



Analysis of Public Comments

Draft Environmental Impact Statement
on Issuance of an Incidental Take Permit
and Implementation of a Habitat
Conservation Plan for the
R-Project Transmission Line

December 2018

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ACRONYMS AND ABBREVIATIONS

| | |
|---------------|---|
| APE | Area of Potential Effects |
| APLIC | Avian Power Line Interaction Committee |
| beetle or ABB | American Burying Beetle |
| BGEPA | Bald and Golden Eagle Protection Act |
| CFR | Code of Federal Regulations |
| CRP | Conservation Reserve Program |
| dBA | A-weighted Decibel |
| DEIS | <i>Draft Environmental Impact Statement Issuance of an Incidental Take Permit and Implementation of a Habitat Conservation Plan for the R-Project Transmission Line</i> |
| DOI | U.S. Department of the Interior |
| ESA | Endangered Species Act |
| FEIS | <i>Final Environmental Impact Statement Issuance of an Incidental Take Permit and Implementation of a Habitat Conservation Plan for the R-Project Transmission Line</i> |
| FR | Federal Register |
| GGS | Gerald Gentleman Station |
| HCP | Habitat Conservation Plan |
| KOP | Key Observation Point |
| kV | Kilovolt |
| MBCP | Migratory Bird Conservation Plan |
| MBTA | Migratory Bird Treaty Act |
| Nebraska SHPO | Nebraska State Historic Preservation Office |
| NEPA | National Environmental Policy Act |
| NGPC | Nebraska Game and Parks Commission |
| NHPA | National Historic Preservation Act |
| NPPD | Nebraska Public Power District |
| NRCS | U.S. Department of Agriculture, Natural Resources Conservation Service |
| NRHP | National Register of Historic Places |
| NWI | National Wetlands Inventory |

| | |
|------------------|--|
| Permit | Incidental Take Permit |
| Project | R-Project |
| Service or USFWS | U.S. Department of the Interior, Fish and Wildlife Service |
| ROW | Right-of-Way |
| SPCC | Spill Prevention, Control, and Countermeasures |
| SPP | Southwest Power Pool |
| U.S.C. | United States Code |
| USDA | U.S. Department of Agriculture |
| USEPA | U.S. Environmental Protection Agency |
| VLU | Visual Landscape Unit |

ANALYSIS OF PUBLIC COMMENTS

INTRODUCTION

On May 12, 2017, the U.S. Department of the Interior, Fish and Wildlife Service (Service), released for public review and comment the *Draft Environmental Impact Statement on Issuance of an Incidental Take Permit and Implementation of a Habitat Conservation Plan for the R-Project Transmission Line* (DEIS), draft Habitat Conservation Plan (HCP), draft Migratory Bird Conservation Plan (MBCP), and draft Restoration Management Plan for Nebraska Public Power District's (NPPD) proposed R-Project transmission line and substations (known as the R-Project or Project) in Nebraska. A Notice of Availability of the DEIS and companion documents was published in the *Federal Register* on May 12, 2017 (82 Federal Register [FR] 42561).

The release of the DEIS and companion documents and publication of the Notice of Availability initiated a 60-day public comment period that ended on July 11, 2017. The DEIS, draft HCP, draft MBCP, and draft Restoration Management Plan were made available via the internet at the Federal eRulemaking Portal (www.regulations.gov) in Docket No. FWS-R6-ES-2014-0048. The documents were also available for public review at nine Nebraska public libraries and by appointment during normal business hours at the Service's Nebraska Field Office.

During the comment period in June 2017, three public meetings were held at three locations in Nebraska. These meetings included an overview of the draft documents and the public comment process and provided the public an opportunity to comment on the draft documents verbally or in writing (with a court reporter on hand to record comments for the official record). The dates and locations of the public meetings follow:

- **Burwell:** American Legion Hall, 657 G Street, Burwell, NE 68823
- **Sutherland:** Village Municipal Offices, 1200 First Street, Sutherland, NE 69165
- **Thedford:** Thomas County Fairgrounds, 8386 Highway 83, Thedford, NE 69166

The public was encouraged to submit comments regarding the DEIS, draft HCP, draft MBCP and draft Restoration Management Plan via the internet at <http://www.regulations.gov> to Docket Number FWS-R6-ES-2014-0048. The public was also able to submit comments by mailing letters or comment forms to the following address:

Public Comments Processing
Attn: Docket No. FWS-R6-ES-2014-0048
U.S. Fish and Wildlife Service Headquarters, MS: BPHC
5275 Leesburg Pike
Falls Church, VA 22041-3803

During the public comment period, the Service received a number of requests to extend the public comment period. In response to these requests, the Service re-opened the comment period

for an additional 60 days. The re-opening of the public comment period was announced in the *Federal Register* on September 8, 2017 (82 FR 42561).

During the second comment period, the Service hosted an informal question and answer session to provide a forum for the public to ask questions and seek clarification about the content of the DEIS and companion documents prior to the close of the second public comment period on November 7, 2017. The informal question and answer session was held on October 25, 2017, at the following location:

Thomas County Fairgrounds
8386 Highway 83
Thedford, NE 69166

Prior to the question and answer session, a press release was sent to 16 media outlets (newspaper, television, and radio) throughout the region. A total of 173 pieces of correspondence were received (see Appendix A) on the DEIS and companion documents during the two public comment periods (56 during the initial comment period and 117 during the second comment period). Once all the correspondences were received, each was read, and specific comments within each piece of correspondence were identified. Approximately 800 individual comments were derived from the correspondences received (Appendix A).

COMMENT ANALYSIS PROCESS

Comment analysis is a process used to compile and correlate similar public comments into a format that can be used by decision makers. Comment analysis assists decision makers in organizing, clarifying, and addressing technical information pursuant to National Environmental Policy Act (NEPA) regulations. It also aids in identifying the topics and issues to be evaluated and considered in the DEIS and companion documents. The process includes seven main components:

- Developing a coding structure
- Reading and separating public correspondences into individual comments
- Coding public comments
- Interpreting and analyzing the comments to identify issues and themes
- Drafting concern statements
- Drafting responses to concern statements
- Preparing a comment summary

A coding structure was developed to help sort comments into logical groups by topics and issues (see Appendix B). The coding structure was derived from an analysis of the range of topics discussed during public scoping and the comments themselves. The coding structure was

designed to capture all comment content and to not restrict or exclude any ideas. Appendix B presents the coding structure used for the analysis.

Analysis of the public comments entailed separating statements made by the public in their correspondences into discrete comments and assigning codes based on the topic and nature of each comment. Correspondences received during the two 60-day public comment periods included statements submitted online through the Regulations.gov comment portal, written statements submitted via mail or email, and verbal and written statements provided at the public meetings. Verbal comments received at the public meetings were extracted from official meeting transcripts documented by court reporters. Where an individual provided more than one statement during a public meeting, statements were combined into one correspondence document for analysis. Correspondences were numbered in the order in which they were received. As stated on the comment form provided at the public meetings, anonymous comments were not considered.

Coded comments were considered to be either substantive or non-substantive (Appendix B), as defined below.

Substantive comments are those that:

- Question, with reasonable basis, the accuracy of the information in the NEPA document
- Question, with reasonable basis, the adequacy of the environmental analysis
- Present reasonable alternatives other than those presented in the NEPA document
- Cause changes or revisions in the DEIS and/or companion document

Non-Substantive comments are those that:

- Are in favor of or against the proposed action or alternatives without reasoning that meet the criteria for a substantive comment
- Only agree or disagree with policy or resource decisions without justification or supporting data that meet the criteria for a substantive comment
- Do not pertain to the Project area or the Project
- Are vague, open-ended questions

Comments that were assigned to a substantive code were interpreted and analyzed to identify issues and themes within each comment code and concern statements were drafted. A concern statement is a concise summary of the substance or central theme of one or more public comments. Concern statements in this document are noted in green. A response was drafted for each concern statement. Responses to each concern statement are colored reddish-brown in this document. Comments that were assigned to a non-substantive code did not require a response, thus concern statements were not drafted.

Although the analysis process attempts to capture the full range of public concerns, this content analysis report should be used with caution. Comments from people who chose to respond do not necessarily represent the sentiments of the entire public. Furthermore, this was not a vote-counting process, and the emphasis was on the content of the comment rather than the number of times a comment was received.

DEFINITION OF TERMS

Primary terms used in this document are defined below.

Correspondence: A correspondence is the entire document received from a commenter. It was in the form of a letter, written comment form, statement extracted from an official meeting transcript, or a statement submitted online using the Regulations.gov comment portal.

Comment: A comment is a portion of the text within a correspondence that addresses a single subject. It could include such information as an expression of support or opposition to a particular Project component, concern about impacts on a particular resource area, additional data regarding the existing conditions, or an opinion regarding the Project planning process or adequacy of analysis.

Code: A code is a grouping of comments based on a common resource category or subject.

Concern Statement: A concern statement summarizes the issues identified for each code. Concern statements were developed to better categorize the content of the comments received. Some codes required multiple concern statements because the comments within them represented different ideas. Other codes had only one concern statement because the comments within them presented similar ideas.

Non-substantive Comment:

Non-substantive comments are those comments that:

- Are in favor of or against the proposed action or alternatives without reasoning that meet the criteria for a substantive comment
- Only agree or disagree with policy or resource decisions without justification or supporting data that meet the criteria for a substantive comment
- Do not pertain to the Project area or the R-Project
- Are vague, open-ended questions

**Substantive
 Comment:**

Substantive comments are those comments that:

- Question, with reasonable basis, the accuracy of the information in the DEIS and/or companion documents
- Question, with reasonable basis, the adequacy of the environmental analysis
- Present reasonable alternatives other than those presented in the DEIS or propose changes or revisions to the DEIS and/or companion documents

COMMENT ANALYSIS SUMMARY

Table 1 presents a summary of the public correspondences received, including the number of comments assigned to each code, and the number of concern statements generated. Concern statements and responses were only generated for substantive comment codes.

Table 1. Comments and Concern Statements Generated for Each Code

| Code | Code Name | Comments | Concern Statements |
|-----------------------------------|-------------------------|----------|--------------------|
| Affected Environment | | | |
| AE100 | All Resource Categories | 20 | 2 |
| Environmental Consequences | | | |
| EC100 | Soils and Geology | 30 | 12 |
| EC200 | Water Resources | 19 | 3 |
| EC300 | Wetlands | 4 | 5 |
| EC400 | Vegetation | 6 | 6 |
| EC500 | Fish and Wildlife | 48 | 24 |
| EC600 | Special Status Species | 33 | 23 |
| EC650 | Whooping Crane | 46 | 19 |
| EC700 | Cultural Resources | 29 | 15 |
| EC800 | Visual Resources | 5 | 4 |
| EC900 | Recreation and Tourism | 14 | 7 |
| EC1000 | Health and Safety | 10 | 7 |
| EC1100 | Climate Change | 1 | 1 |
| EC1200 | Land Use | 0 | 0 |
| EC1300 | Noise | 2 | 2 |
| EC1400 | Socioeconomics | 0 | 0 |

| Code | Code Name | Comments | Concern Statements |
|---|---|----------|--------------------|
| Cumulative Impacts | | | |
| CI100 | General | 4 | 4 |
| CI200 | Cumulative Impacts: Future Renewable Energy Projects | 57 | 15 |
| Alternatives | | | |
| AL100 | Alternative A | 82 | 61 |
| AL200 | Alternative B | 0 | 0 |
| AL300 | Alternative Transmission Line Routes Eliminated from Further Study | 57 | 11 |
| AL350 | Alternative Central Route Alternative but Eliminated from Further Study | 19 | 8 |
| AL400 | New Alternatives or Elements | 3 | 1 |
| Other AE/EC Topics | | | |
| OT100 | Other AE/EC Topics | 0 | 0 |
| Consultation and Coordination | | | |
| CC100 | General Comments | 3 | 3 |
| Other NEPA Issues | | | |
| ON100 | General Comments | 46 | 23 |
| Draft Habitat Conservation Plan | | | |
| HCP100 | Draft Habitat Conservation Plan | 20 | 19 |
| Draft Restoration Management Plan | | | |
| RMP100 | Draft Restoration Management Plan | 38 | 21 |
| Draft Migratory Bird Conservation Plan | | | |
| MBCP100 | Draft Migratory Bird Conservation Plan | 4 | 2 |
| Miscellaneous Topics | | | |
| MT100 ^a | General Comments | 111 | N/A |
| General Opposition | | | |
| OPP100 ^a | General Opposition to the R-Project and DEIS | 89 | N/A |
| Purpose and Need | | | |
| PN100 | NPPD's Need for the R-Project | 11 | 10 |
| General Support | | | |

| Code | Code Name | Comments | Concern Statements |
|---------------------------------|---|----------|--------------------|
| SUP100 ^a | General Support for the R-Project, DEIS and HCP | 5 | N/A |
| Duplicate Correspondence | | | |
| DUP100 | Duplicate Correspondence | 2 | N/A |

^a Indicates non-substantive comment code

CONCERN STATEMENTS AND RESPONSES

AE100: Affected Environment: All Resource Categories

Concern Statement 5.1-1: The Sandhills is a unique landscape that consists of pristine tall-grass prairies, which are among the few remaining in the world.

Response: The *Final Environmental Impact Statement Issuance of an Incidental Take Permit and Implementation of a Habitat Conservation Plan for the R-Project Transmission Line* (FEIS) presents detailed information about the uniqueness of the Sandhills in several resource sections (e.g., Section 3.2.1, *Geology and Soils, Affected Environment*; Section 3.3.1, *Water Resources, Affected Environment*; Section 3.4.1, *Wetlands, Affected Environment*, and Section 3.5.1, *Vegetation, Affected Environment*).

Concern Statement 5.1-2: The prairie chicken is an umbrella species; if it is doing well, the ecosystem is stable. More information about this important species and its occurrence within or near the Project area should be included in the FEIS.

Response: The prairie chicken is discussed in Section 3.6.1.4, *Wildlife, Species*, of the FEIS; additional text has been added to this section to describe the unique aspects of this species.

EC100: Environmental Consequences: Soils and Geology

Concern Statement 5.2-1: Concern was expressed about the continued compromise of seriously eroded, fragile soils and blowing sand. Constructing and maintaining towers for the transmission line, maintaining required access roads, and using heavy equipment would only make this situation worse and most likely would either significantly delay or permanently prevent proper reclamation.

Response: In numerous locations, the FEIS (e.g., Section 3.2.1.4, *Geology and Soils, Soils*) acknowledges the fragile nature of the Sandhills ecosystem. The FEIS presents a detailed evaluation of the soil characteristics within the Project area, including erosion potential, restoration potential, and the effects of soil disturbance on vegetation composition and succession. NPPD would implement avoidance, minimization, and mitigation measures for soils and vegetation as described in the FEIS. Additionally, NPPD would restore all temporary work areas and access routes to original conditions to the greatest extent feasible. If initial restoration efforts are unsuccessful, NPPD would continue to implement restoration measures until restoration goals are met as specified in the Restoration Management Plan, which is a companion document to the FEIS for public review.

Concern Statement 5.2-2: NPPD's plan for restoration is insufficient because restoring a disturbed area in the Sandhills of Nebraska would take substantially longer than 5 years.

Response: NPPD would restore all temporary work areas and access roads to original conditions to the greatest extent feasible. If initial restoration efforts are unsuccessful, NPPD would continue to implement restoration measures until restoration goals are met as defined in NPPD's Restoration Management Plan for the R-Project. NPPD's restoration planning team; private landowners; local U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), staff; and other rangeland experts would be consulted regarding the appropriate techniques, seed mix, and rate to re-vegetate areas disturbed during construction. NPPD has prepared a Restoration Management Plan and NPPD would submit a final version of the Restoration Management Plan to the Service prior to the start of construction. Additionally, NPPD would restore all temporary work areas and access roads to original conditions to the greatest extent feasible. If initial restoration efforts are unsuccessful, NPPD would continue to implement restoration measures until restoration goals are met as specified in the Restoration Management Plan.

Concern Statements 5.2-3: Blowouts exist along existing NPPD distribution and transmission lines. Concern was expressed about NPPD's ability to avoid or minimize erosion and blowouts along the proposed transmission line.

Response: The FEIS and accompanying documents describe the environmental consequences related to erosion and blowouts and the avoidance, minimization, and restoration measures that NPPD proposes to implement. Section 3.2.1.4, *Geology and Soils, Soils*, of the FEIS addresses

soil erosion, and Section 3.2.3, *Geology and Soils, Avoidance, Minimization, and Mitigation Measures*, of the FEIS presents the measures that NPPD would implement to reduce potential impacts on soils. Further, Section 3.0, *Restoration*, of NPPD's Restoration Management Plan provides details about restoring temporarily disturbed areas, which would reduce the likelihood of blowouts forming. Section 6.4, *Performance and Success Criteria*, of the HCP also provides details regarding restoration performance success criteria for restoring temporarily disturbed areas.

NPPD owns, operates, and maintains existing transmission lines in the Sandhills ecoregion, as identified in the Nebraska Natural Legacy Project. All or portions of these lines have been in place for longer than 40 years. Because blowouts remove soil from around the foundation of a structure, thereby potentially jeopardizing the integrity of the structure and the reliability of the line, NPPD closely tracks blowouts during semi-annual maintenance inspections. NPPD's maintenance records do not support the concern that blowouts occur as a result of the structures.

Concern Statement 5.2-4: Further soil studies are recommended along the route of the R-Project, such as collecting soil samples along the entire route of the R-Project to more accurately characterize all soil types that would be crossed by the R-Project.

Response: Section 3.2.1, *Geology and Soils, Affected Environment*, of the FEIS evaluates the soil characteristics within the Project area in detail, including erosion potential, restoration potential, and prime farmland, and the effects of ground surface disturbance activities on soils. Soil data throughout the study area were obtained from USDA, NRCS, soil surveys and the Soil Survey Geographic database. In addition to those sources, NPPD has analyzed Project-specific soil boring samples collected along the R-Project route in Lincoln, Logan, Thomas, Blaine, Loup, Holt, Garfield, and Wheeler counties. These data were sufficient to characterize the soils of the study area for the level of detail needed to conduct the FEIS effects analysis. However, if additional soils data are needed for final design of the R-Project, these investigations would be conducted after issuance of the Permit.

Concern Statement 5.2-5: Use of heavy equipment would leave ruts in the soil that cannot be restored.

Response: NPPD would implement measures to avoid, minimize, or mitigation impacts on soils related to erosion and rutting as described in Section 3.2.3, *Geology and Soils, Avoidance, Minimization, and Mitigation Measures*, of the FEIS. These measures include, but are not limited to, avoiding construction and maintenance activities when soils are too wet to adequately support construction equipment, except in cases of an emergency or when using special measures such as matting to minimize impacts; preparing a Restoration Management Plan; restoring grasslands following construction; conducting post-construction monitoring to evaluate restoration effectiveness, and implementing an adaptive management strategy until restoration is successful.

Concern Statement 5.2-6: Operation of the R-Project transmission line would kill microbes in the soil and severely damage the ecosystem.

Response: Information about the potential effects on soil microbes from soil disturbance is limited. Section 3.2, *Geology and Soils*, of the FEIS presents a detailed evaluation of the soil characteristics within the Project area, including erosion potential, restoration potential, and the effects of soil disturbance on vegetation composition and succession. NPPD would implement avoidance, minimization, and mitigation measures for soils and vegetation as described in the FEIS. Additionally, NPPD would restore all temporary work areas and access routes to original conditions to the greatest extent feasible. If initial restoration efforts are unsuccessful, NPPD would continue to implement restoration measures until restoration goals are met as specified in its Restoration Management Plan.

Concern Statement 5.2-7: Blowouts created by the use of heavy equipment during construction of the R-Project could increase in size during a drought period and then continually grow larger.

Response: Because blowouts remove soil from around the foundation of a structure, thereby potentially jeopardizing the integrity of the structure and the reliability of the line, NPPD closely tracks blowouts during semi-annual maintenance inspections. NPPD's maintenance records do not support the concern that blowouts occur as a result of the structures. NPPD would implement measures to avoid, minimize, or mitigate impacts on soils related to erosion as described in Section 3.2.3, *Geology and Soils, Avoidance, Minimization, and Mitigation Measures*, of the FEIS. These measures include, but are not limited to, using existing roads and two-tracks for access during construction based on availability and landowner approval; locating construction yards, fly yards, and staging and assembly areas in previously disturbed areas outside sensitive soils where practicable based on availability and landowner approval; restricting all construction vehicle movement outside the right-of-way (ROW) to pre-designated access routes and established roads other than for emergency situations; locating new transmission line access parallel to landform contours to minimize ground disturbance; preparing and implementing a Restoration Management Plan; restoring grasslands following construction; re-vegetating temporary work and access areas; conducting post-construction monitoring to evaluate restoration effectiveness; and implementing an adaptive management strategy until restoration is successful.

Concern Statement 5.2-8: The DEIS does not specifically identify how the compensatory mitigation lands would benefit geology and soils or vegetation. Likewise, for these resources, the DEIS mentions that Alternative B would conserve 660 acres compared to the 500 acres that Alternative A would conserve, but the DEIS does not discuss the beneficial effects of that conservation effort. The FEIS should specifically explain how the conservation of American burying beetle (beetle) habitat would benefit geology, soils, and vegetation and should acknowledge the beneficial effects of the mitigation parcel in the discussion of water resources.

Response: The purpose of the land protection is to support the Sandhills population of the beetle to mitigate impacts on the species after implementing the avoidance and minimization measures presented in the HCP. The protection of this property in perpetuity would protect the quality of geology, soils, and vegetation on this land parcel.

Concern Statement 5.2-9: NPPD should conduct additional geologic surveys to assess potential impacts on fossils along the R-Project final route.

Response: Section 3.2, *Geology and Soils*, of the FEIS has been revised to include a discussion of paleontological resources. If an unanticipated discovery of paleontological resources occurs during construction, NPPD would stop work within a 50-foot radius of the discovery. NPPD would then assess the significance of the resources in consultation with a professional archaeologist. If any unanticipated or paleontological resources are determined to be significant, NPPD would coordinate with the Service to determine the appropriate treatment.

Concern Statement 5.2-10: NPPD has not fully considered the issue of soil replacement in the Sandhills or removal of gravel used in temporary access roads as part of the analysis of effects on soils.

Response: Upon completion of construction, all fill, including gravel, would be removed, soils would be decompacted, and the area would be re-vegetated to the appropriate specifications. NPPD would implement avoidance, minimization, and mitigation measures for soils as described in Section 3.2.3, *Geology and Soils, Avoidance, Minimization, and Avoidance Measures*, of the FEIS and the Restoration Management Plan. Additionally, NPPD would restore all temporary work areas and access roads to original conditions to the greatest extent feasible. If initial restoration efforts are unsuccessful, NPPD would continue to implement restoration measures until restoration goals are met as specified in the Restoration Management Plan.

