richland County, North Dakota

Photo Point: PP1 **Orientation:** Facing Northeast **Location:** 46.4481°, -96.8829° **Date:** 10/31/2023 **Biologist/Photographer:** Ted Woods	

Photo Point: PP2 **Orientation:** Facing Northwest **Location:** 46.4476°, -96.8617° **Date:** 10/31/2023 **Biologist/Photographer:** Ted Woods	

Photographic Documentation
Flickertail Solar Eagle Stick Nest Survey
Richland County, North Dakota

Photo Point: PP3 **Orientation:** Facing South **Location:** 46.4419°, -96.8620° **Date:** 10/31/2023 **Biologist/Photographer:** Ted Woods	

Photo Point: PP4 **Orientation:** Facing Northwest **Location:** 46.4373°, -96.8616° **Date:** 10/31/2023 **Biologist/Photographer:** Ted Woods	

Photographic Documentation
Flickertail Solar Eagle Stick Nest Survey
Richland County, North Dakota

Photo Point: PP5 **Orientation:** Facing Southwest **Location:** 46.4302°, -96.8615° **Date:** 10/31/2023 **Biologist/Photographer:** Ted Woods	
Photo Point: PP6 **Orientation:** Facing Southeast **Location:** 46.4275°, -96.8542° **Date:** 10/31/2023 **Biologist/Photographer:** Ted Woods	

Photographic Documentation
Flickertail Solar Eagle Stick Nest Survey
Richland County, North Dakota

Photo Point: PP7 **Orientation:** Facing Southeast **Location:** 46.4195°, -96.8407° **Date:** 10/31/2023 **Biologist/Photographer:** Ted Woods	

Photo Point: PP8 **Orientation:** Facing Southeast **Location:** 46.4199°, -96.8352° **Date:** 10/31/2023 **Biologist/Photographer:** Ted Woods	

Photographic Documentation
Flickertail Solar Eagle Stick Nest Survey
Richland County, North Dakota

Photo Point: PP9 **Orientation:** Facing Northeast **Location:** 46.4182°, -96.8347° **Date:** 10/31/2023 **Biologist/Photographer:** Ted Woods	

Photo Point: PP10 **Orientation:** Facing Southwest **Location:** 46.4275°, -96.7931° **Date:** 10/31/2023 **Biologist/Photographer:** Ted Woods	

Photographic Documentation
Flickertail Solar Eagle Stick Nest Survey
Richland County, North Dakota

Photo Point: PP11 **Orientation:** Facing East **Location:** 46.4182°, -96.7987° **Date:** 10/31/2023 **Biologist/Photographer:** Ted Woods	

Photo Point: PP12 **Orientation:** Facing Northwest **Location:** 46.4054°, -96.8241° **Date:** 10/31/2023 **Biologist/Photographer:** Ted Woods	

Photographic Documentation
Flickertail Solar Eagle Stick Nest Survey
Richland County, North Dakota

Photo Point: PP13 **Orientation:** Facing Southeast **Location:** 46.4130°, -96.8321° **Date:** 10/31/2023 **Biologist/Photographer:** Ted Woods	

Photo Point: PP14 **Orientation:** Facing East **Location:** 46.4130°, -96.8435° **Date:** 10/31/2023 **Biologist/Photographer:** Ted Woods	

Photographic Documentation
Flickertail Solar Eagle Stick Nest Survey
Richland County, North Dakota

Photo Point: PP15 **Orientation:** Facing Northwest **Location:** 46.4273°, -96.8775° **Date:** 10/31/2023 **Biologist/Photographer:** Ted Woods	

Photo Point: PP16 **Orientation:** Facing Northeast **Location:** 46.4346°, -96.8825° **Date:** 10/31/2023 **Biologist/Photographer:** Ted Woods	

Photographic Documentation
Flickertail Solar Eagle Stick Nest Survey
Richland County, North Dakota

Photo Point: PP17 **Orientation:** Facing East **Location:** 46.4417°, -96.8798° **Date:** 10/31/2023 **Biologist/Photographer:** Ted Woods	