Concern Statement 5.2-11: Concern was expressed about R-Project restoration efforts being undertaken during periods of drought.

Response: Section 7.2, *Changed Circumstances*, of the HCP identifies and addresses the potential impact of drought on restoration efforts. If drought were to slow the successful establishment of vegetation to meet restoration criteria, NPPD would continue efforts as part of its adaptive management strategy as described in Section 6.4, *Performance and Success Criteria*, of the HCP. In numerous locations, the FEIS also discusses the fragile nature of the Sandhills ecosystem for example, see Section 3.2.1, *Geology and Soils, Affected Environment*. Section 3.2, *Geology and Soils*, of the FEIS evaluates in detail the soil characteristics within the Project area, the potential for erosion and restoration success, and the effects of soil disturbance on vegetation composition and succession. NPPD would implement avoidance, minimization, and mitigation measures for soils and vegetation as described in Section 3.2.3, *Geology and Soils, Avoidance, Minimization, and Avoidance Measures*, of the FEIS. Additionally, NPPD would restore all temporary work areas and access roads to original conditions to the greatest extent feasible. If

initial restoration efforts are unsuccessful, NPPD would continue to implement restoration measures until restoration goals are met as specified in the Restoration Management Plan.

EC200: Environmental Consequences: Water Resources

Concern Statement 5.3-1: The Dismal River is not discussed in the DEIS and is not located on maps within the DEIS; this should be corrected in the FEIS.

Response: The Dismal River was discussed, at length, in multiple sections of the DEIS and was mentioned 47 times in the text, not including maps or figures, many of which identified the Dismal River (such as Figure 3.3-1). The Dismal River is noted on maps that identify water resources in the FEIS (note: not all maps label major waterbodies, including rivers, because of scale issues).

Concern Statement 5.3-2: The FEIS should re-evaluate the effects on the aquifer and groundwater from drilling to construct tower footings. One commenter asks what studies have been conducted to evaluate the potential impacts of placing the steel monopole within the water table of the Ogallala Aquifer and what contingency plans have been conducted by NPPD if drilling activities were to puncture the aquifer. Another commenter asks whether the appropriate agencies were contacted regarding potential damage to the aquifer.

Response: Two potential Project effects have been raised about the Ogallala Aquifer: 1) puncturing and dewatering the aquifer and 2) contaminating the aquifer.

As noted in Section 3.3.1.2, *Water Resources, Affected Environment, Groundwater*, of the FEIS, the Ogallala Aquifer is an unconfined aquifer. Because the aquifer is unconfined, no confining layer exists that pressurizes the aquifer or that could be punctured. Section 3.3.2.2, *Water Resources, Direct and Indirect Effects, Alternative A: Tubular Steel Monopole and Steel Lattice Tower Structures*, of the FEIS acknowledges the presence of shallow groundwater aquifers within the Project area. Excavation activities associated with construction of monopoles may encounter groundwater in areas where the groundwater is shallow, but casing and/or drilling slurry installation methods (rather than pumping water from the excavation) would be used in areas with a shallow water table and would not lead to dewatering the aquifer. As discussed above, because the Ogallala Aquifer is unconfined in the Project area, excavation activities that encounter groundwater would not puncture the aquifer resulting in release of water to the ground surface. Groundwater would flow around subsurface objects, such as a drill pipe, through open excavations with little to no effect on groundwater vertical fluctuation or flow direction. Helical pier foundations used for lattice tower structures would not require excavation. No damage to the aquifer is anticipated.

The Ogallala Aquifer is generally shallow in the Project area, so the shallow water depth and presence of sandy soils make groundwater susceptible to contamination. Consequently, implementing avoidance, minimization, and mitigation measures is important to prevent impacts. Potential contaminants, such as oils, hydraulic fluids, antifreeze, and fuels, would not be dumped on the ground, and all spills would be cleaned up according to a Spill Prevention, Control, and Countermeasures (SPCC) plan that would be prepared by the construction contractor prior to start of construction. The plan would describe the measures to be implemented during construction to prevent, respond to, and control spills of hazardous materials as well as measures

to minimize a spill's effect on the environment. Construction vehicles and equipment used on the construction site would be properly maintained and serviced to prevent fuel and oil leaks. Helicopter refueling practices, including spill prevention measures, are described in Section 2.6.1, *Helicopter Construction*, of the HCP and Section 2.4.12.1, *Construction with Helicopters*, of the FEIS. Furthermore, NPPD contacted multiple agencies—U.S. Environmental Protection Agency (USEPA); USDA, NRCS; and the Nebraska Department of Environmental Quality—during development of the EIS.

Concern Statement 5.3-3: Concern was expressed that accidental fuel and oil spills and the placement of construction materials (i.e., cement, dust, rebar, or scrap iron) adjacent to rivers, wetlands, and groundwater would negatively affect water quality. Commenters ask what long-term effects on water quality can be anticipated and what best management practices would be implemented by NPPD.

Response: Section 3.3.2, *Water Resources, Direct and Indirect Effects*, of the FEIS evaluates in detail the short-term and long-term impacts of the R-Project on surface water, groundwater, floodplains, and surface water classified by USEPA and the Nebraska Department of Environmental Quality as impaired waters. All stream crossings would be spanned, and no transmission structures would be placed in the streambed. During construction, each surface water would be approached from each side of the waterbody and would not be crossed by any type of vehicle. Floodplain areas would be spanned to the extent feasible. If any structures are placed in a floodplain, they are not expected to affect the floodplain characteristics because of their design and minimal footprint and because NPPD would adhere to applicable floodplain regulations. These techniques would avoid disturbance to the water course and associated soils, riparian and floodplain vegetation, drainage patterns, and water quantity and quality. Avoidance, minimization, and mitigation measures, including, but not limited to, silt fencing, performance of refueling and maintenance activities in designated construction zones located approximately 100 yards from surface waters, and implementation of other prevention and containment measures as needed would mitigate effects on receiving waters. As required by federal law, NPPD would prepare an SPCC plan for locations that meet the regulatory criteria for development of such plans. The SPCC plan would be approved and completed by relevant state and federal agencies prior to construction.

The generally shallow Ogallala Aquifer and the sandy soils in the Project area make groundwater susceptible to contamination, making implementation of avoidance, minimization, and mitigation measures critical in preventing impacts. Potential contaminants, such as oils, hydraulic fluids, antifreeze, and fuels, would not be dumped on the ground, and all spills would be cleaned up according to an SPCC plan prepared by the construction contractor. The plan would describe the measures to be implemented during construction to prevent, respond to, and control spills of hazardous materials, as well as measures to minimize a spill's effect on the environment. Construction vehicles and equipment used on the construction site would be properly maintained and serviced to prevent fuel and oil leaks. Helicopter refueling practices, including spill

prevention measures, are described in Section 2.6.1, *Helicopter Construction*, of the HCP and Section 2.4.12.1, *Construction with Helicopters*, of the FEIS.

EC300: Environmental Consequences: Wetlands

Concern Statement 5.4-1: Not all wetland areas are identified and/or addressed in the DEIS.

Response: As described in Section 3.4.1, *Wetlands, Affected Environment*, of the FEIS, NPPD assessed the entire Project area for the presence of wetlands using the National Wetlands Inventory (NWI). In addition to the assessment of the Project area using NWI, NPPD also completed a desktop inventory using hydric soils mapping, digitized river channels from aerial imagery, and National Hydrography Dataset waterbodies. The desktop inventory was followed by a field inventory and delineation. The field inventory and delineation consisted of an onsite inspection of the approximate Project ROW and areas just outside the ROW. Section of 3.4.1, *Wetlands, Affected Environment*, of the FEIS acknowledges that portions of the ROW were not inventoried because property owners did not grant right-of-entry for wetland field surveys or the areas could not be accessed because of lack of public records, land use activities, or other obstructions. Once it can obtain right-of-entry, NPPD would survey the portions of the ROW that were not field inventoried and that still require field verification to identify wetlands in areas of temporary and permanent disturbance.

Concern Statement 5.4-2: Drilling holes to install the steel monopole tower structures in wet meadows along the final route of the R-Project could result in tapping an artesian well, causing adverse impacts.

Response: The Ogallala Aquifer is an unconfined aquifer, meaning that water in it is not under pressure by a confining layer above it. Therefore, there is no confining layer that could be punctured by drilling and result in the release of water that would cause flooding. Additionally, because the aquifer is unconfined, drilling or excavating shallow holes to install steel monopoles (or other Project infrastructure) in wet meadows would not tap into or lead to an artesian well.

Concern Statement 5.4-3: Concern was expressed that wetlands and sub-irrigated meadows would be damaged during construction of the R-Project and that these areas are the most difficult to restore.

Response: Section 3.4.2, *Wetlands, Direct and Indirect Effects*, of the FEIS presents a detailed evaluation of the short- and long-term impacts of the R-Project on wetlands and sub-irrigated meadows. Placing structures in wetlands, including sub-irrigated meadows, would be avoided by using approximately 1,350-foot or longer spans between structures. NPPD would implement avoidance, minimization, and mitigation measures, including but not limited to, using low-ground-pressure equipment and temporary matting to cross wetlands and sub-irrigated meadows, implementing erosion and sediment controls, and installing culverts to maintain the existing hydrology and avoid drainage of adjacent wetlands and sub-irrigated meadows. Lattice tower structures with helical pier foundations would be used in areas without existing access to avoid permanent wetland disturbance and minimize temporary disturbance. Helical pier foundations for lattice structures require fewer pieces of equipment, a smaller temporary structure work area,

and less improved access to each structure than traditional foundations for steel monopole structures. Additionally, NPPD would restore all temporary work areas and access routes to original conditions to the greatest extent feasible. If initial restoration efforts are unsuccessful, NPPD would continue to implement restoration measures until restoration goals are met as specified in the Restoration Management Plan.

EC400: Environmental Consequences: Vegetation

Concern Statement 5.5-1: The Sandhills ecosystem appears to be rugged but, in fact, is very fragile. The DEIS does not present sufficient information about the extent of damage from constructing the R-Project transmission line.

Response: The FEIS presents detailed information about the unique and fragile nature of the Sandhills ecosystem in several resource sections (e.g., the *Affected Environment* sections of Section 3.2.1, *Geology and Soils*; Section 3.3.1, *Water Resources*; Section 3.4.1, *Wetlands*; and Section 3.5.1, *Vegetation*). Section 3.2.2, *Geology and Soils, Direct and Indirect Effects*, of the FEIS also evaluates in detail the soil characteristics within the Project area for erosion potential and restoration potential and the effects of soil disturbance on vegetation composition and succession. NPPD would implement avoidance, minimization, and mitigation measures for soils and vegetation as described in Section 3.2.3, *Soils, Avoidance, Minimization, Mitigation Measures*, and Section 3.5.3, *Vegetation, Avoidance, Minimization, Mitigation Measures*, of the FEIS. Additionally, NPPD would restore all temporary work areas and access roads to original conditions to the greatest extent feasible. If initial restoration efforts are unsuccessful, NPPD would continue to implement restoration measures until the performance standards are met as defined in Section 4.2, *Performance Standards*, of the Restoration Management Plan.

Concern Statement 5.5-2: The FEIS needs to include additional information about proposed techniques to restore vegetation following construction of the R-Project. Vegetation in the Sandhills, once disturbed, typically requires long periods of time to recover.

Response: NPPD would restore all temporary work areas and access routes to original conditions to the greatest extent feasible. If initial restoration efforts are unsuccessful, NPPD would continue to implement restoration measures until restoration goals are met. NPPD's restoration planning team; private landowners; local USDA, NRCS, staff; and other rangeland experts would be consulted regarding the appropriate techniques, seed mix, and rate to re-vegetate areas disturbed during construction. NPPD has prepared a Restoration Management Plan, which was made available for public comment along with the DEIS. NPPD would submit a final version of the Restoration Management Plan to the Service prior to the start of construction.

Concern Statements 5.5-3: Maintenance activities would continually damage the fragile grasslands along the transmission line ROW.

Response: In numerous locations, the FEIS acknowledges the fragile nature of the Sandhills ecosystem (e.g., Section 3.2.1, *Soils and Geology, Affected Environment*). The FEIS presents a detailed evaluation of the characteristics within the Project area for erosion potential, restoration potential, and the effects of soil disturbance on vegetation composition and succession. NPPD would implement avoidance, minimization, and mitigation measures for soils and vegetation as described in the FEIS. Additionally, NPPD would restore all temporary work areas and access roads, including those used for maintenance, to original conditions to the greatest extent feasible.

If initial restoration efforts are unsuccessful, NPPD would continue to implement restoration measures until restoration goals are met as specified in the Restoration Management Plan (see Section 4.2, *Performance Standards*).

Concern Statements 5.5-4: Concern was expressed about restoring disturbed lands along the R-Project transmission line ROW with grasses that would be of minimal value as a food source to livestock.

Response: Recovery of all disturbed R-Project-related areas would be governed by provisions contained in the Restoration Management Plan. NPPD's restoration planning team; private landowners; local USDA, NRCS, staff; and other rangeland experts would be consulted regarding the appropriate techniques, seed mix, and rate to re-vegetate areas disturbed during construction. Areas used as grassland range would be reseeded with a native seed mix.

Concern Statements 5.5-5: The analysis of the R-Project's anticipated impacts on vegetation described in Section 3.5, *Vegetation*, of the DEIS is incomplete and should be expanded to address the long-term impacts on sand dune vegetation disturbance for the entire Project.

Response: Section 3.5.2, *Vegetation, Indirect and Direct Effects*, of the FEIS presents a detailed evaluation of the short- and long-term impacts of the R-Project on vegetation. For example, in Section 3.5.2.2, *Vegetation, Indirect and Direct Effects, Alternative A: Tubular Steel Monopole and Steel Lattice Tower Structures*, the FEIS notes that short-term, direct impacts on vegetation would include "localized disturbance to vegetation, which includes individual plants and the seedbank, caused by construction equipment and vehicles during site preparation, including damage to vegetation from vehicle tires, trampling/crushing, excavation, grading, soil compaction, and soil stockpiling," while long-term impacts on vegetation "would be limited to conversion of woody vegetation to non-woody vegetation and loss of vegetation resulting from permanent conversion to developed areas...Approximately 1.2 acres of permanent disturbance would occur combined at all structure foundations and 26 acres at permanent access roads." Acknowledging these potential impacts, NPPD would implement avoidance, minimization, and mitigation measures for soils and vegetation as described in the FEIS. Additionally, NPPD would restore all temporary work areas and access roads to original conditions to the greatest extent feasible. If initial restoration efforts are unsuccessful, NPPD would continue to implement restoration measures until restoration goals are met. NPPD's restoration planning team; private landowners; local USDA, NRCS staff; and other rangeland experts would be consulted regarding the appropriate techniques, seed mix, and rate to re-vegetate areas disturbed during construction. NPPD has prepared a Restoration Management Plan, which was made available for public comment along with the DEIS. Restoration of damage occurring during emergency repairs would be subject to the same requirements as for restoration of construction impacts. NPPD would submit a final version of the Restoration Management Plan to the Service prior to the start of construction. Additionally, NPPD would restore all temporary work areas and access roads to original conditions to the greatest extent feasible. If initial restoration efforts are unsuccessful,

NPPD would continue to implement restoration measures until restoration goals are met as specified in the Restoration Management Plan.

Concern Statements 5.5-6: The DEIS states that NPPD would avoid potential habitat for blowout penstemon to the maximum extent practicable, yet the criteria to establish the maximum extent practicable are not defined.

Response: The FEIS, HCP, and Restoration Management Plan describe the environmental consequences related to erosion and blowouts and identify the avoidance, minimization, and restoration measures that NPPD would implement. Courts have interpreted “practicable” as “reasonably capable of being accomplished.” NPPD would avoid blowout habitat when it is reasonably capable of doing so, considering technical and other environmental concerns. As noted in Section 3.5.3, *Vegetation, Avoidance, Minimization, and Mitigation Measures*, of the FEIS and Section 4.10.3, *Avoidance and Minimization Measures Proposed for Blowout Penstemon*, of the HCP, structures, construction access, and temporary work areas would not be located in blowout habitat. Because blowouts remove soil from around the foundation of a structure, thereby potentially jeopardizing the integrity of the structure and the reliability of the line, NPPD closely tracks blowouts during semi-annual maintenance inspections. NPPD’s maintenance records do not support the concern that blowouts occur as a result of the structures.

EC500: Environmental Consequences: Wildlife

Concern Statement 5.6-1: The infrastructure (i.e., structures and lines) for the R-Project could provide perching locations for birds of prey, attracting the birds in greater numbers near the Project location. This increase in birds of prey could increase predation of birds such as grouse, pheasants, and prairie chickens. More information about transmission line towers increasing perching opportunities for raptors should be included in the FEIS.

Response: Section 3.6.2, *Wildlife, Direct and Indirect Effects*, of the FEIS was revised to add information about transmission line towers providing additional perching opportunities for raptors and potentially increasing predation pressure on prairie chickens and other avian species.

Concern Statement 5.6-2: Concern was expressed that the R-Project final route poses an unacceptably high risk to birds through electrocution, collisions with shield wires of transmission lines, and behavioral disruptions, potentially leading to reproductive failure. Additionally, concern was expressed that bird flight diverters would not be effective in preventing bird collisions with power lines during fog or bad storms. What monitoring would be conducted to ensure that bird flight diverters are effective in preventing migratory bird collision? Measures to avoid, minimize, or mitigate adverse impacts on migratory birds described in the DEIS, including the use of bird flight diverters, are not sufficient to offset the impacts of the R-Project.

Response: Section 3.6.2, *Wildlife, Direct and Indirect Effects*, of the FEIS presents a detailed discussion of potential impacts of the R-Project on birds, including mortality, injury, and behavioral disruptions. Additionally, Section 3.6.2 discusses bird flight diverter types and their effectiveness at preventing collisions under varying conditions, including during storms and fog events. Section 3.6.3, *Wildlife, Avoidance, Minimization, and Mitigation Measures*, and the MBCP explain the measures that NPPD would implement to minimize avian mortality associated with operating the transmission line and to mitigate impacts on bird species. Specific measures would include spacing conductors to exceed the Avian Power Line Interaction Committee (APLIC) standards to eliminate the potential for electrocution of avian species and placing bird flight diverters on 123 miles of the R-Project transmission line and at least 123 miles of existing transmission lines to improve visibility and reduce collision risk. Diverters with reflective and glow-in-the-dark surfaces are believed to be more effective at reducing avian collision in low-light conditions and would be used at river crossings and other areas identified as areas of bird use during low-light conditions. Of the available options, placement of bird flight diverters represents the most effective minimization and mitigation for impacts on migratory birds. At this time, NPPD has not proposed any monitoring to document migratory bird collision mortality. The Service cannot require NPPD to monitor bird mortality resulting from the R-Project.

Concern Statement 5.6-3: Access roads and routes on private lands crossed by the R-Project would be damaged and possibly not rehabilitated to pre-existing conditions. Additionally, NPPD's final route would cross significant hunting areas, which support large numbers of waterfowl that would be adversely affected.

Response: Section 2.4.9.5, *Access for Construction*, of the FEIS and Section 2.4.5, *Access for Construction*, of the HCP discuss construction access, while Section 2.4.11, *Site Restoration*, of the FEIS and Section 2.4.14 of the HCP discuss restoration of all temporary disturbance areas, including access paths. Finally, NPPD's avoidance and minimization measures are discussed throughout Chapter 3.0, *Affected Environment and Environmental Consequences*, of the FEIS. For all of its transmission projects, NPPD works with landowners through easement agreements to ensure any damage done to existing roads or travel paths would be restored.

Section 3.6.2, *Wildlife, Direct and Indirect Effects*, of the FEIS and the MBCP discuss potential impacts on waterfowl, while Section 3.8.2, *Land Use, Direct and Indirect Effects*, of the FEIS presents an evaluation of impacts on designated conservation easements along the North Platte and South Platte Rivers. Finally, Section 3.9.2, *Recreation and Tourism, Direct and Indirect Effects*, of the FEIS discusses the potential impacts on hunting. Each of these sections also identifies the avoidance, minimization, and mitigation measures that NPPD would implement to mitigate effects on migratory birds.

Concern Statement 5.6-4: Construction of the R-Project along the final route would pose an unacceptably high risk to migratory birds, including waterfowl, shorebirds, and songbirds, because the Project would be located within the Central Flyway bird migration corridor and would traverse several wildlife reserves and other important habitat areas, including river crossings.

Response: NPPD would implement various measures to minimize avian mortality associated with operation of the R-Project transmission line. Section 3.6.3, *Wildlife, Avoidance, Minimization, and Mitigation Measures*, of the FEIS and Section 6.0, *Avoidance and Minimization Strategy*, of the MBCP describe those mitigation measures, including the installation of bird flight diverters on overhead shield wires on 123 miles of the R-Project transmission line and at least 123 miles of existing transmission lines. Diverters with reflective and glow-in-the-dark surfaces, which are believed to be more effective at reducing avian collision in low-light conditions, would be used at river crossings and other areas identified as areas of bird use during low-light conditions.

Concern Statement 5.6-5: The DEIS fails to adequately describe the abundance of bird species in the Sandhills and how these species would be affected by the proposed Project.

Response: Appendix D, *Wildlife Species of the Nebraska Sandhills*, in the FEIS provides a list of representative bird species in the Nebraska Sandhills based on a list of more than 300 species, as described Nebraska's State Wildlife Action Plan (Schneider et al. 2011). Section 3.6.2, *Wildlife, Direct and Indirect Effects*, of the FEIS presents an analysis of general impacts on birds resulting from the action alternatives.

Concern Statement 5.6-6: Concern was expressed about other wildlife species, not just the endangered species. The DEIS should consider impacts of access roads and well relocations on wildlife.

Response: Section 3.6, *Wildlife*, of the FEIS analyzes the potential impacts of the action alternatives on wildlife species that are not listed as special status species. Section 3.6.2.2, *Alternative A: Tubular Steel Monopole and Steel Lattice Tower Structures*; Section 3.6.2.3, *Alternative B: Tubular Steel Monopole Structures Only*, of the FEIS; Table 3.6-1, *Estimated R-Project Potential Disturbance Acreages under Alternative A*; and Table 3.6-2, *Estimated R-Project Potential Disturbance Acreages under Alternative B*, present detailed information about impacts associated with access roads and well relocations.

Concern Statement 5.6-7: Is it common practice for entities applying for an incidental take permit (permit) to conduct the required wildlife surveys themselves?

Response: The applicant is responsible for completing the required wildlife surveys as a part of the permit application process and may use its qualified staff or contract with outside qualified parties to conduct these surveys and provide the required information for inclusion with the permit application. All surveys for federally listed species were conducted using established Service-approved protocols and surveyors had applicable and necessary permits.

Concern Statement 5.6-8: The Wildlife section of the FEIS should discuss potential impacts on bats and the implications for the control of mosquito populations as it relates to the transmission of viruses, including the Zika virus, and diseases to humans and other animals.

Response: Section 3.6, *Wildlife*, of the FEIS was revised to add a discussion of potential impacts on bats as a result of implementing the action alternatives. While bats may be injured or die after colliding with the R-Project transmission line and associated infrastructure, the action alternatives are not anticipated to result in population-level changes to bats or their prey populations, including mosquitos. Therefore, the action alternatives are not anticipated to have an effect on the transmission of the Zika virus or other mosquito-borne pathogens.

Concern Statement 5.6-9: The number of birds that could potentially be killed from colliding with transmission lines should be discussed in the FEIS. The FEIS should incorporate methods described in Erickson et al. (2005) to develop a quantitative estimate of avian mortality resulting from collisions with the R-Project transmission line for the life of the Project. Bird mortality estimates should be calculated for each alternative route considered and used to compare routes for the FEIS analysis.

Response: The FEIS does not attempt to quantify potential avian mortality from collisions with the transmission line because of the substantial variability among previous studies and the high level of scientific uncertainty associated with such estimates (Loss et al. 2014). As the commenter notes, Erickson et al. (2005) acknowledge that their calculation could be off by

orders of magnitude; therefore, developing a quantitative estimate of potential bird mortality with a sufficient degree of certainty is not possible.

Concern Statement 5.6-10: The number of bird mortalities resulting from collision with power lines would increase the number of large mammalian predators in the Project area, potentially affecting ranching operations during calving season. This issue should be addressed in the FEIS.

Response: Avian mortality associated with operation of the transmission line is not expected to result in a noticeable increase in predators within the Project area and would not likely disrupt ranching operations because potential bird carcasses would be distributed across the 225-mile ROW, not concentrated on certain ranches. Section 3.8, *Land Use*, and Section 3.17, *Socioeconomics*, of the FEIS discuss potential impacts on ranching operations.

Concern Statement 5.6-11: One commenter notes a number of wildlife species (e.g., white tail deer, mule deer, and prairie chickens) present on his ranch may be affected by construction of the R-Project.

Response: Section 3.6.2, *Wildlife, Direct and Indirect Effects*, of the FEIS discusses potential direct and indirect effects on wildlife resulting from the construction of the R-Project, and Section 3.6.3, *Wildlife, Avoidance, Minimization, and Mitigation Measures*, of the FEIS presents the measures that NPPD would implement to avoid, minimize, or mitigate effects on wildlife.

Concern Statement 5.6-12: A commenter notes that the prairie dog towns on his/her land are a source of revenue from potential visitors and are susceptible to human activity.

Response: Appendix D, *Wildlife Species of the Nebraska Sandhills*, of the FEIS provides a representative list of mammal species in the Nebraska Sandhills, and this list includes the black-tailed prairie dog (*Cynomys ludovicianus*). Section 3.6.2, *Wildlife, Direct and Indirect Effects*, of the FEIS discusses potential direct and indirect effects on wildlife resulting from the construction of the R-Project, while Section 3.6.3, *Wildlife, Avoidance, Minimization, and Mitigation Measures*, of the FEIS presents the measures NPPD would implement to avoid, minimize, or mitigate effects on wildlife. Section 3.9.2, *Recreation and Tourism, Direct and Indirect Effects*, of the FEIS discusses the potential effects on recreation and tourism resulting from the construction of the R-Project.

Concern Statement 5.6-13: A commenter notes that his/her land is home to prairie dogs and that the holes made by the prairie dogs have become a haven for the western burrowing owl, which could be affected by construction, operation, and maintenance of the R-Project.

Response: Appendix D, *Wildlife Species of the Nebraska Sandhills*, of the FEIS provides a representative list of bird species in the Nebraska Sandhills, and this list includes the burrowing owl (*Athene cunicularia*), which is also known as the western burrowing owl. Section 3.6.2, *Wildlife, Direct and Indirect Effects*, of the FEIS discusses the potential direct and indirect

effects on wildlife resulting from the construction of the R-Project. Section 3.6.3, *Wildlife, Avoidance, Minimization, and Mitigation Measures*, of the FEIS presents the measures that NPPD would implement to avoid, minimize, or mitigate effects on wildlife.

Concern Statement 5.6-14: A commenter notes that box turtles present on his/her ranch are in decline. The ranch is also home to the ornate box turtle and western box turtle. These turtle species could be adversely affected if they are relocated.

Response: Appendix D, *Wildlife Species of the Nebraska Sandhills*, of the FEIS provides a representative list of herpetofauna species in the Nebraska Sandhills, and this list includes the ornate box turtle (*Terrapene ornata*), which is also known as the western box turtle. Section 3.6.2, *Wildlife, Direct and Indirect Effects*, of the FEIS discusses the potential direct and indirect effects on wildlife resulting from the construction of the R-Project. Section 3.6.3, *Wildlife, Avoidance, Minimization, and Mitigation Measures*, of the FEIS presents the measures that NPPD would implement to avoid, minimize, or mitigate effects on wildlife.

Concern Statement 5.6-15: The R-Project transmission line and potential future wind energy development associated with the line may diminish populations of grouse, including prairie chickens.

Response: Section 3.6.2, *Wildlife, Direct and Indirect Effects*, of the FEIS presents more specific information about potential impacts on the prairie chicken and other grouse species. These ground-dwelling species are particularly sensitive to habitat fragmentation, which would occur as a result of constructing the R-Project. Prairie chickens have been shown to avoid power lines and by distances of up to 328 feet and rarely cross power line ROWs (Pruett et al. 2009). Therefore, power lines and access routes create permanent movement barriers for these species. Additionally, these species are susceptible to raptor predation, which may be enhanced by the presence of transmission line towers placed in grassland habitat because the towers provide perching locations for raptors. Impacts of any future wind energy development on wildlife is discussed in Chapter 4, *Cumulative Effects*.

Concern Statement 5.6-16: The FEIS should include additional information about the trumpeter swan, greater prairie chicken, and long-billed curlew.

Response: Appendix D, *Wildlife Species of the Nebraska Sandhills*, of the FEIS provides a representative list of bird species in the Nebraska Sandhills, and this list includes the trumpeter swan, greater prairie chicken, and long-billed curlew. Section 3.6.2, *Wildlife, Direct and Indirect Effects*, of the FEIS discusses general impacts on birds as a result of the action alternatives and presents more specific information describing potential impacts on the prairie chicken.

Concern Statement 5.6-17: A commenter expresses concern about the clearing of trees potentially disturbing nesting birds during construction of the R-Project and asks NPPD to

specify the exact period for tree clearing and to identify who would verify that no bird nests are destroyed.

Response: Section 6.7, *Seasonal Restrictions*, of the MBCP and Section 3.6.3, *Wildlife, Avoidance, Minimization, and Mitigation Measures*, of the FEIS describe seasonal restrictions on tree clearing. To the extent feasible, NPPD would conduct tree clearing in the ROW outside the nesting period for migratory birds (i.e., sometime from July 16 to March 31). If any tree clearing were required to be completed during the migratory bird nesting season, a qualified biologist would conduct clearance surveys prior to tree removal to identify and avoid trees with occupied nests. NPPD would also conduct a preconstruction raptor survey to identify nests and the species occupying the nests. If occupied raptor nests are identified, NPPD would adhere to the seasonal buffers identified in Section 6.7, *Seasonal Restrictions*, of the MBCP.

EC600: Environmental Consequences: Special Status Species

EC600 Special Status Species

Concern Statement 5.7-1: Bald eagles and golden eagles are known to occur in the study area of the R-Project transmission line; the FEIS should describe what measures would be taken to protect them.

Response: Section 3.7.2.3, *Special Status Species, Bald Eagle, Avoidance, Minimization, and Mitigation Measures*, and Section 3.7.3.3, *Special Status Species, Golden Eagle, Avoidance, Minimization, and Mitigation Measures*, of the FEIS present the avoidance, minimization and mitigation measures that NPPD would implement to reduce effects on bald eagles and golden eagles under the action alternatives. These measures include conducting a bald eagle survey during the spring prior to construction to identify bald eagle nests that should be avoided; spacing conductors to exceed APLIC standards to eliminate any potential for electrocution of avian species; placing bird flight diverters on 123 miles of the R-Project transmission line and at least 123 miles of existing transmission lines to improve visibility and reduce collision risk; and requiring all construction personnel to remove trash that might attract scavenging eagles. The HCP and MBCP discuss the additional measures that would be taken to protect these species. The Service believes that these measures are sufficient to avoid the take of eagles for construction and operation of the R-Project.

Concern Statement 5.7-2: Protected bird species that are likely to be harmed by construction and operation of new wind projects and the associated power lines and towers include the endangered whooping crane, piping plover, and rufa red knot and the federally protected bald eagle and golden eagle. Many other non-avian species, including the endangered beetle, long-eared bat, and Blanding's turtle, would likely be harmed as well.

Response: Section 3.7, *Special Status Species*, of the FEIS analyzes the potential impacts of the action alternatives on federally listed and state-listed birds and other wildlife species that are known to occur or may occur within the Project area. Although some impacts would be unavoidable, this section also discusses the measures that NPPD would implement to avoid, minimize, or mitigate impacts for each species. Chapter 4, *Cumulative Impacts*, of the FEIS addresses the cumulative impacts of reasonably foreseeable future activities including future electrical utilities, multiple wind energy projects, transportation, and land use.

Concern Statement 5.7-3: The FEIS should state a safe buffer distance for nesting bald eagles from the R-Project transmission line.

Response: As noted in Section 3.7.2.3, *Special Status Species, Bald Eagle, Avoidance, Minimization, and Mitigation Measures*, of the FEIS, construction activities would avoid active bald eagle nests by a distance of 0.5 mile during nesting season (February 1 through August 31) and winter roosts by a distance of 0.25 mile.

Concern Statement 5.7-4: Section 3.7.12.2 of the DEIS describes impacts on the blowout penstemon; however, this section includes several generalized references to all three special status plants, rather than providing an analysis of potential impacts specific to the blowout penstemon. The indirect effects discussion is particularly lacking in species-specific analysis. The commenter provided suggested edits to several paragraphs in Section 3.7.12.2; they are intended to describe impacts on the blowout penstemon rather than special status plants in general.

Response: The FEIS was revised to include an analysis of potential impacts specific to the blowout penstemon, western prairie fringed orchid, and small white lady's slipper, and the commenter's suggested edits were incorporated as appropriate.

Concern Statement 5.7-5: The beetle should be protected. It has a vital function in the ecosystem of the Sandhills and requires relocating to areas to obtain food sources. Attempts through mitigation to mimic the required natural processes would likely be unsuccessful.

Response: As discussed in Section 2.4.15, *Mitigation for the Impacts of Take*, the FEIS, NPPD would acquire occupied beetle habitat at a ratio of 3 acres of mitigation for every 1 acre of disturbance (3:1 ratio). Acres of temporary disturbance are multiplied by 10 percent to represent the time between when disturbance would occur and when restoration is expected to be completed to mitigate the R-Project's impacts on the species after avoidance and minimization measures in the HCP are implemented.

Section 3.7.11.3, *Special Status Species, American Burying Beetle, Avoidance, Minimization, and Mitigation Measures*, of the FEIS lists the measures that NPPD would take to avoid, minimize, and mitigate impacts on the beetle, which are further described in the HCP. NPPD would monitor to evaluate post-construction restoration effectiveness and inform the adaptive management program, where additional restoration is needed. Additionally, to ensure restoration is successful, NPPD would establish an escrow account with a banking association to serve as a financial guarantee that money is available to restore temporary beetle habitat disturbance areas if NPPD fails to take the appropriate steps to do so.

Concern Statement 5.7-6: If the R-Project were to move forward and renewable energy projects were to be constructed, a plan for compensating the public for any loss of state and federally protected species should be established. This plan should include setting aside or rehabilitating additional lands outside the Project area for bird and bat conservation purposes.

Response: Mitigation would be determined on a project-by-project basis for those wind energy developers who apply for a permit or other applicable federal or state permits associated with their specific wind energy project.

Concern Statement 5.7-7: Because prairie dogs are present within the study area, the black-tailed prairie dog may also be present.

Response: The black-tailed prairie dog is not listed at either the federal or state level. Although it has previously been considered a candidate species for listing under the Endangered Species Act (ESA), the Service has determined, on multiple occasions, that listing of the black-tailed prairie dog as either threatened or endangered was not warranted, most recently in December 2009 (74 FR 63343). Section 3.6.2, *Wildlife, Direct and Indirect Effects*, of the FEIS describes the general impacts on wildlife resulting from implementation of the action alternatives.

Concern Statement 5.7-8: The FEIS should be updated to assess potential impacts on the mountain plover.

Response: The FEIS does not specifically address impacts on the mountain plover because it is not known to occur in the study area (USFWS 2018a, NGPC 2013).

Concern Statement 5.7-9: How would construction of the R-Project affect the blowout penstemon?

Response: Section 3.7.12.2, *Special Status Species, Blowout Penstemon, Direct and Indirect Effects*, of the FEIS describes the potential impacts on the blowout penstemon under the action alternatives. Section 3.7.12.3, *Special Status Species, Blowout Penstemon, Avoidance, Minimization, and Mitigation Measures*, of the FEIS discusses the avoidance, minimization, and mitigation measures that NPPD would implement to reduce impacts. These measures include avoiding blowout penstemon habitat, training personnel regarding federally and state-protected species, and implementing a noxious and invasive weed control program. The Service also addresses blowout penstemon in the Section 7 Biological Opinion.

Concern Statement 5.7-10: The FEIS should describe impacts on the western prairie fringed orchid.

Response: Section 3.7.13.2, *Special Status Species, Western Prairie Fringed Orchid, Direct and Indirect Effects*, of the FEIS describes the potential impacts on the western prairie fringed orchid under the action alternatives. Section 3.7.13.3, *Special Status Species, Western Prairie Fringed Orchid, Avoidance, Minimization, and Mitigation Measures*, of the FEIS discusses the avoidance, minimization, and mitigation measures that NPPD would implement to reduce impacts. These measures include avoiding occupied habitat, training personnel regarding federally and state-protected species, and implementing a noxious and invasive weed control program. The Service also addresses the western prairie fringed orchid in the Section 7 Biological Opinion.

Concern Statement 5.7-11: The FEIS should use the most recent data to describe existing conditions for the bald eagle, including active nests in the study area. NPPD should coordinate and consult with the Nebraska Game and Parks Commission (NGPC).

Response: NPPD conducts annual bald eagle nest surveys for the R-Project. The results of these surveys were used to describe existing conditions for bald eagles, including active nests in the study area, in the DEIS. The FEIS has been updated to include results of the 2017 and 2018 bald eagle surveys of the Project area, which became available after the release of the DEIS. NGPC is a cooperating agency in the development of the EIS and has reviewed the FEIS content pertaining to the bald eagle. As described in Section 3.7.2.3, *Special Status Species, Bald Eagles, Avoidance, Minimization, and Mitigation Measures*, of the FEIS, any additional bald eagle nests that may be discovered during pre-construction surveys would be avoided by 0.5 mile during the bald eagle nesting season (February 1 through August 31).

Concern Statement 5.7-12: The FEIS should describe long-term effects on the beetle, whooping crane, and Sandhill crane from constructing and operating the R-Project.

Response: Sections 3.7.11, *Special Status Species, American Burying Beetle*, and 3.7.7, *Special Status Species, Whooping Crane*, of the FEIS, respectively, describe the short- and long-term effects on the beetle and the whooping crane under the action alternatives. The Sandhill crane is not listed as threatened or endangered at either the federal or state level. Section 3.6.2, *Wildlife, Direct and Indirect Effects*, of the FEIS describes general impacts on wildlife, including birds, under the action alternatives.

Concern Statement 5.7-13: Proposed mitigation for the take of the beetle under the action alternatives is not sufficient to compensate for damage to its habitat. Additional acreage should be acquired.

Response: The criteria for determining the amount of mitigation required for take of the beetle was developed in a collaborative manner between the Service and NPPD. The Service determined that mitigation should occur at a ratio greater than 1:1. NPPD agreed to mitigate impacts on beetle habitat at a ratio of 3 acres of mitigation for every 1 acre of permanent disturbance (3:1). Because all acres of disturbed habitat are assumed to be beetle habitat, all disturbance within the permit area would be mitigated at a ratio of 3:1. Acres of temporary disturbance would then be multiplied by 10 percent to represent the time between disturbance and when restoration is expected to be completed. The Service has determined this to be sufficient to mitigate impacts on the species after avoidance and minimization measures in the HCP are implemented. Section 5.2.2, *Estimated Take of Covered Species*, and Section 6.0, *Conservation Plan*, of the HCP, respectively, present a detailed discussion of beetle take and mitigation calculations.

Concern Statement 5.7-14: How would the R-Project affect the habitat of the regal fritillary?

Response: Section 3.6.2, *Wildlife, Direct and Indirect Effects*, of the FEIS describes general impacts on wildlife, including insects, under the action alternatives. Impacts to the regal fritillary would be the same or similar to those described for other insects. The regal fritillary (*Speyeria*

idalia) is not listed at the federal or state level but is under review at the federal level for consideration. However, protection under the ESA does not apply until a species is listed.

Concern Statement 5.7-15: How would take of the beetle be monitored during construction of the R-Project and what would the consequences be if the amount of take authorized under the permit were exceeded?

Response: Section 6.3.1, *Compliance Monitoring*, of the HCP describes the monitoring that would be conducted to ensure that NPPD does not exceed the take number. Monitoring activities would include conducting annual surveys to estimate beetle populations and employing onsite monitors to ensure that impact avoidance and minimization measures identified in the FEIS and the HCP are properly implemented. A Compliance Monitoring Plan and a separate plan to monitor beetle populations in the permit area are included as appendices to the HCP. If monitoring were to indicate take is occurring at such a rate that the permit limit might be exceeded, NPPD would immediately notify the Service to discuss appropriate measures to avoid exceedance.

Concern Statement 5.7-16: What long-term impacts to the beetle population would occur as a result of less ranching activity within the R-Project ROW?

Response: Section 3.17.2, *Socioeconomics, Direct and Indirect Effects*, of the FEIS describes the potential short- and long-term impacts on ranching operations under the action alternatives. These impacts would include the permanent loss of up to 40 acres of ranch lands and 12 acres of other agricultural lands resulting from the placement of tower foundations and access roads. The approximately 52 acres of land that would be permanently converted to non-agricultural use constitute a very small fraction of the agricultural lands in the analysis area counties. While these disturbances would also affect the beetle, impacts on the beetle are anticipated to occur from habitat loss and fragmentation and direct mortality during construction, but they are not attributed to changes in ranching activity in the permit area. Take of the beetle resulting from constructing and operating the R-Project are not expected to have population level effects on the species.

Concern Statement 5.7-17: The DEIS fails to adequately analyze the impacts of the R-Project on the interior least tern and piping plover because marking of lines with bird flight diverters, as proposed in the DEIS, would reduce but not eliminate the risk of collision. Increased opportunities for raptor perching from constructing the R-Project transmission line may increase predation pressure on these two species. Therefore, these species should be covered under a permit.

Response: Section 3.7.4, *Special Status Species, Interior Least Tern*, and Section 3.7.5, *Special Status Species, Piping Plover*, of the FEIS describe the potential impacts of the action alternatives on interior least tern and piping plover. Although the use of bird flight diverters does not eliminate the risk of avian collision, the 50 to 80 percent reduction in collision risk attributed

to bird flight diverters (according to the *USFWS Region 6 Guidance for Minimizing Effects from Power Line Projects within the Whooping Crane Migration Corridor*, which was based on the best available science), combined with the lack of suitable nesting habitat for these species along the R-Project corridor and the agile nature of these species, makes the risk of take unlikely. Although transmission tower structures can provide perching habitat for raptors, constructing the R-Project is not expected to result in an increase in predation on the interior least tern or the piping plover because suitable nesting habitat for these species is lacking near the Project. Therefore, NPPD has not applied for a permit to address these species.

Concern Statement 5.7-18: The DEIS fails to adequately analyze the impacts on the beetle because the estimate of beetle density in the permit area provided in the DEIS is not supported by reliable data and has not been properly validated with accurate surveys. Impacts from construction activities, including soil compaction, may be greater than described in the DEIS, in part because the analysis does not take into account the fact that the beetle is active at night when it may fly into construction areas seeking prey. Therefore, take of the beetle may be higher than the estimate provided in the DEIS.

Response: Section 5.2.1, *American Burying Beetle Density Estimate*, of the HCP presents a detailed description of the methods and assumptions used to develop the beetle take estimate. The Service and NPPD collaboratively developed the take estimate, which is based on the best available science. The density estimate is based on the 99th percentile of current and historical trap data that were collected inside and outside the permit area and that met specific survey requirements identified by the Service. Annual beetle surveys associated with the R-Project are ongoing to verify the take estimate is accurate and would not be surpassed. The take estimate calculation does not assume the beetles are equally distributed across the landscape but rather assumes that all impacts would occur in areas with the highest 1 percent of beetle density ever recorded. By applying a density based on the 99th percentile to all disturbed areas, regardless of actual habitat quality, the HCP calculates the highest take number that may occur from construction. The Service believes that this is the best approach for estimating take of the beetle.

Section 3.7.11.2, *Special Status Species, American Burying Beetle, Direct and Indirect Effects*, of the FEIS describes the potential impacts of the action alternatives on the beetle, and Section 3.7.11.3, *Special Status Species, American Burying Beetle, Avoidance, Minimization, and Mitigation Measures*, discusses the avoidance, minimization, and mitigation measures that NPPD would implement. These measures include using overland access with low-ground-pressure equipment, where possible based on construction requirements, to avoid soil disturbance and compaction in areas where existing roads are not available for construction and maintenance access; avoiding nighttime construction and using artificial lighting during periods when the beetle is active to avoid attracting beetle to construction areas and increasing the likelihood of take; and using sodium vapor lighting and down-shield lighting at the Thedford Substation to avoid attracting the beetle to artificial lighting sources. Therefore, the analysis provided in the FEIS has accounted for impacts on the beetle from construction activities, including soil compaction, and the fact that beetles are active at night. Section 3.2.1, *American*

Burying Beetle (Nicrophorus americanus), of the HCP describes in detail the impacts of soil compaction on the beetle and the use of low-ground-pressure equipment. A graduate thesis study aimed at investigating the impacts of soil compaction on the beetle found high survival rates when beetles were exposed to compaction from moving vehicles, including an NPPD line truck, which is the largest in NPPD's fleet. Although the study did not use the beetle, it used other species of burying beetles with similar biological characteristics as a proxy for the beetle during field and laboratory investigations. Section 5.1.1, *Potential Effects from Construction*, of the HCP presents a detailed discussion of degradation of beetle habitat from lighting.