Photo Point: PP18 **Orientation:** Facing Northwest **Location:** 46.4418°, -96.8689° **Date:** 10/31/2023 **Biologist/Photographer:** Ted Woods	

Photographic Documentation
Flickertail Solar Eagle Stick Nest Survey
Richland County, North Dakota

Photo Point: PP19 **Orientation:** Facing Southwest **Location:** 46.4274°, -96.8528° **Date:** 10/31/2023 **Biologist/Photographer:** Ted Woods	

Photo Point: PP20 **Orientation:** Facing Southeast **Location:** 46.4274°, -96.8586° **Date:** 10/31/2023 **Biologist/Photographer:** Ted Woods	

Attachment D: NDGF Eagle Nest Review

From: Johnson, Sandra K.
To: Gorman, Kim
Cc: Holven, Adam; Bellrichard, Kathy
Subject: RE: Flickertail Solar - Request for Eagle Nest Locations
Date: Thursday, September 12, 2024 1:41:10 PM
Attachments: image002.png
image003.png
image004.png
image005.png
image006.png
image007.png
image008.png
image009.png
image010.png
image011.png
image012.png

Hi Kimberly,
There are no known eagle nests within 2 miles of the project area. The closest known Bald Eagle nest is more than 3 miles from the site.
Thanks,
Sandy

Sandra Johnson
Conservation Biologist

(701) 328-6382 • sajohnson@nd.gov • gf.nd.gov

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From: Gorman, Kim <Kim.Gorman@tetratech.com>
Sent: Monday, September 9, 2024 3:08 PM
To: Johnson, Sandra K. <sajohnson@nd.gov>
Cc: Holven, Adam <adam.holven@tetratech.com>; Gorman, Kim <Kim.Gorman@tetratech.com>; Bellrichard, Kathy <kathy.bellrichard@tetratech.com>
Subject: RE: Flickertail Solar - Request for Eagle Nest Locations

Sandra,

Sending along the KMZ for the Flickertail Solar Project Area as attached. Could you please check your eagle nest dataset and send along any nests within 2 miles?

Much appreciated!

Kimberely

Kimberely Gorman | Vice President / Operations Manager
Pronouns: she, her, hers
Direct **(612) 643-2224** | Business **(612) 643-2200** | Mobile **(612) 998-7468** | Fax **(612) 643-2201** kim.gorman@tetratech.com
Time Zone: Central (UTC -05.00)
Climate positive and carbon negative by 2030. Read more

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From: Johnson, Sandra K. <sajohnson@nd.gov>
Sent: Monday, September 9, 2024 7:02 AM
To: Holven, Adam <adam.holven@tetratech.com>
Cc: Gorman, Kim <Kim.Gorman@tetratech.com>
Subject: RE: Flickertail Solar - Request for Bald Eagle Nest Locations

Hi Adam,
Please send me a KMZ or shapefile of the project location. Do not zip the files, our email does not accept them.
Thanks,
Sandy

Sandra Johnson
Conservation Biologist

(701) 328-6382 • sajohnson@nd.gov • gf.nd.gov

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From: Holven, Adam <adam.holven@tetratech.com>
Sent: Thursday, September 5, 2024 5:32 PM

To: Johnson, Sandra K. <sajohnson@nd.gov>
Cc: Gorman, Kim <Kim.Gorman@tetratech.com>
Subject: Flickertail Solar - Request for Bald Eagle Nest Locations

Hi Sandra,

I left you a message today, but I am looking for information to determine if there are known bald eagle nest within 2 miles of the Flickertail Solar Project in Richland County. This is different from the Flickertail **Wind** Project that you have work with Kim on.

What information would you need from me to do a search of 2-mile area around the Flickertail Solar Project?

Thanks,
Adam

Adam C. Holven | Senior Archaeologist/Project Manager
Direct: 612.643.2237 | Main: 612.643.2200 | Fax: 612.643.2201
adam.holven@tetratech.com

Tetra Tech
2001 Killebrew Drive, Suite 141 | Bloomington, Minnesota 55425 | **www.tetratech.com**

I will be out of the office on PTO during the following dates: Monday, September 9 through Friday, September 13.