If the measures described in Section 3.7.11.3, *Special Status Species, American Burying Beetle, Avoidance, Minimization, and Mitigation Measures*, were implemented, the Service does not believe the Project would reduce the likelihood of survival and recovery of the beetle.

Concern Statement 5.7-19: A commenter expressed concern about other endangered species in the study area and questions their absence from NPPD's application for a permit.

Response: Section 3.7, *Special Status Species*, of the FEIS describes special status species in the study area. All federally listed endangered and threatened species that may occur in the vicinity of the R-Project were discussed in the R-Project HCP. However, only one species—American burying beetle—was included as a covered species. This is the only species for which take is being requested and for which take would be permitted. Other federally listed species were included as evaluated species because take of these species is not anticipated.

Concern Statement 5.7-20: A commenter expressed concern that the DEIS did not provide sufficient detail about how restored habitat would be suitable for the beetle.

Response: As noted in FEIS Section 3.7.11.3, *Special Status Species, American Burying Beetle, Avoidance, Minimization, and Mitigation Measures*, beetle habitat would be restored in accordance with NPPD's Restoration Management Plan. NPPD's Restoration Management Plan includes specific restoration criteria and monitoring provisions and is subject to Service review and approval prior to finalization to ensure permit requirements are met and successful restoration is achieved.

Concern Statement 5.7-21: A commenter states that the piping plover has been observed in the study area and that the EIS should not rely solely on information from NGPC to describe baseline conditions.

Response: Section 3.7.5.1, *Special Status Species, Piping Plover, Affected Environment*, of the FEIS acknowledges that piping plover has been documented in the study area. The FEIS was compiled using information from various sources including a piping plover nesting habitat assessment completed for the R-Project crossing locations on the North Platte River and South Platte River.

Concern Statement 5.7-22: A commenter indicates that global climate change trends may negatively affect existing beetle populations and that this issue should be given consideration by the Service before issuing a permit to NPPD.

Response: Section 3.7.11.1, *Special Status Species, American Burying Beetle, Affected Environment*, of the FEIS describes how climate change could negatively affect beetle populations. Although effects of global climate change on the beetle are difficult to predict, increasing temperatures and dryer conditions could result in further reductions in the species' range. Similarly, milder winters could disrupt hibernation cycles if freezing temperatures occur later in the year or if temperatures consistently reach 55°F to 60°F earlier in the year. Changes in the frequency of extreme weather events associated with global climate change could also affect the beetle. Mitigation at a ratio of 3:1 would partly offset anticipated future effects of climate change on the Sandhills population.

Concern Statement 5.7-23: A commenter states that potential effects on the beetle should be revisited for temperatures closer to 80°F to 90°F.

Response: Section 5.1, *American Burying Beetle*, of the HCP and Section 3.7.11.2, *Special Status Species, American Burying Beetle, Direct and Indirect Effects*, of the FEIS describe impacts on the beetle. Section 5.2, *Estimated Take of Covered Species*, of the HCP describes take of the beetle, which is based on the amount of habitat disturbed by the R-Project and an estimated density across permitted activities. Air temperature does not factor into the take calculation for the beetle.

EC650: Environmental Consequences: Whooping Cranes

Concern Statement 5.8-1: NPPD’s proposed avoidance, minimization, and mitigation measures are not sufficient to avoid take of whooping cranes and do not justify the absence of the whooping crane as a covered species under the permit. Justification provided in the DEIS for not requiring whooping cranes to be treated as a covered species under the permit is insufficient. As described in the DEIS, impacts on whooping cranes constitute take, as defined in Section 9 of the ESA, through “harassment” and “harm,” even if direct mortality does not occur. Very inadequate relevance is given to “emergency” repairs, which will be done hastily and with heavy, habitat damaging equipment. The Final EIS should discuss the Service’s rationale for not requiring NPPD to apply for a permit for the whooping crane, even though the R-Project transmission line and its placement within the Central Flyway presents a long-term collision risk. Whooping crane must be treated as a covered species as part of the permit, as the placement of the R-Project transmission line within the Central Flyway would pose an unacceptably high risk to whooping cranes and may be detrimental to the species.

Response: The Service has analyzed impacts from disturbances during construction and maintenance and permanent and temporary habitat loss during construction and operation in Section 3.7.7, *Special Status Species, Whooping Crane*, of the FEIS.

It is unlikely that emergency repair activities would directly affect potentially suitable whooping crane habitat because the disturbance would largely result from required access to structures for equipment completing the repairs. Access for emergency repairs would likely avoid potentially suitable whooping crane habitat because those areas are not conducive for vehicle travel. Additionally, emergency repairs are typically required during the winter when ice storms can damage large stretches of power lines. Emergency repairs would largely be required outside the whooping crane migration season.

The Service concludes that NPPD’s HCP requirements of avoidance and minimization measures related to disturbances and habitat loss results in short-term, low-intensity effects on the whooping crane not likely to adversely affect whooping cranes or cause the take of whooping crane during the permit term.

The Service has summarized known whooping crane mortalities associated with power line collisions in Section 3.7.7.1, *Special Status Species, Whooping Crane, Affected Environment*, of the FEIS. The Service has reviewed and conducted assessments of risk of whooping crane collision with NPPD’s R-Project transmission line. Multiple whooping crane collision risk analyses were completed during the development process of the R-Project transmission line. NPPD completed a collision risk assessment for the R-Project, as described in the HCP released for public comment (NPPD 2016). Its analyses suggested that the likelihood of whooping crane collisions with the R-Project transmission line would be extremely low, resulting in a risk value of less than one collision over the 50-year life of the Project.

The Service conducted a separate whooping crane collision risk assessment for the DEIS that also concludes the risk of whooping crane mortality from collision with the R-Project

transmission line would likely be low, although a great amount of uncertainty exists because of the lack of data (Appendix E of the FEIS).

During the comment period on the DEIS, the Service received an additional whooping crane assessment (Gil and Weir 2017) that estimated a higher risk of collision than estimated by NPPD (2016) and the Service (Appendix E of the FEIS). Additionally, the Service received specific satellite location data from the Pearse et al. (2018) study. Based on variation in the assessment results and the receipt of new information, the Service hired an independent researcher to prepare a report (Davis 2018) reviewing the whooping crane risk assessments prepared by NPPD (2016), the Service (Appendix E of the FEIS), and Gil and Weir (2017). Davis (2018) identified issues in the risk assessments prepared by both NPPD and Gil and Weir (2017) and concludes that NPPD's risk assessment likely underestimates the risk to the whooping crane as a result of the R-Project, while Gil and Weir (2017) likely overestimate the risk. NPPD's underestimation of whooping crane collision risk associated with the R-Project, as identified in the Davis report, was due to reliance on historical whooping crane sighting data rather than the satellite location data that were not available to NPPD at the time of the analysis, the lack of inclusion of all relevant spatial and biological parameters that may determine the likelihood of collision with power lines, and the incorrect assumption that collision risk would be equal among all transmission line segments within the whooping crane migration corridor, regardless of proximity to suitable habitat (recognized by NPPD as a limitation, but NPPD determine that the appropriate data do not exist to apply a correction factor). Gil and Weir's overestimation of whooping crane collision risk associated with the R-Project was due to the inclusion of questionable model parameters without sufficient justification, inappropriate extrapolation of data, and exclusion of line segments with a low probability of collision (Davis 2018). Davis (2018) states that the Service's analysis (Appendix E of the FEIS) used the best available science in terms of what is known about power line collisions by whooping cranes in the Great Plains. While the Service's analysis in the DEIS did not include the satellite location data, Davis was not sure how much more certainty would be achieved if that information were to be added to the analysis. Overall, Davis (2018) concludes that the necessary data are not available to obtain an estimate of whooping crane take that is at a level of certainty that is scientifically defensible.

The previous estimates of whooping crane collision risk calculated for the R-Project contain uncertainties and assumptions, resulting in the widely varying assessments discussed above. Since the independent review of the whooping crane risk assessments (Davis 2018), the Service has continued to review literature and potential methods to estimate risk of whooping crane collision with the R-Project (USFWS 2018b). The Service incorporated the satellite location data and found that the risk assessment yielded the same results as methods derived without incorporating the satellite location data (USFWS 2018b). The Service's review of the various methods and best available science continue to conclude that the risk of whooping crane collision is low (less than 0.5 whooping cranes over the 50-year life of the Project) (Appendix E of the FEIS; USFWS 2018b). The Service has found no scientifically agreed-upon methodologies that more accurately assess whooping crane collision risk than the analyses conducted by the Service. NPPD concludes in its HCP that the likelihood of whooping crane collisions with the R-Project transmission line is extremely low (NPPD 2018). The Service concludes that there is no

scientifically reliable evidence that take of whooping cranes from collision with the R-Project transmission line is reasonably certain to occur.

As stated in the Service's Habitat Conservation Plan Handbook, the standard for determining whether activities are likely to result in incidental take is whether take is "reasonably certain" to occur in considering both the direct and indirect impacts of the activities. If incidental take of ESA-listed species is not anticipated from a landowner or a project proponent's activities, an incidental take permit is not needed or appropriate.

If new or additional information emerges suggesting that risk of whooping crane take reasonably certain to occur, NPPD agrees to seek to amend the HCP and permit for the R-Project to include the whooping crane as a covered species, as described in Section 6.5.3, *Whooping Crane Adaptive Management*, of the HCP.

Concern Statement 5.8-2: Neither the DEIS nor any other document made available for public comment remotely supports the assertion that whooping cranes disturbed from chosen habitats would simply make do with other "stopover habitat as an alternative." Not only is the assertion entirely unsupported but also belies fundamental ecological principles that animals carefully select particular habitats for a reason; hence, it cannot be assumed that they would simply pick up and move elsewhere without consequence when those habitats are destroyed, degraded, or otherwise rendered inhospitable to the species for other reasons.

The R-Project would adversely affect the whooping crane (and other migratory bird species) by inhibiting the species' ability to use the habitat on which they depend for feeding and roosting. The Service and NPPD fail to support their claim that whooping cranes disturbed by the R-Project would likely move to adjacent suitable habitat, and the best available science suggests otherwise. Also as mentioned above, the Service failed to implement the best available science when analyzing the effects that temporary disturbance of 12.7 acres of suitable habitat would have on the species. The R-Project would cross at least 5.7 miles of wetlands, and several of these sensitive areas would be permanently disturbed by the foundations of steel monopoles. Failure to analyze this critical information is contrary to the procedural obligations of the ESA and NEPA, and must result in the permit being denied.

Response: The Service hired an independent researcher to prepare a report (Davis 2018) reviewing the whooping crane risk assessments prepared by NPPD (2016), the Service (Appendix E of the FEIS), and Gil and Weir (2017). Among the assumptions used by Gil and Weir (2017) to develop their assessment was the notion that whooping cranes exhibit site fidelity and therefore would not use other stopover sites if their preferred sites were disturbed or destroyed. Davis (2018) reviewed historical sighting and GPS telemetry data and conducted a literature review of whooping crane site fidelity. He concludes that while whooping cranes may exhibit site fidelity for stopover sites that consistently contain habitat, such as rivers and large wetland complexes, migrating whooping cranes are likely flexible in habitat selection due to the spatial and temporal dynamics of wetlands in the Great Plains (Davis 2018). Therefore, the best available science suggests that whooping cranes would use alternative sites within suitable

habitat if their preferred stopover sites were disturbed or destroyed. The R-Project transmission line would span rivers and streams at locations with existing bridge crossings where such infrastructure is available. Structure foundations located within potentially suitable whooping crane habitat would result in the permanent loss of 0.013 acre of habitat. However, in its desktop analysis (NPPD 2016), NPPD finds that approximately 8,969 acres of suitable whooping crane stopover habitat occurs within 1 mile of the centerline of NPPD's final route, though it is likely that the entire study area contains much more suitable whooping crane stopover habitat (Davis 2018). Additionally, whooping crane habitat is readily abundant in much of Nebraska (Stahlecker 1997). Based on the availability of habitat in the area, combined with the avoidance and minimization measures to be implemented by NPPD, the Service has determined, similar to its conclusions in the DEIS, that take is not reasonably certain to occur because of the temporary and permanent disturbances to whooping crane habitat from the R-Project.

Concern Statement 5.8-3: The Final EIS should be updated to include more recent findings of Stehn and Haralson-Strobel (2014) with regard to whooping crane mortality of the Aransas-Wood Buffalo population, which indicates that 20 percent of the known mortalities for fledged whooping cranes from the Aransas-Wood Buffalo populations are a result of collisions and 20 percent are from shooting.

Response: The Service agrees with the comment and has revised the text in the FEIS. The source used in the FEIS was updated to reflect the information reported in Stehn and Haralson-Strobel (2014) from the proceedings from the North American Crane Workshop, which references 20 percent of known whooping crane mortalities for fledged whooping cranes from the Aransas-Wood Buffalo population results from collision and 20 percent results from shooting.

The Service has also supplemented the text in the FEIS to better qualify the use of a percentage (20 percent) to indicate a source of mortality; the text now reads "...20 percent of known mortalities (Stehn and Harralson-Strobel 2014)."

Concern Statement 5.8-4: The FEIS should be updated to note that only 9 percent of whooping crane mortalities have a known cause. The FEIS should also explain that during the past 80 years, the Aransas-Wood Buffalo population has increased from 15 to approximately 380 individuals, while over that same time, the miles of power line have increased from virtually zero to hundreds of thousands with only 10 documented mortalities from power-line collisions, only one of which was associated with a transmission line. Likewise, the FEIS should disclose that a recently completed satellite tracking study does not support the past assumptions that the majority of mortality occurs during migration or that it is appropriate to extrapolate the known mortalities to all mortalities since most mortality occurs on the summer and winter grounds where threats such as power lines are not an issue.

Response: The FEIS has been updated to include information that only 9 percent of whooping crane mortalities has a known cause and information about historical and current population size.

Because of the low number of carcasses recovered (i.e., 50 carcasses recovered over 60 years from Stehn and Harralson-Strobel [2014]) with known cause of mortality and high uncertainty about causes of mortality, the Service has not speculated on the relationship between population size and amount of power lines on the landscape.

The Service has included description mortality estimates and timing of mortality from Pearse et al. (2018) in Section 3.7.7.1, *Special Status Species, Whooping Crane, Affected Environment*, of the FEIS. The Service also references previous mortality estimates from Stehn and Harralson-Strobel (2014).

Concern Statement 5.8-5: The FEIS should be corrected to avoid the suggestion that it is more likely that whooping cranes will occur in the study area than anywhere else in the state of Nebraska.

Response: Information about the 95 percent corridor and likelihood of whooping crane occurrence in Nebraska and the study area has been modified in Section 3.7.7.1, *Special Status Species, Whooping Crane, Affected Environment, of the EIS*.

Concern Statement 5.8-6: How would NPPD mitigate for take in the event of whooping crane mortality from collision with the transmission line and what monitoring would be conducted to ensure that potential take is reported?

Response: As described in Section 6.5.3, *Whooping Crane Adaptive Management*, of the HCP, NPPD would implement whooping crane adaptive management measures if new information suggests that the collision risk to whooping cranes is significantly higher than currently estimated. New information relevant to the R-Project's whooping crane collision risk includes a whooping crane strike on a transmission line in the United States segment of the Aransas-Wood Buffalo population migratory corridor that has two defining characteristics:

1. The strike must occur on a transmission line designed at 115 kilovolt (kV) or higher voltage.
2. The transmission line where the strike occurred must have been marked with bird flight diverters with a design that is documented to be at least as effective as those installed by NPPD on the R-Project.

NPPD's response to this new information would be to amend the HCP and permit for the R-Project to include whooping crane as a covered species. If NPPD were to seek to add the whooping crane as a covered species to its HCP in the future, the Service would work with NPPD to determine the appropriate mitigation and monitoring requirements.

The Service cannot require NPPD to monitor for the potential take of the whooping crane because it is not a covered species. However, new information could be provided from a variety of sources, including electrical utility staff, landowners, recreationists, or hunters who happen to observe whooping crane carcasses.

Concern Statement 5.8-7: Why doesn't the incidental take permit application for the R-Project include all of NPPD's final route, especially the crossings of Birdwood Creek, the North Platte River, and the South Platte River?

Response: The permit that would be issued for the R-Project only involves the incidental take of the beetle, and suitable habitat for this species does not occur along NPPD's entire final route.

Concern Statement 5.8-8: NPPD's adaptive management strategy puts whooping cranes at risk of jeopardy in violation of ESA, and directly contradicts the regulatory requirements for incidental take under Section 10 of the ESA. This species is hovering on the brink of extinction, and the Service must not allow NPPD to circumvent the requirements of the ESA. Rather than endorse NPPD's scheme, the Service must find that this adaptive management approach is contrary to the intent and requirement of the ESA, and deny the Project.

Response: The whooping crane adaptive management approach described in the HCP was developed in a collaborative manner by the Service and NPPD. While the Service has determined that the R-Project is not likely to result in take of the whooping crane, based on the current available information, the adaptive management approach would provide next steps to be implemented in the event that new information suggests that the risk to whooping cranes is significantly greater than currently thought or if take of the whooping crane is reasonably certain to occur. If, in the future, NPPD were to decide to seek permit coverage for the whooping crane, at that point, the Service would conduct the appropriate analysis to determine the current population status, threats to the species, and the amount of whooping crane take that may occur. The Service and NPPD would also develop monitoring, mitigation, and minimization measures for the species at that time. Based on the above, the Service would determine whether the HCP for the whooping crane meets permit issuance criteria.

Concern Statement 5.8-9: NPPD and the Service are further relying on preconstruction surveys to mitigate the risk of impacts to whooping cranes. The DEIS notes that "work would cease if a whooping crane were to land within 0.5 mile of construction activities." While it is certainly beneficial to cease construction activities when whooping cranes are in the vicinity, this provision does not go far enough to prevent harm from occurring. Cranes can cover significant distances relatively quickly over the course of their migration, and therefore the 0.5 mile threshold is insufficient to ensure that activities that may harm cranes – such as noise that would cause the birds to deviate from their intended migratory route, causing stress and potentially leading to the utilization of suboptimal stopover locations where the cranes may be more susceptible to predation or other harms – are put on hold quickly enough to avoid adverse impacts. The Service should require more thorough monitoring with several teams covering the migratory area, and work should cease when cranes are within 1 mile of construction activities. This would be consistent with the Region 6 Guidance for whooping cranes, which focusses on minimizing impacts within 1 mile of potentially suitable whooping crane habitat.

Response: As a result of public comments received during the DEIS public comment periods for the R-Project, the Service hired an independent expert to review whooping crane risk assessments prepared by NPPD, the Service, and a separate assessment submitted by a commenter (Gil and Weir 2017). The independent review included a critique of the assumptions and claims made and conclusions drawn in each of the assessments, as requested by the Service. One of the conclusions of Gil and Weir (2017) was that proposed construction buffers are insufficient to prevent harm to the whooping crane. The independent expert notes in the final report that while it is recognized that whooping cranes are intolerant to human disturbances, the level and type of disturbances that potentially affect the whooping crane and the distance at which the whooping crane respond to a disturbance are not well documented in the literature. The report provides examples from literature, demonstrating the large amount of variability in reported distances at which whooping cranes responded to various types of disturbances in the studies. The report concludes that, based on the available data, a 0.5-mile buffer is likely sufficient to prevent harm to whooping cranes, rather than a 1 mile buffer. However, the report also notes that NPPD should be willing to enlarge the buffer if observations of whooping cranes indicate a negative response to construction activities at the 0.5-mile buffer or farther away from the construction activity. NPPD has since added as a requirement in the HCP that “if a whooping crane is observed in the vicinity of but more than 0.5 mile away from the construction area, that bird will be observed for signs of agitation. If signs of agitation are observed, all construction activities will cease until the individual has relocated on its own accord.”

EC700: Environmental Consequences: Cultural Resources

Concern Statement 5.9-1: The R-Project transmission line would devastate the incredible historical site in Lincoln County near the eastbound interstate rest area and along the Oregon Trail. It would also devastate one of the very few remaining sites that show the ruts from the Mormon Trail westward migration. Commenters not only worried about impacts to the sites themselves but also effects on the view from these sites.

Response: Section 3.10.6, *Cultural Resources, Affected Environment*, of the FEIS discusses the historical importance of the Mormon and Oregon Trail remnants. Section 3.10.7, *Cultural Resources, Direct and Indirect Effects*, of the FEIS describes the results of the effects analysis of constructing the R-Project on cultural resources and, specifically, the historical trail remnants. In addition, Section 3.10.8, *Cultural Resources, Avoidance, Minimization, and Mitigation Measures*, of the FEIS presents NPPD's avoidance, minimization and mitigation measures to reduce potential effects on these trail remnants.

The Area of Potential Effects (APE) for this Project has been revised, and the Mormon Pioneer Trail and Oregon Trail will be considered under Section 106 of the National Historic Preservation Act (NHPA) for potential adverse, direct and indirect effects on cultural resources in Section 3.10, *Cultural Resources*, of the FEIS. A Programmatic Agreement between the Service, the Advisory Council on Historic Preservation, the Nebraska State Historic Preservation Office (Nebraska SHPO), and other consulting parties, as identified, will be finalized and signed prior to the issuance of the incidental take permit and will guide the implementation of the Section 106 process beyond the duration of the EIS process. The Programmatic Agreement will also guide the development of avoidance, minimization and mitigation measures that NPPD would implement to reduce and/or offset potential effects on these trail remnants. Section 3.12.2, *Visual Resources, Direct and Indirect Effects*, of the FEIS discusses potential impacts on visual resources, including effects near these trail remnants. Section 3.12.3, *Visual Resources, Avoidance, Minimization, and Mitigation Measures*, includes avoidance, minimization, and mitigation measures for these visual resources, including the measure to "use increased setbacks for locating structures that may be near trails and river crossings to minimize visual intrusion."

Concern Statement 5.9-2: What is NPPD's plan for not disrupting and destroying the cultural resource sites when constructing and maintaining the transmission line or performing emergency repairs? Special concern is expressed about the remnants of the Oregon and Mormon Trails.

Response: Section 3.10.8, *Cultural Resources, Avoidance, Minimization, and Mitigation Measures*, of the FEIS and the Programmatic Agreement outline the process to avoid, minimize, or mitigate effects on eligible sites during construction and maintenance. The Programmatic Agreement also addresses emergency situations. If an emergency situation that represents an imminent threat to public health or safety or a hazardous condition were to occur, and NPPD can respond to that emergency using the same access routes that were used during construction, no further consultation under the Programmatic Agreement would be required. If an emergency

situation that represents an imminent threat to public health or safety or creates a hazardous condition were to occur and requires NPPD to use access routes or take other action in areas that were not previously surveyed for cultural resources, NPPD will immediately contact the Service prior to using areas not previously surveyed. The Service and NPPD will develop alternative measures to relevant Stipulations in the Programmatic Agreement and notify the Nebraska SHPO and Advisory Council on Historic Preservation of the situation and measures used to remedy the emergency.

Concern Statement 5.9-3: The R-Project would adversely affect significant archeological sites, located up and down the Birdwood Valley. A national historic area with a Native American Indian campsite and relics dating back 10,000 years is located across Birdwood Valley where the line is proposed to turn and go east. Any disturbance would affect the sacred area in which the Native American Indians camped and lived.

Response: As described in Section 3.10.3, *Cultural Resources, Government-to-Government Tribal Consultation*, of the FEIS, the Service has contacted the Native American tribes with interests in the Project area and invited formal government-to-government consultation about resources that may be of concern to them as described in Executive Order 13175: *Consultation and Coordination with Indian Tribe Governments*. All the archaeological sites within the APE would be assessed for National Register of Historic Places (NRHP) eligibility and potential Project-related effects. The Programmatic Agreement will guide the Section 106 process beyond the duration of the EIS process, and efforts would be made to avoid, minimize, or mitigate any adverse effects on historic properties. Archaeological Site 25LN113 (LW-14) at Birdwood Creek was outside the original APE and is discussed in Section 3.10.6.3, *Cultural Resource Investigations*, and Section 3.10.7, *Cultural Resources, Direct and Indirect Effects*. The revised APE includes the Birdwood Creek crossing and Archaeological Site 25LN113; therefore, Section 106 processes determining NRHP eligibility and avoidance, minimization, and mitigation efforts now apply to this site. The FEIS has been revised to reflect this change; it discusses Archaeological Site 25LN113 as a potential historic property.

Concern Statement 5.9-4: A summary of the cultural resources viewshed analysis conducted by NPPD should be included in the FEIS.

Response: Section 3.10.6.3, *Cultural Resource Investigations*, of the FEIS has been revised to include a summary of the cultural resources visual analysis conducted by NPPD (in the *Cultural Resources Visual Analysis* subsection).

Concern Statement 5.9-5: The FEIS should describe the types of mitigation measures that may be developed to address adverse impacts on cultural resources, such as establishment of an interpretive kiosk, marker, or other signage; photographic recordation, archival research, and preparation of a report regarding the resource; stabilization or restoration of historic sites; use of landscaping to minimize visual impacts; and/or other creative mitigation options. It is important

to disclose to the public what these mitigation options may entail and that such mitigation would not include re-routing the transmission line.

Response: Section 3.10.8, *Cultural Resources, Avoidance, Minimization, and Mitigation Measures*, of the FEIS has been revised to describe the types of mitigation measures NPPD might develop to address the adverse effects of the R-Project on cultural resources as noted in the concern statement above. A Programmatic Agreement, which will be finalized and signed prior to the issuance of the permit, outlines the process the Service and consulting parties would follow to develop and implement appropriate mitigation measures.

Concern Statement 5.9-6: The DEIS does not sufficiently emphasize the culture of today. People think of cultural resources as history, 10, 15, 20, or even 100 years ago. But today’s culture—the culture of the Sandhills—is the ranchers who live here, and that culture needs to be addressed in more detail in the FEIS.

Response: New Section 3.10.6.2, *Contemporary Cultural Landscape*, has been added to the FEIS to discuss the contemporary cultural landscape and ranching culture of the Sandhills and to reference other sections of the document where present-day use is emphasized. In the FEIS, analyses of effects on ranching and farming are included in Section 3.8, *Land Use*, and Section 3.17, *Socioeconomics*, while Sections 3.9, *Recreation and Tourism*, and 3.12, *Visual Resources*, discuss contemporary cultural uses.

Concern Statement 5.9-7: The FEIS should address potential effects of constructing the R-Project to the Swift House historic property.

Response: As mentioned in Section 3.10.6.3, *Cultural Resource Investigations*, a member of the public mentioned the Swift House as a potential cultural resource during the EIS scoping process. However, after consultation with the Nebraska SHPO and the public, the Service was not able to identify additional information about this potential resource; the public commenter who mentioned the property did not provide any resources or specific information on the property. Without these specific details, no further analysis of the Swift House claims is possible in the FEIS. Thus, it is not addressed as a historic property in the FEIS.

Concern Statement 5.9-8: The commenter believes the DEIS does not meet the Service’s obligations under NEPA and NHPA with regard to historic properties. In particular, the commenter notes the Service “is obligated to continue the consultation process to develop and evaluate alternatives or modifications” that would avoid, minimize, or mitigate adverse effects on historic properties. The DEIS is deficient in its discussion of the R-Project’s impacts on historic and cultural resources, not the least of which is that the statutorily required consultation process has not yet been concluded. The NEPA and NHPA processes depend on a fully informed public. The Service and NPPD should complete the NHPA consultation process and permit the public to comment on the affected resources and proposed mitigation measures.

The recognized effects of constructing the R-Project led the Nebraska State Historical Preservation Organization to “strongly recommend” that NPPD consider an alternative route for the transmission line. NPPD’s proposed mitigation measures underestimate the harm the Project would cause to historic properties and fail to address the actual adverse effects. The Service and NPPD failed to give serious consideration to alternate routes, although reasonable alternatives certainly exist.

Response: Section 3.10.6.3, *Cultural Resource Investigations*, of the FEIS discusses, in detail, cultural and historical resources within the study area. The Section 106 process is not complete; a Programmatic Agreement will be developed and implemented to ensure all resources within the APE are identified, assessed, and managed in compliance with the NHPA. The Programmatic Agreement will be finalized and signed prior to the issuance of the permit. A signed Programmatic Agreement satisfies the Section 106 consultation for purposes of the NHPA. The Service continues to consult with the Nebraska SHPO to identify appropriate avoidance, minimization, and mitigation measures for historic resources within the APE. The public had the opportunity to comment on avoidance, mitigation, and minimization measures for cultural resources during the public comment review period for the DEIS and during public meetings. The Programmatic Agreement will be made public upon issuance of the permit.

The Service carefully evaluated several routing options; all were eliminated for a variety of reasons as explained in Section 2.6.6, *Alternative Transmission Line Routes*, of the FEIS. As noted in Section 1.4, *Purpose of the Service’s Proposed Action*, of the FEIS, the Service is proposing to approve the R-Project HCP and issue a permit authorizing the take of the beetle under the ESA. The Service does not have authority to approve the R-Project itself or require NPPD to use a specific transmission line route. NPPD has applied for a permit that would cover part of the final route it selected through its own route selection/public involvement process, which is separate from the Service’s permit authorization and NEPA process.

The Service has recommended alterations to NPPD’s final route on several occasions; however, the Service does not have routing authority. The Service cannot require NPPD to place the route along a particular alignment in this instance. Ultimately, the Service must make decisions based on the permit application that NPPD submitted with its proposed route.

Concern Statement 5.9-9: The DEIS does not reference the Lieutenant. G. K. Warren Expeditions of 1855 and 1857 or the adventures of Dr. Thomas G. Maghee in the DEIS; the FEIS should be revised to include a complete discussion of historic events within the study area.

Response: The FEIS discusses the historical events and context relevant to the potential historic properties identified in the thorough analysis of the study area (this analysis is detailed in Section 3.10.6.3) and evaluated in the FEIS (these historic properties are identified and explained in Section 3.10.6.4). Background information was thoroughly researched, and although this historic episode may be important to the commenter, the research did not show it to be historically significant to any of the listed or eligible historic properties within the study area.

Concern Statement 5.9-10: The FEIS needs to address the potential effects on cultural resources along NPPD’s entire final route, not just the designated Section 106 APE. A related comment states that the FEIS needs to be modified to explain why the EIS can state: “limited cultural resources are present” when not all the final route has been surveyed and the potential effects on cultural resources have not been analyzed along the entire route.

Response: Section 3.10.2, *R-Project Section 106 Consultation*, of the FEIS, provides background on how the Service worked with the Nebraska SHPO and the Advisory Council on Historic Preservation to identify the APE for the R-Project. Section 3.10.4, *Area of Potential Effects*, of the FEIS, describes the basis and details of the APE. Under Section 106 of the NHPA, the APE is defined as: “the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist” (36 Code of Federal Regulations [CFR] 800.16(d)). The Service’s undertaking regarding the R-Project entails issuance of the permit for take of the beetle, which includes implementation of the HCP. The APE for this undertaking includes the permit area, the beetle mitigation area, and the segments along the R-Project transmission line where bird flight diverters would be installed to avoid take of the whooping crane, interior least tern, and piping plover. Nothing in the NHPA or NEPA requires a federal agency to survey or analyze effects beyond the APE for the undertaking.

Section 3.10.6.3, *Cultural Resource Investigations*, of the FEIS, thoroughly describes extensive efforts to identify cultural and historic resources, including consulting the Nebraska SHPO, research previous records, and conducting numerous surveys. NPPD has surveyed more than 93 percent of the APE for cultural resources. NPPD was unable to gain access to the remaining private properties to complete field surveys prior to issuance of the DEIS and FEIS. The Service has developed a Programmatic Agreement with consulting parties to guide the identification of additional cultural resources as access to private land is obtained; survey reports would share the results of these surveys, including the presence of any cultural resources in drainage areas on these properties. The Programmatic Agreement also identifies the process NPPD would follow to implement avoidance, minimization, and mitigation measures for historic properties that may be adversely affected by the Project. Cultural resource surveys would be completed prior to the start of construction and an effects analysis completed. The Programmatic Agreement process has been documented in the FEIS, and the Programmatic Agreement will be finalized and signed prior to the issuance of the incidental take permit.

Concern Statement 5.9-11: What has the Service done to contact Native American Indian tribes with regard to construction of the R-Project and how much time has been allotted for the tribes to review the DEIS and accompanying documents.

Response: Native American Indian tribes were contacted to solicit input regarding their concerns at the beginning of the scoping process and then again upon the issuance of the DEIS. The tribes were given the same period of time to review the DEIS as the general public—120 days during the two public review periods. They were contacted again by letter regarding the revised APE and were given the opportunity to participate in the development of the Programmatic

Agreement. A final round of consultation letters was sent to involved tribes on October 26, 2018. Section 1.8.3, *Agency Coordination*, and Section 3.10.3, *Cultural Resources, Government-to-Government Tribal Consultation*, of the FEIS fully summarize the coordination and consultation the Service conducted with Tribes.

Concern Statement 5.9-12: The proper term to refer to archaic time is Before Common Era (B.C.E.), not “before present” as used in the DEIS.

Response: Both terms are appropriate and are commonly used.

EC800: Environmental Consequences: Visual Resources

Concern Statement 5.10-1: Tourists coming to the Sandhills do not want to view the R-Project transmission line. The FEIS should discuss visual impacts on tourism.

Response: Section 3.9.2, *Recreation and Tourism, Direct and Indirect Effects*, of the FEIS discusses the impacts on tourism from constructing and operating the R-Project. Section 3.12.2, *Visual Resources and Aesthetics, Direct and Indirect Effects*, of the FEIS presents the impacts on visual resources and aesthetics. Section 3.12.3, *Visual Resources and Aesthetics, Avoidance, Minimization, and Mitigation Measures*, of the FEIS presents the measures that NPPD would implement to avoid, minimize, and mitigate effects on visual resources.

Concern Statement 5.10-2: In the discussion of impacts on visual resources and aesthetics, the DEIS describes 11 key observation points (KOPs) but then does not discuss those KOPs in the impact analysis. Likewise, the DEIS describes seven visual landscape units (VLUs) but does not specifically identify which viewpoints fall within which VLU. Those KOPs and VLUs should be included in the impact summary table (Table 3.12-2) of the FEIS. It would also be useful for the FEIS to define what constitutes minor, moderate, and substantial changes to vividness, intactness, and unity for purposes of Table 3.12-2.

Response: KOPs and VLUs are described in the FEIS to help illustrate the visual condition of the study area and to provide context for the analysis of effects. The effects analysis focuses on representative viewing locations, rather than KOPs and VLUs, because using representative viewing locations incorporates a consideration of the number of viewers and sensitivity of a location, thereby allowing a more rigorous analysis of visual impacts than would be possible with KOPs or VLUs. The representative viewing locations also cover more locations than KOPs or VLUs. Table 3.12-2, *Summary of Potential Visual Effects of Alternative A on Representative Viewing Locations and Landscape Units*, does not include KOPs and VLUs because the source document from which the contextual KOP and VLU discussions were drawn (*R-Project Routing and Environmental Report*, NPPD 2015) did not analyze the factors discussed in Table 3.12-2.

Table 3.12-2 summarizes the evaluation of anticipated changes in vividness, intactness, and unity, based on professional judgment and the application of standards widely accepted in the visual resource community. Minor, moderate, and substantial changes in these elements of visual character are defined qualitatively, based on the anticipated contrast between the Project and the landscape setting. To correlate with a quantitative approach, a minor change would roughly correspond to a difference of 1 to 2 points on the 7-point Federal Highway Administration evaluation scale (FHWA 1981), a moderate change would correspond to scores near 3, and a substantial change would correspond to a difference of scores of 4 or more.

Concern Statement 5.10-3: Construction of the R-Project would affect the aesthetic values of the Sandhills; in particular, the Project would obstruct the view for some landowners.

Response: This commenter's discussion of visual impacts did not include any specific areas of potential impact to address but rather just a general concern about visual effects. The commenter did not provide additional specific information about these potential impacts. Section 3.12.2, *Visual Resources and Aesthetics, Direct and Indirect Effects*, discusses the potential direct and indirect effects on visual resources and aesthetics. The analysis addresses potential effects on viewers in local communities and residences. Section 3.12.3, *Visual Resources and Aesthetics, Avoidance, Minimization, and Mitigation Measures*, of the FEIS presents the measures that NPPD would implement to avoid, minimize, and mitigate effects on visual resources.

Concern Statement 5.10-4: Commenters expressed concern about the visual impacts of transmission facilities.

Response: The tower locations depicted in the current Project design are approximate, and NPPD expects to work with landowners to minimize impacts by adjusting tower locations. Throughout the process of identifying options for siting the proposed transmission line, NPPD sought to avoid or minimize the potential for adverse effects (including visual impacts) on local residents and visitors. As stated in Section 2.2.2, *Corridor Development*, of the FEIS, the criteria NPPD employed when identifying potential routes included the avoidance of residences and communities. As discussed in Section 3.8.2.2, *Land Use, Direct and Indirect Effects, Alternative A: Tubular Steel Monopole and Steel Lattice Tower Structures*, of the FEIS, which analyzes the potential effects on land use, the transmission line ROW would be located more than 300 feet from all but three residences in the study area and would be situated between 300 to 500 feet away from an additional nine residences. Thus, the transmission line would be located more than 500 feet from all other residences. NPPD's options for locating towers are constrained by logistical considerations, such as maximizing the distance between towers to minimize the total number of towers on the landscape. NPPD is nevertheless prepared to work with landowners on a case-by-case basis to adjust the locations of tower structures with a goal of minimizing the visual intrusion of structures near occupied residences. To explore options for reducing visual impacts, NPPD is requesting information from potentially affected landowners concerning the locations of specific structures. For example, it may be possible to adjust the location of a tower so that it would not be in the direct view from a residence. Another option that NPPD can consider is whether it is feasible to locate a tower structure behind a building or shelterbelt that could act as a screen.

EC900: Environmental Consequences: Recreation and Tourism

Concern Statement 5.11-1: Nebraska Highway 2 is one of the most scenic highways in the United States and is one of the top 10 scenic highways in the nation. This information should be acknowledged in the FEIS.

Response: Section 3.9.1.2, *Recreation and Tourism, State Recreation Areas and Opportunities*, of the FEIS discusses the designation of the scenic highway, and that discussion includes the following statement: “This 272-mile stretch of Nebraska Highway 2 through the Sandhills from Grand Island to the railroad community of Alliance has been named one of the 10 most scenic routes in the nation.” Section 3.12.2, *Visual Resources and Aesthetics, Direct and Indirect Effects*, discusses the potential effects of the alternatives on travelers on Nebraska Highway 2 (the Sandhills Journey Scenic Byway).

Concern Statement 5.11-2: A major reason hunters come to the Sandhills is for the scenery and the serenity; this should be acknowledged in the FEIS.

Response: This information has been added to Section 3.9.1, *Recreation and Tourism, Affected Environment*, of the FEIS.

Concern Statement 5.11-3: The FEIS should include an economic analysis of the R-Project’s impact on ecotourism in the Nebraska Sandhills region. The economic analysis of the impact on tourism and recreation should include a review of measures to offset the economic impacts. This analysis should also include the economic analysis of the cumulative impact of future wind energy site development on ecotourism.

Response: An analysis of potential direct and indirect effects on ecotourism, including economic impacts, has been added to Section 3.9, *Recreation and Tourism*, of the FEIS. A corresponding analysis of the potential cumulative effects of reasonably foreseeable future wind energy site development on recreation and tourism has been added to the cumulative effects portion of Section 4.4.6, *Cumulative Impacts Analysis, Recreation and Tourism*.

Concern Statement 5.11-4: The DEIS does not explain the conclusion that implementation of avoidance, minimization, and mitigation measures would reduce the magnitude of potential effects on recreation and tourism to low intensity from the R-Project. The FEIS should be modified to support this conclusion.

Response: The basis for determining the impact intensity that appears in Section 3.9.4, *Recreation and Tourism, Effects Summary*, can be found in the discussions in Section 3.9.2, *Recreation and Tourism, Direct and Indirect Effects*. Additional text was added to the FEIS summarizing the results of recent studies on the effects of high voltage transmission lines on regional and local ecotourism.

Concern Statement 5.11-5: Over the long term, the presence of the R-Project transmission line may create visual disturbances that affect recreational user experiences.

Response: Section 3.12.2, *Visual Resources and Aesthetics, Direct and Indirect Effects*, addresses potential aesthetic impacts on recreational users.

Concern Statement 5.11-6: A commenter requests that an analysis be conducted to determine the effects on tourism and recreation for each of the alternative routes and measures determined to offset the economic impact.

Response: Section 3.9.2, *Recreation and Tourism, Direct and Indirect Effects*, of the FEIS discusses the analysis of effects of NPPD's final route on recreation and tourism. This section only analyzed those alternatives selected by the Service for detailed analysis which did not include alternative routes. Section 3.9.3, *Recreation and Tourism, Avoidance, Minimization, and Mitigation Measures*, of the FEIS presents the avoidance, minimization, and mitigation measures that NPPD would implement to offset adverse effects.

Concern Statement 5.11-7: A commenter asks where the scenic value of Highway 83 is discussed in the EIS and also expressed concern about potential disturbance of other viewsapes by the R-Project.

Response: Section 3.9.1.2, *Recreation and Tourism, State Recreation Areas and Opportunities*, of the FEIS discusses state highways that follow corridors of unusual scenic and historical importance as designated by the Nebraska Department of Roads. The two such highways identified within the R-Project study area are Nebraska Highway 2 and U.S. Highway 30. And while Nebraska Highway 83 is not mentioned specifically in this section, the unique scenic quality and many scenic viewsapes within the study area are discussed in Section 3.12.1, *Visual Resources, Affected Environment*, and Section 3.12.2, *Visual Resources, Direct and Indirect Effects*, of the FEIS, including Highway 83.

EC1000: Environmental Consequences: Health and Safety

Concern Statement 5.12-1: The FEIS should address human health concerns that would be associated with construction and operation of the R-Project.

Response: Section 3.16, *Health and Safety*, of the FEIS addresses health and safety concerns associated with the R-Project—potential health hazards related to high-voltage electrical transmission lines (e.g., electric and magnetic fields [EMFs]), electric shock, and potential impacts to items such as implantable medical devices. Agencies such as the World Health Organization and the National Institute of Environmental Health Sciences have studied EMFs since the mid-1980s (World Health Organization 2012). No scientific studies have shown a direct cause-and-effect relationship between EMF exposure and adverse health effects. EMF exposure associated with high-voltage transmission lines, such as the R-Project, diminishes rapidly with distance from the source. For example, at the edge of the ROW, exposure levels are very low and are similar to normal, everyday exposure. The effects of EMFs as a public health hazard would be of low intensity for the life span of the R-Project and would not pose a health risk to landowners or to individuals with implantable medical devices, such as pacemakers.

Concern Statement 5.12-2: How would NPPD compensate landowners for losses, such as grazing, resulting from fire caused by the R-Project transmission line?

Response: If a fire is caused by the negligence on the part of NPPD (i.e., below-standard construction, operation, or maintenance practices), NPPD would be responsible for losses and damages to landowners, and such losses would be covered through NPPD’s “self-insurance” or excess liability insurance coverage. NPPD’s excess liability insurance is underwritten by Associated Electric and Gas Insurance Services Limited, a leading mutual insurance company that provides liability and property insurance coverage and related risk-management services to the energy industry. NPPD would not be liable or responsible for landowner losses resulting from fire caused by a tower or other infrastructure that is damaged by a storm or some other event resulting from natural causes without human intervention.

Concern Statement 5.12-3: A commenter asks whether research has been conducted about if the presence of a transmission line increases the potential for lightning strikes and also questions whether alternative routes were analyzed in detailed was conducted on to determine which would offer the quickest response time in the event of a wildfire.

Response: As described in Section 3.16, *Health and Safety*, specifically, the *Risk of Wildfire* subsection of the FEIS, research shows that transmission lines do not “draw” or “attract” lightning (EPRI 2005; Uman 1971; Viemeister 1961; Westinghouse 1964). Wind conditions that steer clouds and local atmospheric electrical conditions largely affect when and where lightning will strike. And, in relationship to a cloud located 2 to 3 miles above the earth, the difference in height between a transmission tower and a tree or barn is minimal. A lightning bolt takes a very

circuitous path to earth (for cloud-to-ground strikes) and does not always hit the tallest object in a strike area. In fact, it sometimes it goes between taller objects and strikes at a lower point.

A transmission line is designed to safely conduct lightning to the ground if it were to strike the line, thus providing protection from a lightning-caused fire in the vicinity of the transmission line. It should be noted that most objects are not grounded in this manner (e.g., trees and barns).

Any damage caused by fire trucks or service vehicles responding to a fire caused by the transmission line would be restored and owners compensated according to criteria outlined in NPPD's emergency response guidance as discussed in Section 2.4.13.6, *Emergency Repairs*.

Because no alternative routes were carried forward for detailed analysis, the response times to respond to fire for different routes were not compared. For any route selected, the response time to any specific location would depend on several variables, including weather conditions (e.g., storms, fog, snow, and ice), distance between the nearest fire department and the fire, response time of local fire departments after receiving the call (volunteer fire departments may need more time to respond), road conditions (e.g., the type of road; whether there are road construction activities), terrain (e.g., if the fire is in an area that is not near any established access), distance to the nearest water source, and whether aerial support is available.

Concern Statement 5.12-4: The DEIS does not address the potential for increased fire risks caused by sparks generated from transmission line towers during electrical storms and energy surges.

Response: Section 3.16, *Health and Safety*, specifically, the *Risk of Wildfire* subsection of the FEIS discuss the potential risk and impacts from wildfire. As described in this subsection, because higher-voltage transmission line conductors are spaced much farther apart, an event involving wind-blown tree limbs and debris contacting a conductor or bridging two conductor phases and causing an electrical arc that may start a fire is an extremely rare occurrence. The standard use of protection systems on transmission lines, which are designed to shut off power flow in a fraction of a second if something were to contact the conductors, also minimizes the potential for wildfires.

Concern Statement 5.12-5: A commenter is concerned that EMFs may have a negative effect on livestock, specifically cattle and horses, along the R-Project route.

Response: Review of available scientific information by Hydro-Quebec (1999) indicates that no biological disorder can be attributed to the exposure of livestock to EMFs generated by high-voltage lines, such as the R-Project. Analysis of data collected did not identify any harmful effect on the health, productivity, fertility, reproduction, or behavior of livestock exposed to EMFs (Hydro-Quebec 1999). This information has been added to Section 3.16.2, *Health and Safety, Direct and Indirect Effects*, of the FEIS.

Concern Statement 5.12-6: Concern was expressed that various bird species could short out the R-Project during collision with power lines as has been experienced with smaller distribution lines in the region.

Response: The energized conductors on distribution and lower-voltage transmission lines are much closer (as close as 4 feet) than on higher-voltage transmission lines, such as those planned for the R-Project, which have conductors spaced farther apart. Mitigation measures described in Section 3.6.3, *Wildlife, Avoidance, Minimization, and Mitigation Measures*, of the FEIS include designing the line according to APLIC standards to eliminate any potential for electrocution for large avian species. These design specifications result in conductor spacing ranging from approximately 23 to 30 feet. Because of this large conductor spacing, there is no possibility of bird species coming into contact and bridging two R-Project conductors, causing an electrical outage.

Concern Statement 5.12-7: A commenter expressed concern about the grounding of metal ranching equipment, particularly barbed wire fences, and the potential effects on humans and livestock.

Response: Section 3.16.2, *Health and Safety, Direct and Indirect Effects*, of the FEIS addresses the potential impacts of electric shock from the R-Project. Farm and ranch equipment, including water tanks and windmills, would be subject to developing an electric shock only if the transmission line were not properly grounded. As noted in Section 3.16.2 of the FEIS, the risk of shock to humans and livestock is low. Section 3.16.3, *Health and Safety, Avoidance, Minimization, and Mitigation Measures*, of the FEIS describes the avoidance and minimization measures that NPPD would implement to further reduce this risk. Such measures include the installation of a grounding system at the base of each transmission structure consisting of copper ground rods embedded in each concrete structure foundation and connected to the structure by a buried copper lead or by use of the helical pier foundations. After installation of the foundations, the grounding would be tested to determine the resistance to ground, and if the resistance to ground for a transmission structure is excessive, additional ground rods would be installed to lower the resistance. Additionally, NPPD would require a grounding system (buried copper conductor arranged in a grid and driven ground rods, typically 8 to 10 feet long) in each substation to transfer faults to ground and ensure personnel safety. The ground rods and any equipment and structures would be connected to the grounding conductor. The amount of conductor and length and number of ground rods required is calculated based on fault current and soil characteristics.

EC1100: Environmental Consequence: Climate Change

Concern Statement 5.13-1: A second reason for eliminating climate change as a resource topic to be addressed is offered for inclusion in the FEIS. These additional considerations include additional stressors on the natural environment and the difficulty in predicting the consequences of climate change with any degree of certainty.

Response: The portion of the recommended text stating that climate change effects would not increase the intensity of Project impacts and would be the same across all analyzed alternatives was incorporated into Section 3.1.1, *Approach to Characterizing Baseline Conditions and Conducting Effects Evaluation, Affected Environment*, of the FEIS.

EC1300: Environmental Consequences: Noise

Concern Statement 5.14-1: Concern was expressed about the effects of corona-generated noise on migrating sandhill cranes and whooping cranes and other wildlife.

Response: Section 3.14.3, *Noise, Direct and Indirect Effects*, of the FEIS addresses this issue. Operation of the R-Project would result in corona-generated noise, occurring in the atmosphere near the conductor. Changes to local atmospheric pressure may result in a hissing or crackling sound that may be heard directly underneath the transmission line or within a few feet of the ROW, depending on weather, altitude, and system voltage. The level of corona noise recedes with distance from the ROW. Maximum noise levels associated with corona noise typically do not exceed 60 A-weighted decibels (dBA) as heard from the edge of the ROW during extreme weather events, and noise levels do not exceed 50 dBA during fair weather events. The level of noise during operation is categorized as quiet and would cause low-intensity impacts on wildlife in the areas immediately adjacent to the noise source.

Concern Statement 5.14-2: Concern was expressed that the noise generated from the implosive splicing of transmission line wire may spook cattle.

Response: Section 3.14.3, *Noise, Direct and Indirect Effects*, of the FEIS addresses the effects of noise generated from implosive splicing of transmission wires. The high-intensity noise level anticipated during construction of the R-Project would originate from implosive splicing of transmission line wire. Noise levels approaching 120 dBA are anticipated in localized areas for short periods and could impact livestock behavior. NPPD would coordinate in advance with local ranchers when construction activity would occur to determine whether livestock may be affected and whether the livestock should be relocated during periods of implosive splicing. NPPD would also establish blasting criteria for implosive splicing within a certain distance of sensitive receptors.

CI100: Cumulative Impacts: General

Concern Statement 5.15-1: The cumulative impact assessment does not discuss the potential impacts on birds and wildlife.

Response: In Chapter 4, *Cumulative Impacts*, of the FEIS, Section 4.4.3, *Wildlife*, and Section 4.4.4, *Special Status Species*, discuss the cumulative impacts on wildlife, including birds.

Concern Statement 5.15-2: The DEIS discusses past, present, and future cumulative effects and assumes there have been past activities. However, a large portion of the region has experienced little past activity and remains mostly undisturbed.

Response: Chapter 4, *Cumulative Impacts*, of the FEIS has been revised to emphasize that limited development has actually occurred within the Sandhills of Nebraska (see Section 4.2, *General Baseline Trends*).

Concern Statement 5.15-3: The cumulative effects of the R-Project should be more fully evaluated before a permit is issued.

Response: Chapter 4, *Cumulative Impacts*, of the FEIS addresses the cumulative impacts of reasonably foreseeable future activities. This chapter has been expanded in the FEIS to describe a typical wind farm development and the general impacts associated with such a development for each environmental resource category evaluated in the FEIS.

Concern Statement 5.15-4: Ranchers work hard to maintain the delicate balance of the fragile Sandhills ecosystem; concern was expressed that the cumulative impacts associated with the R-Project could destroy this balance.

Response: Chapter 4, *Cumulative Impacts*, of the FEIS addresses the cumulative impacts of past, present, and reasonably foreseeable future activities, including potential changes to land use (Section 4.4.5, *Land Use*).

CI200: Cumulative Impacts: Future Renewable Energy Projects

Concern Statement 5.16-1: The issuance of a permit for the R-Project could lead to the request for other permits because other high-voltage transmission lines and massive industrial wind farms would be constructed as a consequence of the R-Project. Several commenters ask what the cumulative impacts would be from the R-Project transmission line when combined with impacts from an unknown number of large-scale, commercial wind developments. Commenters state that without knowing precisely how many and what types of projects would be constructed in the future, this plan is largely flying blind when it comes to its predicted impacts on the region's wildlife and may make the Service's compliance with NEPA impossible. Additionally, the construction of large, commercial wind energy facilities and associated infrastructure in major migratory corridors and sensitive breeding areas for birds and bats places the continent's ecologically important wildlife at great risk. One commenter recommends including further discussion in the FEIS about how future development in sensitive ecological areas and resources such as the Nebraska Sandhills, beetle habitat, and heavily traveled migratory bird flyover areas may be affected from a cumulative outlook.

Response: One of the stated purposes of the R-Project is to "...provide transmission access to renewable energy resources (e.g., wind power projects) in an area of Nebraska with wind resources." The R-Project transmission line has a designed capacity to carry a certain amount of energy, regardless of the generation source. The capacity is also dynamic, i.e., constantly fluctuating. In an interconnected transmission system, the entire system must be analyzed under various loading scenarios and contingency events to determine whether sufficient transmission capacity is available to provide incremental generator interconnection service. Thus, it is impossible to predict the number of turbines that the R-Project would be able to accommodate or to predict what other loads or supplies could also materialize that would consume the capacity of the line.

In response to public comments on the DEIS, Chapter 4, *Cumulative Impacts*, of the FEIS has been revised to include additional information about the cumulative effects of future wind energy development. The Service acknowledges that either of the action alternatives may induce the growth of future wind power development in the Sandhills of Nebraska. However, currently, only one wind energy project is located in the analysis area and has a signed interconnection agreement (the Thunderhead Wind Energy Center). While wind as a type of action may be reasonably foreseeable, insufficient information is available about the number of projects, their configuration, whether funding exists, whether environmental reviews have occurred, and whether permits have been issued or power purchase agreements have been entered into to provide a detailed analysis regarding wind development.

Future wind energy development projects that interconnect to the R-Project may trigger permits or other authorizations from federal agencies; these subsequent federal agency actions (e.g., issuance of a permit for take of a federally listed species or authorization to connect to a federally owned and managed transmission line) may require additional NEPA documentation. Because the R-Project would be in place at that time, existing impacts from the R-Project would

be considered in the analysis for that project. The Service could issue permits for future facilities only if the applicant(s) satisfy the ESA's permit issuance criteria.

In Chapter 4, *Cumulative Impacts*, Section 4.4.3, *Wildlife*, and Section 4.4.4, *Special Status Species*, of the FEIS discuss the cumulative impacts on wildlife, including birds.

Concern Statement 5.16-2: One commenter suggested that the R-Project's chief purpose was to support wind development in Cherry County, Nebraska, and one commenter lists several potential projects in Cherry County that should be included in the cumulative impact analysis, including a proposed wind farm north of Thedford (Cherry County Wind Farm or BSH Cascade, LLC); a proposed north/south connector transmission line from the wind farm to NPPD's Thedford Substation; and three meteorological equipment towers.

Response: The purpose of the R-Project is not chiefly to support wind development in Cherry County. Rather, as stated in the FEIS, "the R-Project is intended to: 1) provide for significant reliability benefits to the existing western Nebraska area transmission system by increasing the west-east power transfer capability across the NPPD system, 2) reduce significant congestion issues by providing an additional outlet path from Gerald Gentleman Station (GGS), and 3) provide transmission access to renewable energy resources (i.e., wind projects) in an area of Nebraska with wind resources." The Service is aware that parcels of leased or invested lands for the purposes of wind energy development are located in Cherry County. The Service also acknowledges a number of wind projects are being considered in Nebraska, as summarized on the Nebraska Energy Office website, a website referenced in a public comment. The Nebraska Energy Office website lists the following information about a wind project being considered in Cherry County, which the public commenter refers to as the BSH Cascade, LLC project: "One hundred forty-seven (147) turbines are to be constructed for the Cherry County Wind Farm from July 2018 to July 2020 by Bluestem Energy Solutions. The turbines will be located in southeast Cherry County near Thedford (NEO 2018a)." However, the Service was not able to find any publicly available information that specifically describes the status of this potential project, its specific potential location, or other details essential to analyzing the specific cumulative impacts it might pose. Leases or invested lands, meetings between local boards and developers, evaluations from the FAA, and registration of meteorological equipment towers are not sufficient information to analyze the specific potential impacts of these activities in a cumulative impacts analysis. Overall, the specific locations and details of reasonably foreseeable future wind development activities are unknown, except for the Thunderhead Wind Energy Center, which is the only one wind energy project located in the analysis area with a signed interconnection agreement. Therefore, while wind as a type of action may be reasonably foreseeable, insufficient information exists about the number of projects, their configuration, whether funding exists, whether environmental reviews have occurred, and whether permits have been issued or power purchase agreements have been entered into to provide a detailed analysis regarding wind development in the FEIS. Thus, the Service updated the information that was in the DEIS to provide a general consideration of impacts from wind energy development.

Concern Statement 5.16-3: Concern was expressed about the effects on raptors from future wind energy development associated with the R-Project, even effects as far away as hundreds of miles. Additionally, the Sandhills are part of the Central Flyway and many species of birds migrate over the Sandhills. Commenters suggest that the R-Project transmission line and future wind energy development would disrupt this ancient migration and stopovers in the study area and cause increased collision risk and mortality rates, especially for the whooping crane and sandhill crane. Finally, concern was expressed about the cumulative effects on bats because of future wind energy development in the Sandhills. Commenters suggested that an analysis should be conducted regarding other power lines that would connect to the R-Project. The number, spatial distribution, height, and rotor area (wind swept area) needs to be analyzed by the Service. Until the number of wind turbines is known, it is impossible to know the total area of the migration corridor that would be affected by the R-Project. Commenters suggested wind energy developers claim they know how to mitigate the bird kills at wind energy facilities and transmission lines, but the only proven mitigation methods for wind turbines to date are proper siting and curtailment. Transmission lines can be marked to help increase bird detection and reduce the possibility of bird collisions and electrocutions, but these reductions may be small and/or insignificant.

Response: At this time, NPPD is not proposing to construct any transmission lines, distribution lines, or substations to connect the R-Project to any wind energy project(s). If future wind projects are proposed, including the need for additional transmission facilities, federal agencies would determine whether a NEPA analysis would be required if federal authorization were involved with the project. The Service cannot speculate as to what may be required for future wind development beyond what is reasonably foreseeable at the time the FEIS is prepared. Additionally, only one future wind energy project is currently located in the analysis area with a signed interconnection agreement—the Thunderhead Wind Energy Center. While wind as a type of action may be reasonably foreseeable, insufficient information is available about the number of projects, their configuration, their funding, the progress of environmental reviews, and the status of permits or power purchase agreements to provide a detailed analysis regarding the number of wind turbines and their future locations in Chapter 4, *Cumulative Impacts*.

If incidental take of a federally listed species is reasonably certain to occur as result of a proposed wind energy project, the project proponent would work with the Service to apply for an incidental take permit. The Service then uses permit issuance criteria to make a determination on the specifics of each individual project. Wind energy proponents may voluntarily provide a conservation plan that could include measures to avoid, minimize, and mitigate impacts on migratory birds that are not listed under the ESA. The risk of bird and bat mortality from collisions with wind turbines varies among species and groups based on biological and behavioral characteristics and the type and quality of habitat present near a wind energy facility (Erickson et al. 2001). Raptors, passerines, waterfowl, and bats are the groups that occur within the spatial boundaries of this effects analysis and could be affected by future wind energy projects. The Service analyzes the cumulative effects on these species in Chapter 4, *Cumulative Impacts*, specifically Section 4.4.3, *Wildlife*, and Section 4.4.4, *Special Status Species*, including

the impacts from reasonably foreseeable wind energy development and other reasonably foreseeable activities.

Concern Statement 5.16-4: Concern was expressed that construction of the R-Project transmission line and potential development of wind energy farms would affect tourism in the Sandhills.

Response: Chapter 4, *Cumulative Impacts*, specifically Section 4.4.6, *Recreation and Tourism*, of the FEIS discusses cumulative impacts of the R-Project on tourism in the Sandhills. Concern has been expressed in many areas that wind farms may adversely affect local tourism by degrading the visual quality of natural or historic landscapes. Numerous researchers have investigated the relationship between wind energy development and rural tourism, but their findings have been inconsistent. Some studies conclude that wind farms may have localized, negative effects on tourism demand and tourism expenditures (e.g., Broekel and Alfken 2015; Riddington et al. 2010). National studies of tourism impacts of wind farms have shown that, where negative effects do occur, they are often in the form of displaced tourism (Regeneris 2014). In other words, some tourists may avoid areas where wind turbines are a dominant landscape feature, choosing instead to visit areas that are in the same region but where wind energy development is less prominent (Broekel and Alfken 2015). Others have found wind farms to have no discernable impact on local tourism demand, expenditures, and experiences (e.g., Aitchison 2012; Frantál and Kunc 2011; de Sousa and Kastenholz 2015). Some studies have found that wind farms can function as tourist attractions in some rural areas (Aitchison 2012; Frantál and Kunc 2011; Nash et al. 2007; MORI Scotland 2002; Pasqualetti et al. 2002).

Concern Statement 5.16-5: To support the cumulative impacts analysis in the FEIS, existing and proposed transmission lines and other utility corridors in the study area should be clearly identified and delineated on figures and maps, including the proposed Thunderhead Wind Energy Center.

Response: Tables 4-2 and 4-3 in the FEIS have been revised to more clearly indicate the locations of existing and reasonably foreseeable future activities, including the Thunderhead Wind Energy Center. The specific locations and details of these reasonably foreseeable future activities are unknown, except for the Thunderhead Wind Energy Center. While additional future development in the categories of mineral extraction, transportation, agriculture, land use, and recreation is possible, the Service does not currently have information on the specifics of location, size, nature of projects, associated activities, and other details that would allow it to provide more than a general consideration of impacts. Additionally, NPPD indicates that existing and proposed transmission lines cannot be depicted beyond the information already provided because of national security concerns. The Service does not believe that any reasonably foreseeable future activity in these categories would have significant adverse effects.

Concern Statement 5.16-6: The FEIS should clarify whether additional transmission/distribution lines and/or substations would be required to connect with the R-Project transmission line to convey electricity generated by wind turbines. Would additional NEPA documentation be required?

Response: At this time, NPPD is not proposing to construct any transmission lines, distribution lines, or substations to connect the R-Project to any wind energy project(s). If future wind projects are proposed, including the need for additional transmission facilities, federal agencies would determine whether a NEPA analysis would be required if a federal authorization were involved with the project. The Service cannot speculate as to what may be required for future wind development beyond what is reasonably foreseeable at the time the FEIS is prepared.

Concern Statement 5.16-7: Where in the DEIS is the cumulative effects analysis of future wind power development discussed? An analysis should be conducted to determine where wind projects would be located, distributions lines placed, and access roads constructed for each alternative route to better determine the potential effects associated with each alternative.

Response: Cumulative impacts associated with future wind power development are discussed in Chapter 4, *Cumulative Impacts*, of the FEIS. This chapter has been expanded to include the general impacts from wind energy development associated with such a development for each environmental resource category evaluated in Chapter 3, *Affected Environment and Environmental Consequences*.

The Service cannot determine specific locations of future wind projects, distribution lines, and access roads, let alone avoidance, minimization, or mitigation measures that may be associated with wind projects that are not reasonably foreseeable. Chapter 4, *Cumulative Impacts*, of the FEIS evaluates the cumulative impacts of existing wind farms and reasonably foreseeable future development, which includes consideration of the planned Thunderhead wind farm and of future potential wind energy development in general, when combined with the impacts of each alternative.

Concern Statement 5.16-8: Concern was expressed about cumulative effects from future wind power development on the integrity and quality of the aquifer's water and whether appropriate environmental studies have been completed.

Response: Chapter 4, *Cumulative Impacts*, of the FEIS discusses cumulative impacts associated with future wind power development. This chapter has been expanded to include the general impacts associated with wind energy development for each environmental resource category. General water resource impacts associated with future wind power development are discussed in Table 4-4, *Summary of Resource Categories for which Cumulative Impacts are of Low Intensity*.

Concern Statement 5.16-9: Concern was expressed about the cumulative effects on soils due to increased erosion as a result of future wind power development in the Sandhills.

Response: Chapter 4, *Cumulative Impacts*, of the FEIS discusses cumulative impacts associated with future wind power development. This chapter has been expanded to include the general impacts associated with wind energy development for each environmental resource category. General water resource impacts associated with future wind power development are discussed in Table 4-4.

Concern Statement 5.16-10: Concern was expressed about the cumulative effects of solar energy development and associated connector distribution lines to the R-Project.

Response: One of the purposes of the R-Project is to “provide transmission access to renewable energy resources (i.e., wind projects) in an area of Nebraska with wind resources,” as stated in the FEIS. Wind energy is the only type of renewable energy development the Service deemed reasonably foreseeable for the purposes of the cumulative impacts analysis; therefore, it is the only type of renewable energy development analyzed as a reasonably foreseeable future action in Table 4-3 and in Section 4.4, *Cumulative Impacts Analysis*.

The Nebraska Energy Office website lists solar projects under consideration in Nebraska (NEO 2018b). While the Service acknowledges the commenter’s mention of a potential solar project in Logan County, the Service was not able to find any publicly available information on the Nebraska Energy Office website that specifically describes the status of this potential project, its specific potential location, or other details essential to analyzing the specific cumulative impacts it might pose. Overall, the specific locations and details of other solar projects in the study area are unknown. Thus, no specific solar energy projects has been identified for analysis in Chapter 4, *Cumulative Impacts*, of the FEIS.

AL100: Alternatives: Alternative A

Concern Statement 5.17-1: Information about the responsibility for repairs to infrastructure of the R-Project transmission line following damages caused by natural disasters, such as ice storms, should be made available to the public and included in the FEIS. Specific information about access by NPPD to Project infrastructure for emergency repairs should be provided to the public in the FEIS and should include timing of repairs (i.e., time of day), method of access (e.g., existing routes or overland travel), equipment used, and the potential impacts expected.

Response: Section 2.4.13.6, *Emergency Repairs*, of the FEIS and Section 2.4.13.6, *Emergency Repairs*, of the HCP describe how NPPD would handle emergency repairs, including access, timing, equipment, and estimated impacts. NPPD would complete emergency repairs to its infrastructure, such as the transmission line or associated substations, as needed regardless of the cause. As noted in Section 3.8, *Land Use*, of the FEIS, NPPD would compensate landowners for all damages and losses incurred as a result of repairs to the transmission line, whether the losses are caused during planned repairs or during emergency repairs.

Concern Statement 5.17-2: Sections of NPPD's final route have moved more than 0.5 mile; the maps in the DEIS are not valid and conclusions reached regarding potential impacts are not valid because they are not based on the most recent route alignment. NPPD does not indicate in the DEIS the precise locations for pulling and tensioning sites and other construction areas; consequently, the impacts on resources located within these areas were not included in the impact analyses of the DEIS. Concern was also expressed about the words "to the extent possible" and "where possible" for locating fly yards and assembly yards on previously disturbed areas. This language seems vague and could allow NPPD to relocate these areas to locations that are not disturbed and that have not been assessed within the DEIS.

Response: As explained in Section 3.1.2, *Environmental Effects*, of the FEIS, disturbance acres as analyzed in the FEIS are conceptual and based on a preliminary design. Minor adjustments throughout the routing and easement acquisition process are typical when developing a transmission line. As such, some of the disturbance areas may, and likely would, change between the conceptual and final design with a goal to reduce total disturbance and impacts on areas of concern to landowners. NPPD would consider minor adjustments to the proposed route design only if they would not increase the total temporary and permanent disturbance amounts above what was reported for the final route in the DEIS and would not increase impacts on other sensitive resource areas (e.g., wetlands, cultural resources, and biological resources). Thus, as noted in Section 3.1.2 of the FEIS, the disturbance estimates as reported provide an adequate basis for the analysis of environmental effects.

NPPD has committed to locating construction yards, fly yards, and staging and assembly areas in previously disturbed areas "where practicable based on availability and landowner approval." Section 3.2.3, *Geology and Soils*, Section 3.3.3, *Water Resources*, Section 3.4.3, *Wetlands*, Section 3.5.3, *Vegetation*, and Section 3.8.3, *Land Use*, of the FEIS present the avoidance, minimization, and mitigation measures that NPPD would implement to address effects on

specific environmental resources. These measures are tailored to each specific resource. For purposes of analysis, all disturbance acres described in Table 3.1-4, *NWI Wetlands in the R-Project Study Area*, of the FEIS and Tables 4-1, *Temporary and Permanent Disturbance Estimates for R-Project Activities*, and 5-1, *Temporary and Permanent Disturbance Estimates for Covered Activities Within the Permit Area*, of the HCP were assumed to be in undisturbed areas versus previously disturbed areas to provide the most conservative estimate of disturbance associated with the R-Project. Therefore, locating construction yards, fly yards, and staging and assembly areas in previously disturbed sites would result in less disturbance compared to that which is analyzed in the FEIS and HCP.

Concern Statement 5.17-3: The commenter objects to nighttime construction discussed in the DEIS. Construction activities performed at night could be disruptive to the beetle, a species that is active during those hours, and to humans who are resting.

Response: As stated in Section 3.14.4, *Noise, Avoidance, Minimization, and Mitigation Measures*, of the FEIS, NPPD has committed to limit construction activities to daylight hours as practicable and to conduct public outreach to neighboring communities, including local governments and residents, to describe when construction would occur and what the public should expect to minimize the potential for complaints or concern.

As stated in Section 3.8.3, *Land Use, Avoidance, Minimization, and Mitigation Measures*, of the FEIS, NPPD has committed to avoiding nighttime construction in proximity to noise-sensitive land uses (e.g., residences and recreation areas). As stated in Section 3.7.11.3, *Special Status Species, American Burying Beetle, Avoidance, Minimization, and Mitigation Measures*, of the FEIS, NPPD has committed to avoiding nighttime construction and use of artificial lighting to the maximum extent possible during periods when the beetle is active to avoid attracting beetles to construction areas and increasing the likelihood of take. Such measures are also included in Section 6.0, *Conservation Plan, American Burying Beetle*, of the HCP.

Concern Statement 5.17-4: An area of concern is biosecurity, particularly during calving periods, and the potential to bring in contamination from other locations. The FEIS should address these issues in greater detail.

Response: Section 5.2, *Noxious Weeds, Preventative Measures*, of the Restoration Management Plan, Section 2.4.3, *Noxious Weed Management*, of the HCP, and Section 3.5, *Vegetation*, of the FEIS present preventative measures to minimize the spread of noxious weeds and invasive species. Section 3.17.2, *Socioeconomics, Direct and Indirect Effects*, of the FEIS describes potential impacts of construction activities on ranching activities.

As stated in Section 3.8.3, *Land Use, Avoidance, Minimization, and Mitigation Measures*, of the FEIS, NPPD has committed to scheduling construction activities to minimize disrupting normal seasonal activities for ranching and agriculture.

As stated in Section 3.14.4, *Noise, Avoidance, Minimization, and Mitigation Measures*, of the FEIS, NPPD has committed to coordinate with local ranchers when construction activity would occur to determine whether livestock may be affected and whether they can be relocated during key periods. NPPD would be responsible for property damages.

Concern Statement 5.17-5: The FEIS should clarify the different widths of the permit area and why the permit area does not encompass the entire length of the R-Project final route.

Response: The ESA permit area is defined by where take of the beetle is expected to occur. Section 1.2, *Project Background*, of the FEIS discusses that the varying width of the permit area incorporates all potential impacts on the beetle occurring outside the transmission line ROW, including construction yards (i.e., temporary work areas, staging areas, fly yards, or other areas of disturbance associated with the construction and maintenance). The permit area is narrow between Stapleton and the Thedford Substation because the R-Project largely follows existing highways along this segment and all temporary disturbances would occur within 1 mile of the transmission line. Conversely, from the Thedford Substation to the new Holt County Substation, existing access is limited, so the permit area must be wider to encompass all construction access. The permit area does not extend the entire length of the R-Project final route because incidental take of the beetle is not expected to occur in all areas.

Concern Statement 5.17-6: The commenter questions the validity of biological studies of the beetle performed by contractors hired directly by NPPD and the thoroughness of these studies.

Response: The use of third-party contractors to perform resource-specific surveys is a common practice for all major development projects. Specially trained and permitted resource personnel are typically required for resource-specific surveys. All surveys conducted for the beetle in association with the R-Project were developed in coordination with the Service to ensure the thoroughness of the survey. Biologists operating under Service permits authorized under Section (10)(a)(1)(A) of the ESA conducted all surveys. The permits are commonly referred to as recovery permits and authorize the take of endangered species for scientific research purposes. All biologists operating under a recovery permit must be properly trained in the handling of that species and approved by the Service. Results of all surveys conducted under a recovery permit must be submitted to the Service at the end of each year.

Additionally, all biologists who conducted surveys for the beetle operated under an NGPC scientific and educational permit, which is similar to a recovery permit.

Per Council on Environmental Quality regulations, the federal action agency may request that the applicant provide information for possible use in preparing the EIS, but the agency must independently evaluate the information submitted and is responsible for its accuracy 40 CFR 1506.5(a). The Service has independently evaluated the information submitted by NPPD and is confident in its accuracy.

Concern Statement 5.17-7: The number of required access roads and routes is questioned because of the effects on small landowners.

Response: Section 2.4.9.5, *Access for Construction*, of the FEIS and Section 2.4.5, *Access for Construction*, of the HCP describe access for construction. NPPD has committed to using existing roads and two-tracks, wherever feasible, to access transmission line structure locations during construction. In addition, NPPD would coordinate with landowners to identify ways to minimize land disturbance when siting necessary access.

Concern Statement 5.17-8: Initially NPPD was calling the R-Project a 100-year transmission line (based on presentation at the open houses) and now it is giving it a 50-year life span.

Response: As noted in Section 1.2, *Project Background*, of the FEIS and Section 1.3, *Permit Holder / Permit Duration*, of the HCP, NPPD has requested a permit with a 50-year duration. As noted in several places in the DEIS, 50 years is the expected life of the R-Project, consistent with how NPPD has described the Project since its inception.

Concern Statement 5.17-9: Concern was expressed about NPPD's ability to accommodate objections raised by individual landowners concerning construction of the proposed transmission line on their land when willing landowners are located within a relatively close distance.

Response: Section 2.2, *NPPD Process for Selecting Its Final Route*, of the FEIS describes the process NPPD used to select their final route. After selection and approval of the final route, only minor adjustments to the transmission line route can be made to accommodate the needs of individual land owners.

Concern Statement 5.17-10: Concern was expressed about 1) the effectiveness of grounding fences on high ground and 2) water tanks and windmills near the R-Project transmission line becoming electrified and shocking cattle.

Response: Section 3.16.2, *Health and Safety, Direct and Indirect Effects*, of the FEIS addresses the potential impacts of electric shock from the R-Project. Farm and ranch equipment, including water tanks and windmills, would be subject to developing an electric shock only if the transmission line is not properly grounded. As noted in this section, the risk of shock to the public and livestock is low. Section 3.16.3, *Health and Safety, Avoidance, Minimization, and Mitigation Measures*, of the FEIS describes the avoidance and minimization measures the NPPD would implement to further reduce this risk. These measures include installing a grounding system at the base of each transmission structure that consists of copper ground rods embedded in each concrete structure foundation and connected to the structure by a buried copper lead or by use of the helical pier foundations. After installation of the ground rods, the grounding is tested to determine the resistance to ground, and if the resistance to ground for a transmission structure is excessive, additional ground rods would be installed to lower the resistance. Additionally, NPPD would require a grounding system (buried copper conductor arranged in a

grid and driven ground rods, typically 8 to 10 feet long) in each substation to transfer faults to ground and ensure personnel safety. The ground rods and any equipment and structures would be connected to the grounding conductor. The amount of conductor and length and number of ground rods required are calculated based on fault current and soil characteristics.

Concern Statement 5.17-11: Concern was expressed that access roads and routes may require crossing lands of property owners who are not otherwise involved with the R-Project. The alignment should follow existing roads.

Response: Section 2.4.9.5, *Access for Construction*, of the FEIS and Section 2.4.5, *Access for Construction*, of the HCP describe access procedures for construction. NPPD has maximized the use of existing roads and two-tracks where such infrastructure is available.

Concern Statement 5.17-12: NPPD should seek out techniques that would assist in restoring the environment of the Sandhills. This approach would require NPPD to work with local stakeholders and consult experts and advocates with particular focus on protecting the ecology of the Sandhills, as well as limiting impacts on species in the region that deserve special consideration.

Response: As noted in Section 2.4.11, *Site Restoration*, and Section 3.5.3, *Vegetation, Avoidance, Minimization, and Mitigation Measures*, of the FEIS and Section 4.4, *Restoration Adaptive Management*, of the Restoration Management Plan, restoration activities would be based on guidance and recommendations from local USDA, NRCS, offices, landowners, and other restoration experts. Restoration efforts in the Sandhills have been successfully completed on previous development projects, and lessons learned from these efforts would be incorporated into the R-Project restoration efforts. Alternative management strategies would be developed in coordination with USDA and NRCS offices, landowners, and restoration experts in the event that initial restoration efforts do not meet success criteria.

Concern Statement 5.17-13: How can the impacts of the R-Project transmission line be evaluated in the DEIS if NPPD has not yet obtained easements for the majority of their final route.

Response: As noted in Section 3.1.2, *Approach to Characterizing Baseline Conditions and Conducting Effects Analysis, Environmental Effects*, of the FEIS, final design of the R-Project is not complete, but the preliminary design provides sufficient estimates of disturbance so that environmental effects can be analyzed. NPPD continues to work with landowners to negotiate easements, which may result in minor adjustments to the preliminary design. However, NPPD would consider minor adjustments to the proposed route design only if these adjustments would not increase the total temporary and permanent disturbance amounts above what was identified for the final route described in the FEIS and would not increase impacts on other sensitive resource areas (e.g., wetlands, cultural resources, and biological resources). In the event NPPD cannot negotiate an easement with a landowner, it has condemnation authority.

Concern Statement 5.17-14: The topography of the Sandhills would prove too costly and difficult to install such enormous towers. From the construction description that has been presented in the DEIS, hundreds of acres would be destroyed to construct staging areas, new access roads, including the 225-mile ROW. Maintenance and access may be hazardous in winter weather to crews. Ongoing upkeep would prove a continual disturbance to nature and human life along this entire route. This is no temporary assault on the land, wildlife, and residents; it would continue for decades.

Response: Section 2.4, *Alternative A: Tubular Steel Monopole and Steel Lattice Structures*, of the FEIS describes the construction techniques NPPD would use to construct the R-Project, including types of access roads to be constructed, ROW clearing, fly yards/assembly areas and material storage yards, substation construction/expansion, and site restoration. This section of the FEIS also describes how NPPD would address routine maintenance and repairs and emergency repairs over the life of the R-Project, and the avoidance, minimization, and mitigation measures that NPPD would implement.

Concern Statement 5.17-15: NPPD must work to avoid harm to the environment from the siting of the transmission line to construction of the line. This would require that NPPD work to collaborate with science experts and local stakeholders to craft mitigation measures and identify opportunities to avoid potential damage through micro-siting. Through these efforts, NPPD would be able to develop a construction plan that would limit impacts on the Sandhills and create plans to restore any damage or set aside areas for conservation.

Response: NPPD has worked with landowners during ROW easement negotiations to site the centerline of the transmission line to minimize impacts on ranching and farming activities. The avoidance and mitigation measures described throughout the FEIS were developed for each environmental resource based on best available scientific information.

Concern Statement 5.17-16: The discussion in the DEIS about the escrow agreement regarding restoration of beetle habitat is not quite accurate because it implies that the agreement itself will contain restoration criteria. The escrow agreement is a financial assurance contract that ensures that funding is available (i.e., in the escrow account that NPPD would establish) in the event that restoration of beetle habitat is unsuccessful and NPPD is not taking active steps to achieve successful restoration, including adaptive management. The escrow agreement itself does not include the actual performance and success criteria for restoration; rather, it is tied to the Restoration Management Plan, which includes those criteria. NPPD does not dispute the purpose of the escrow agreement and escrow account as described in the DEIS; it would just be useful to clarify that the Restoration Management Plan, which has been made available for public comment, contains the substantive restoration standards. Another commenter asked what the specific language is in the escrow agreement.

Response: Section 2.4.11, *Site Restoration*, of the FEIS was revised to indicate that the Restoration Management Plan details the substantive restoration standards upon which the

escrow agreement and account are based. The escrow agreement is in development at this writing and will be finalized after the permit decision. The draft escrow agreement contains standard language, used by most financial institutions, that establishes the escrow and describes the conditions and processes for drawing down funds to cover costs for actions necessary to address failure to meet success criteria as stipulated in the Restoration Management Plan.

Concern Statement 5.17-17: NPPD would begin annual inspections of the R-Project the first year after construction is completed, not beginning in year 30 of the Project, as stated in the DEIS. Any repair needs identified during these annual inspections are accounted for in the HCP as emergency repairs. By contrast, NPPD would not begin routine maintenance and repairs until year 30 of the life of the Project and then again once every 10 years after that. Routine maintenance and repairs involve a comprehensive inspection of the entire transmission line to evaluate whether the line or any part of it needs to be refurbished. The FEIS should be revised to clarify that transmission line inspections would occur annually, with any repair needs identified in those inspections considered to be emergency repairs, whereas the comprehensive line inspection, i.e., routine maintenance and repairs, would not occur until year 30.

Response: Section 2.4.13.5, *Routine Maintenance and Repairs*, and Section 2.4.13.6, *Emergency Repairs*, of the FEIS were revised to clarify that transmission line inspections would occur annually, and any repair needs identified from those inspections would be considered emergency repairs. The FEIS was further revised to state that comprehensive line inspection (i.e., routine maintenance and repairs) would not begin until year 30.

Concern Statement 5.17-18: How was the size of the 500 acres of compensatory mitigation lands determined? The amount of beetle mitigation lands (500 acres) seems small compared to the amount of potential beetle habitat (672,767) that is in the permit area. The Service should reevaluate this amount.

Response: NPPD would implement measures to mitigate the impacts of the R-Project's incidental take of the beetle. As noted in Section 6.2.2, *Conservation Plan, Mitigation Measures*, of the HCP, the amount of beetle habitat required to mitigate the impacts of the take was calculated at a rate of 3 acres of mitigation for every 1 acre of disturbance (3:1) within the permit area, based on the assumption that all disturbed acres are beetle habitat and mitigation lands present equal high-quality habitat value for the beetle. The R-Project is anticipated to permanently disturb 33 acres of beetle habitat and temporarily disturb 1,250 acres. Beetle habitat temporarily disturbed would be restored to its previous vegetation condition after construction is complete as described in the R-Project Restoration Management Plan. NPPD estimates that restoration of vegetation cover would occur in the first 5 years of the 50-year life of the Project or 10 percent of the life of the Project. Thus, mitigation acres for temporary construction impacts were multiplied by 10 percent to mitigate for 5 years of beetle habitat loss. This results in the need to mitigate the temporary and permanent disturbance with 473 acres of habitat. NPPD rounded this up to 500 acres to account for the effective survey radius for the species. The Service reviewed and approved this approach to estimating mitigation of the impacts. NPPD has

secured an Option to Purchase approximately 600 acres of mitigation lands in fee title with deed restrictions for protection and management in perpetuity. This parcel, which is a continuous tract of land that has documented beetle presence along the entire tract, occurs in portions of Sections 15 and 22 in T24N, R22W in Blaine County, Nebraska.

Concern Statement 5.17-19: The FEIS should be modified to provide additional information about the mitigations lands to include:

- Supplemental information about 1) how NPPD would ensure that the 500 acres of mitigation land will be protected in perpetuity from future development and disturbance, and 2) the anticipated location of mitigation lands and whether the lands would be required to be within a certain proximity of the Project area.
- Whether a biological assessment and subsequent biological opinion have been prepared. The commenter requested to include an appendix.
- Clarification about the role of annual monitoring reports in the FEIS and HCP and a discussion on whether and how these reports will be made available to the public.

Response: NPPD would protect land in perpetuity to support the Sandhills population of the beetle to mitigate impacts of take on the species after avoidance and minimization measures in the HCP are implemented.

NPPD has secured an Option To Purchase approximately 600 acres of mitigation lands in fee title that occurs in portions of Sections 15 and 22 in T24N, R22W in Blaine County, Nebraska, to mitigate the R-Project's impacts. This parcel is a continuous tract of land that has documented beetle presence along the entire tract. NPPD has completed two years of beetle surveys along public roads adjacent to these mitigation lands. Beetle densities on portions of the property are within the upper 10 percent of densities documented in the Service's beetle database. NPPD, in conjunction with the Service and NGPC, would develop a management plan for the mitigation parcel that would address land uses such as grazing, haying, and controlled burns, which would be implemented to maximize beetle density on the parcel. The HCP describes in detail the development of the management plan. NPPD would implement this plan and maintain the property in its current grassland land cover that provides habitat for beetle in perpetuity. NPPD obtained the option on this land parcel in advance of the Service's decision whether to issue a permit. The Service and NGPC have approved the land parcel as suitable for mitigation if the Service were to issue a permit and NPPD constructs the R-Project, based upon the following criteria:

Mitigation lands should generally be located in an area with a probability of occurrence exceeding 70 percent, roughly corresponding to good or prime beetle habitat, from the Jorgensen et al. (2014) model.

- Mitigation lands should achieve a habitat quality assessment rating of at least *Good* using the rating system developed by Hoback (2011).

- If trap data are available for the potential mitigation area, at least one trap within 5 miles should average 6 beetles in a 5-night trap session.

Deed restrictions on the property would ensure that protections would run with the land in perpetuity, a management plan for the parcel would be developed and implemented, and compatible and non-compatible activities on the land would be identified.

Annual reporting requirements are described in Section 6.6, *Reporting*, of the HCP and Section 4.3, *Effectiveness Monitoring Reporting*, of the Restoration Management Plan. A bulleted list of information that NPPD would include in annual monitoring reports is included in Section 6.6, *Reporting*, of the HCP. The FEIS has been updated to indicate that the annual monitoring report would be used to assess progress in meeting restoration objectives and would be made available to the public upon request. The annual reports would be provided to those who request them from the Service.

The Service does not prepare or require preparation of a biological assessment for HCPs, because the HCP provides all the information required for the Service to prepare a biological opinion for issuance of an incidental take permit. The Service will post the final Biological Opinion on its Nebraska Ecological Services Field Office website.

Concern Statement 5.17-20: A commenter was unable to find technical specifications for the R-Project transmission line in the DEIS.

Response: Section 2.4, *Alternative A: Tubular Steel Monopole and Steel Lattice Structures*, of the FEIS describes in detail the R-Project design features and proposed construction techniques. Two types of structures would be used for the R-Project transmission line—tubular steel monopoles and steel lattice towers. Tubular steel monopoles, which are typically used on most NPPD projects, require large equipment to install and would be used along the transmission line route where there is relatively good access, established roads exist, including U.S. Highway 83, or in cultivated fields. Tubular steel monopole structures would be placed approximately 1,350 feet apart (average ruling span) and would have an average height of 145 feet with a range of 115 to 190 feet.

Steel lattice towers would be used in areas of the Sandhills where existing access roads are limited or do not exist. Lattice towers can be constructed with less overall effect on the surrounding area because smaller equipment and helicopter construction can be used. Span lengths between lattice towers would be the same as monopoles (1,350 feet), and the towers would have an average height of 135 feet with a range of 90–165 feet. Both tubular steel monopoles and lattice towers can be designed for angles (where the line changes direction) or dead-ends to withstand the increased lateral stress of conductors pulling in two different directions.

Concern Statement 5.17-21: Concern was expressed about the decommissioning of the R-Project and the final disposition of all the associated transmission line equipment and materials and the potential high cost.

Response: NPPD has requested a permit for take of the beetle associated with the construction and operation of the R-Project. Any decommissioning of the R-Project would be a separate action subject to regulatory processes and approvals applicable at that time.

Concern Statement 5.17-22: The draft HCP and DEIS should be modified to provide more detail about the environmental risks associated with indiscriminate spraying of herbicides for vegetation control along the ROW. Additionally, NPPD has not identified the specific environmentally friendly chemicals to be used during ROW maintenance. These chemical should be identified in the FEIS.

Response: Section 6.0, *Herbicide Use*, of the Restoration Management Plan; Sections 2.4.3, *Noxious Weed Management*, Section 2.4.4, *ROW Tree Clearing*, and Section 2.7.3, *ROW Vegetation Management Program*, of the HCP; and Section 3.5.2, *Vegetation, Direct and Indirect Effects*, of the FEIS describe how herbicides would be applied in the Project ROW. As stated in these sections, herbicide application would be limited to areas with noxious weed infestations and tree stumps that remain in the ROW. Large-scale application of herbicides is not anticipated as part of the R-Project. The herbicides to be applied would be determined on a case-by-case basis and would depend, in large part, on the vegetation to be controlled. Other factors include weather conditions, time of year, and surrounding land use. All herbicides would be used in accordance with label instructions.

Concern Statement 5.17-23: A more detailed plan of how access for emergency repairs would be managed and how disturbed lands, especially beetle habitat, would be restored is needed for the HCP and FEIS.

Response: As stated in Section 2.7.6, *Emergency Repairs*, of the HCP, disturbance from emergency repairs would be restored if conditions require restoration efforts. As stated in Section 3.5.2.2, *Vegetation, Alternative A: Tubular Steel Monopole and Steel Lattice Structures*, of the FEIS, NPPD would apply the same avoidance and minimization measures during emergency repairs and restoration activities as it would during construction. The Restoration Management Plan has been updated to expressly state that disturbance from emergency repairs would be restored if conditions require restoration efforts. These restoration efforts would be held to the same performance standard identified for initial construction, which is described in Section 4.2, *Performance Standards*, of the Restoration Management Plan.

As noted in Section 2.7.6 of the HCP, necessary access for emergency repairs would follow the same access scenarios identified for construction, to the extent practicable. Instances where the same access identified for construction may not be used include: repairs that require larger equipment than was used during construction, stream crossings that have changed due to changes

in stream course during permit duration, and landowner construction of a new road or two-track that is more efficient for emergency repair access.

Concern Statement 5.17-24: Methods for mitigating damage caused by the construction of the R-Project need to be developed prior to construction activity, rather than after the Project has been built.

Response: Measures that NPPD would take to avoid, minimize, and mitigate potential impacts from the R-Project construction and operations have been developed and listed for each environmental resource category and are described throughout the HCP and FEIS.

Concern Statement 5.17-25: The HCP and FEIS should describe how public and/or private landowners would be compensated for the loss of ecosystem services, including economic losses associated with wild birds, grasslands, and viewshed, such as those that would be experienced at the Goose Lake WMA.

Response: Economic losses resulting from changes in ecosystem services are commonly referred to as a “resource equivalency analysis.” A resource equivalency analysis is not required for issuance of a permit. NPPD would negotiate agreements with individual landowners or condemnation proceedings would determine the monetary value of easements.

Goose Lake Wildlife Management Area (WMA) is approximately 1 mile north of the R-Project. Sections 3.6, *Wildlife*, 3.8, *Land Use*, 3.9, *Recreation and Tourism*, and 3.12, *Visual Resources and Aesthetics*, of the FEIS present the potential impacts on Goose Lake WMA.

Concern Statement 5.17-26: NPPD has failed to indicate how it will comply with the Nebraska statute preventing the unlawful destruction of bird nests, eggs, or young birds.

Response: The commenter’s referenced statute is likely to be Nebraska Statute 37-540, *Protected birds; nest or eggs*, which does not apply to the R-Project, because NPPD would not be hunting or possessing birds or destroying nests or eggs. Section 3.6.2.2, *Wildlife, Alternative A: Tubular Steel Monopole and Steel Lattice Structures*, of the FEIS describes the migratory bird nest clearance surveys. Additionally, NPPD has prepared an MBCP specifically for the conservation of migratory birds. NGPC and the Service have reviewed the plan. See Section 6.7, *Seasonal Restrictions*, of the MBCP for a description of clearance surveys conducted during the migratory bird nesting season.

Concern Statement 5.17-27: NPPD describes the Holt County Substation site as consisting of cropland, when in fact the site includes a shelterbelt and the Holt County Road in addition to cropland.

Response: The new Holt County Substation would be located in Holt County on the northwest corner of the intersection of 846th Road and 510th Avenue. The current land use of the site in

Holt County is center-pivot irrigated cropland. Site inspection by NPPD and recent aerial photography indicates no shelterbelt is located on the parcel of property NPPD has purchased for development of this substation.

Concern Statement 5.17-28: NPPD has failed to indicate the current extent of tree removal along the R-Project transmission line route and how these resources would be replaced.

Response: Section 3.5.2.2, *Vegetation, Alternative A: Tubular Steel Monopole and Steel Lattice Structures*, of the FEIS describes the estimated extent of tree removal in the ROW where it would be necessary to ensure safe and reliable operation of the transmission line as 49 acres. The FEIS identifies tree removal as a permanent direct effect.

Concern Statement 5.17-29: NPPD has failed to describe how traffic at highway and county road crossings would be managed during construction periods.

Response: Section 3.11.3, *Transportation, Avoidance, Minimization, and Mitigation Measures*, of the FEIS describes the measures NPPD would implement to avoid, minimize, and mitigate adverse effects on transportation and transportation facilities.

Concern Statement 5.17-30: How would NPPD notify local residents regarding upcoming helicopter usage or implosive splicing during construction of the R-Project?

Response: NPPD would directly contact landowners—either via telephone or face-to-face visits—to coordinate specific construction activities prior to working on a property.

Concern Statement 5.17-31: NPPD has failed to adequately describe impacts associated with the relocation of existing distribution lines crossed by the R-Project. The FEIS should be modified to address this issue and co-location in the same immediate corridor should be required.

Response: Section 2.6.2, *Distribution Power Line Relocation*, of the HCP and Section 2.4.12.2, *Distribution Power Line Relocation*, of the FEIS address distribution line relocation. Table 4-1, *Temporary and Permanent Disturbance Estimates for R-Project Activities*, of the HCP and Table 3.1-4, *R-Project 345 kV Transmission Line Alternatives Disturbance Comparison*, of the FEIS provide an estimate of the disturbance required to relocate the distribution line.

Concern Statement 5.17-32: How was the distance of 150 feet selected for irrigation well relocation?

Response: When NPPD determines that well relocation is required for safety reasons, it evaluates the site-specific circumstances to determine a relocation distance that would provide adequate clearances for the safe installation and maintenance of the well by the landowner or well driller. The reference to 150 feet in the HCP and FEIS represents an approximate distance that the five wells already identified would likely need to be relocated.

Concern Statement 5.17-33: NPPD has failed to provide a Transmission Line Vegetation Plan for public review.

Response: Because the majority of the ROW is grassland, existing vegetation would not need to be cleared for most of the R-Project; however, Section 2.4.13.3, *Right-of-Way Vegetation Management Program*, of the FEIS provides information about how NPPD would manage woody vegetation in accordance with its Transmission Vegetation Management Plan to ensure the safe operation of the line. This NPPD document was not part of the package available for public review.

Concern Statement 5.17-34: NPPD has failed to indicate how landowners would be notified of upcoming transmission line inspections; this notification should be provided several days in advance of the actual inspection.

Response: Section 2.7.4, *Transmission Line Inspection*, of the HCP and Section 2.4.13.4, *Transmission Line Inspection*, of the FEIS describe transmission line inspection. Aerial inspection would not require access to any properties. Access to properties for ground inspections would be covered by and in accordance with the terms of NPPD's easement agreements.

Concern Statement 5.17-35: The seed mix proposed for restoration of disturbed areas along the R-Project route lacks native forbs species; consequently, the seed mixture does not represent the flora of Sandhill native plant communities.

Response: The seed mixes identified in the Restoration Management Plan are baseline eastern Sandhills seed mixes intended for semi-arid, mesic grassland and wet meadows. As indicated in the plan, seed mixes required may vary and may need to be modified to be compatible with the surrounding vegetation. The variation in vegetative prevalence across the landscape is one of the purposes for using surrounding vegetation to adjust the seed mix. If the surrounding vegetation indicates that inclusion of forbs is necessary, the seed mix would be adjusted to include a percentage of forbs representative of the surrounding landscape.

Concern Statement 5.17-36: NPPD has failed to indicate how it would implement "restoration area protection" and what that protection would entail. For example, does it include fencing?

Response: Section 3.3.5, *Restoration Area Protection*, of the Restoration Management Plan fully addresses restoration area protection.

Concern Statement 5.17-37: Where would vehicle washing sites be located and how would they be cleaned when construction is complete?

Response: As noted in Section 5.2, *Noxious Weeds, Preventative Measures*, of the Restoration Management Plan, all construction vehicles and equipment that have been in areas known to

contain noxious weeds would be cleaned before entering and leaving the ROW. Construction vehicles and equipment also would be cleaned when entering each county for the first time, regardless of where the equipment or vehicles worked previously. Equipment and vehicles would be cleaned using a high-pressure washer or air compressor.

The identified cleaning methods would not contaminate soils, surface water, or groundwater. Construction vehicles and equipment used on the construction site would be properly maintained and serviced to prevent fuel and oil leaks. Vehicle cleaning stations would be removed and cleaned following completion of construction. Any sediment and weed seeds contained in the runoff from washing construction vehicles and equipment would be contained onsite with erosion and sediment control measures to prevent runoff into nearby streams.

Concern Statement 5.17-38: How were decisions made on where to locate the two types of structures (i.e., lattice structures or monopole) proposed for the R-Project along the final route? Additionally, no information is provided about how excavation for monopoles foundations would be performed, which could impact wetlands.

NPPD should use steel lattice tower construction rather than monopole construction along Highway 83, particularly in the segment north of Stapleton and for the crossing of the Dismal River because these areas contains soft soils prone to damage. Construction using monopoles in these areas would also increase the damage to beetle habitat.

Response: Section 2.1.1, *Structure Types and Foundations*, of the HCP and Section 2.4.2, *Transmission Line Structure Types and Foundations*, of the FEIS describe the structure and foundation types, the reasons underlying the location of each type, and the reasons why various structures were selected. NPPD typically uses tubular steel monopole structures for most projects and would use tubular steel monopole structures for the R-Project when paralleling existing maintained access areas, such as Highway 83.

Concern Statement 5.17-39: The HCP and FEIS should be modified to indicate whether the optical cable required to traverse the entire length of the R-Project would be overhead or underground and include the environmental effects on wildlife and nearby communication towers.

Response: The optical ground wire would be placed in one of the overhead shield wire positions as described in Section 2.1.4, *Overhead Shield (Ground) Wires*, of the HCP and Section 2.4.4, *Overhead Shield (Ground) Wires*, of the FEIS. The optical ground wire was included in all impact analyses completed in the HCP, MBCP, and FEIS.

Concern Statement 5.17-40: NPPD's cost estimates do not adequately account for required maintenance and repairs once initial construction is complete.

Response: The cost estimates provided in the FEIS are for construction costs only as maintenance and repair costs have not yet been developed.

Concern Statement 5.17-41: Estimates of permanent disturbance of various habitat types are based on the footprint of tower structures. The permanent damage around each structure would be much greater because cattle would use the structures as rubbing/congregation areas, disturbing an area greater than the footprint of the structure.

Response: Table 4-1, *Temporary and Permanent Disturbance Estimates for R-Project Activities*, of the HCP and Table 3.1-4, *R-Project 345 kV Transmission Line Alternatives Disturbance Comparison*, of the FEIS present estimates of permanent disturbance resulting from construction of the R-Project. It would not be possible to estimate or quantify the amount of disturbance that may occur as a result of cattle rubbing or congregating around a structure. If disturbances were to occur around structures following construction because of livestock activities, NPPD would work with landowners to identify and implement corrective measures.

Concern Statement 5.17-42: Adequate grounding of R-Project tower structures would be difficult during drought periods and require grounding to the level of the groundwater table for safety purposes. More detailed plans for grounding needs to be described in the FEIS and HCP, and the risk of potential contamination should be clarified.

Response: Section 2.1.5, *Grounding Rods*, of the HCP and Section 2.4.5, *Grounding Rods*, of the FEIS describe grounding of the R-Project. NPPD operates and maintains an electrical system across Nebraska and has experience in engineering and installation of grounding of lines and structures in all types of soils and soil conditions. It is not necessary for grounding to reach the groundwater level to be effective, and materials that would be used for grounding do not pose a risk of aquifer contamination.

Concern Statement 5.17-43: What is the current plan for the R-Project's crossing of Birdwood Creek? Why doesn't the draft HCP and permit cover the entire R-Project?

Response: The transmission line would span all river crossings, including Birdwood Creek. Section 4.1.3, *Avoidance and Minimization Measures Proposed for Whooping Crane*, of the HCP, Section 6.2, *Installation of Bird Flight Diverters to Minimize Collision*, of the MBCP, and Section 3.6.3, *Wildlife, Avoidance, Minimization, and Mitigation Measures*, of the FEIS describe how spans over waterbodies would be marked with reflective bird flight diverters.

Section 1.4, *Permit Area*, of the HCP describes and explains the basis of the permit area. The permit area covers the potential range of beetle habitat where incidental take is likely to occur and NPPD has requested a permit.

Concern Statement 5.17-48: Why is NPPD allowed to exceed National Electrical Safety Code standards for placement of conductors at a height of 28 to 33 feet above ground? The effects on wildlife and humans of exceeding these standards should be described in the FEIS.

Response: Exceeding the standards as described in the HCP is referring to the fact that there would be more separation (a greater distance) between the ground and the conductor than

required by the National Electrical Safety Code. Therefore, additional spacing of conductors as described in Section 2.1.3, *Conductors and Associated Hardware*, of the HCP and Section 2.4.3, *Conductors and Associated Hardware*, of the FEIS would increase the safety of the R-Project.

Concern Statement 5.17-45: A commenter is concerned about low levels of uranium, thorium, and radon found in the soils of the Sandhills and their potential occurrence in fugitive dust created during construction of the R-Project. Additionally, mitigation for these potential effects should be determined.

Response: R-Project construction activities would not affect the levels of uranium and thorium that naturally occur in the soils. Section 3.13.2, *Air Quality and Greenhouse Gas Emissions, Direct and Indirect Effects*, of the FEIS addresses potential impacts from fugitive dust as a result of construction activities. Section 3.13.3, *Air Quality and Greenhouse Gas Emissions, Avoidance, Minimization, and Mitigation Measures*, of the FEIS presents avoidance and minimization measures to reduce the impacts of fugitive dust. Radon is a naturally occurring radioactive gas that comes from the decay of uranium found in nearly all soils that move up through the ground into the air. Radon primarily becomes a health problem when concentrated in confined spaces such as basements of homes or buildings. Since construction of a transmission line occurs in an open ventilated environment, radon levels would not be concentrated.

Concern Statement 5.17-46: NPPD should indicate whether aviation fuel for helicopters needs to be stored along the R-Project alignment; and if so, where these storage locations would be located. Additionally, how would NPPD respond to any potential fuel spills?

Response: Section 2.6.1, *Helicopter Construction*, of the HCP and Section 2.4.12.1, *Construction with Helicopters*, of the FEIS describe helicopter refueling practices, including spill prevention measures.

Concern Statement 5.17-47: Concern was expressed about the use of helicopters for construction of the R-Project and the potential effects of the rotor down draft on plant life and wildlife. Additionally, have the potential effects of helicopter usage on grazing cattle been assessed?

Response: Based on past experience in the Sandhills of Nebraska, no impacts on plant life and wildlife from helicopter downdraft are anticipated. However, as noted in Section 2.6.1, *Helicopter Construction*, of the HCP, “matting or the use of a water truck may be required to spray the site to reduce dust.” Section 2.6.1 of the HCP also identifies concentrations of cattle as sensitive features that daily helicopter flights would avoid.

Concern Statement 5.17-48: A commenter suggests that the proposed acreage for the beetle compensatory mitigation is too low and that the multiplier used to calculate mitigation acreage be raised from 10 percent to 25 percent.

Response: Section 6.2.2, *Conservation Plan, Avoidance, Minimization, and Mitigation Measures*, of the HCP and Section 3.7.11.3, *Special Status Species, American Burying Beetle, Avoidance, Minimization, and Mitigation Measures*, of the FEIS describes how the mitigation calculation accounts for temporal aspects of beetle habitat loss for temporary impacts from Project construction and emergency repairs within the permit area. This represents the anticipated amount of time between R-Project construction/emergency repairs and successful completion of restoration. Restoration of vegetation cover is expected to take 5 years, or 10 percent of the 50-year life of the R-Project. Therefore, the acres of beetle habitat required to offset temporary construction/emergency repair impacts were multiplied by 10 percent to mitigate for 5 years of beetle habitat loss. The Service does not believe increasing the temporal multiplier to 25 percent is necessary for potential failure to meet success criteria for restoration because NPPD and the Service are developing an escrow agreement to ensure funds would be available to carry out measures required to resolve such a failure.

Concern Statement 5.17-49: The analysis of the selected R-Project alternative route segments is not included in the DEIS. This analysis, including the routing criteria, prioritization of factors, and consideration of public input, should be made available for public review.

Response: As noted in Section 1.4, *Purpose of the Service's Proposed Action*, of the FEIS, the Service's action subject to NEPA is the issuance of a permit authorizing the take of the beetle under Section 10(a)(1)(B). The Service does not have authority to approve the R-Project itself. NPPD engaged in its own route selection and public involvement process, during which the commenter's requested information was provided.

Concern Statement 5.17-50: Why does NPPD place so much emphasis on avoiding center pivots when this land has already been previously disturbed and would have soils more suitable for disturbance and most likely require less mitigation? The availability of water would aid in restoration efforts.

Response: Avoiding center-pivot irrigation systems and the resulting impact on field irrigation was identified by the public as one of the two most important routing criteria during open house meetings held by NPPD.

Concern Statement 5.17-51: NPPD should prepare a cost comparison of constructing the R-Project adjacent to the existing 115-kV transmission (double circuit) line using the existing corridor versus the final R-Project route. This cost comparison should be included in the FEIS and made available to the public for review.

Response: As noted in Section 1.4, *Purpose of the Service's Proposed Action*, of the FEIS, the Service is proposing to approve the R-Project HCP and issue a permit authorizing the take of the beetle. The Service does not have authority to approve the R-Project itself or require a specific transmission line route. NPPD has applied for a permit that will cover incidental take of the beetle for a portion of its final route that was selected through its route selection and public

involvement process. NPPD evaluated and rejected double circuit and parallel opportunities as part of its route selection process, a process entirely separate from the NEPA process that has produced this FEIS. Furthermore, Section 2.6, *Alternatives Considered and Eliminated from Further Consideration*, of the FEIS, provides construction cost estimates for some alternative routes considered but ultimately dismissed from analysis.

Concern Statement 5.17-52: NPPD needs to include a component addressing historical sites located along the final route alignment in the emergency repairs management plan.

Response: Section 2.4.13.6, *Emergency Repairs*, of the FEIS and Section 2.7.6, *Emergency Repairs*, of the HCP describe emergency repair activities, including access, timing, equipment, and estimated impacts. Emergency repairs would follow the procedures described in the final Access Plan and approved Restoration Management Plan for any required construction activities. The Programmatic Agreement also addresses emergency situations and the process regarding cultural resources, in particular. If an emergency situation that represents an imminent threat to public health or safety or creates a hazardous condition were to occur, and NPPD can respond to that emergency using the same access routes that were used during construction, no further consultation under the Programmatic Agreement would be required. If an emergency situation that represents an imminent threat to public health or safety or creates a hazardous condition that requires NPPD to use access routes or take other action in areas that were not previously surveyed for cultural resources were to occur, NPPD would immediately contact the Service prior to using areas not previously surveyed. The Service and NPPD will develop alternative measures to relevant Stipulations in the Programmatic Agreement and notify the Nebraska SHPO and Advisory Council on Historic Preservation of the situation and measures used to remedy the emergency.

Concern Statement 5.17-53: Concern was expressed regarding the impacts of access roads on soils and vegetation, considering that 90 miles of the R-Project proposed route are inaccessible from existing roads.

Response: Section 2.4.5, *Access for Construction*, of the HCP and Section 2.4.9.5, *Access for Construction*, of the FEIS describe access for the R-Project construction. Potential impacts from access were addressed for all resource areas analyzed in the FEIS and for the species evaluated in the HCP.

Concern Statement 5.17-54: A commenter asks how a 200-foot ROW can be created for a transmission line placed adjacent to state and county highways.

Response: The ROW is not established based on the location of the highway or road. The 200-foot-wide transmission ROW is established from the location of the structure itself. Once a structure is spotted, the ROW is then established at 100 feet on either side of the structure. If a structure is located directly adjacent to a highway or road as described, part of the transmission

ROW would overlap the highway or road ROW. Nebraska Department of Roads policy allows for such overlap of ROWs if specific criteria are met.

Concern Statement 5.17-55: A commenter states that NPPD should make incidental take reports to the Service on a 5-year basis over the life of the 50-year permit.

Response: As described in the HCP, NPPD would submit an annual report to the Service and NGPC by December 31 of each year during the life of the permit. Those reports would include, among other things, a description of estimated beetle take that occurred based on disturbances incurred that year.

Concern Statement 5.17-56: A commenter states that NPPD did not consider all of the costs associated with use of helicopters in development of cost estimates for the R-Project.

Response: NPPD has accounted for all costs associated with construction, operation, and maintenance of the R-Project, including use of helicopters.

Concern Statement 5.17-57: Commenter states that while NPPD has previously erected “power poles” in the Sandhills of Nebraska, few if any, were steel lattice towers placed in the soil and water conditions found in the Sandhills.

Response: NPPD specifically chose to use steel lattice towers on this Project in the Sandhills to minimize environmental impacts. Soil data throughout the study area were obtained from USDA, NRCS, soil surveys and the Soil Survey Geographic database. In addition to those sources, NPPD has analyzed Project-specific soil boring samples along the R-Project route in Lincoln, Logan, Thomas, Blaine, Loup, Holt, Garfield, and Wheeler counties. NPPD recognizes the environmental conditions in the Sandhills and has modified construction methods accordingly.

AL300: Alternatives: Alternative Transmission Line Routes Eliminated from Further Study

Concern Statement 5.18-1: The immediate negative impacts of the R-Project could be mitigated by co-locating the transmission line in a pre-existing transportation or energy corridor where impacts on resources (i.e., wildlife habitat, sensitive species, sensitive ecosystems, migratory birds) have already occurred, and siting the line in areas previously disturbed that do not fragment existing quality wildlife habitat. Wouldn't placing the line along existing corridors decrease the potential for whooping crane fatalities?

Response: The FEIS contains the Service's consideration of alternative routes using existing linear corridors (i.e., northern and southern conceptual routes) to assess the potential advantages. However, these alternative routes were eliminated from further consideration for a variety of reasons as described in Section 2.6.6.1, *Descriptions of Conceptual Routes and Reasons for Elimination*, of the FEIS. The northern conceptual route would parallel U.S. Highway 20 for about 90 miles but would require multiple diversions away from the highway to avoid towns and residential developments. As a consequence, the total length (40 miles greater than NPPD's final route) and associated cost of the northern route would become economically infeasible. It would also increase the amount of disturbance and construction complexity. The R-Project requirement to connect with the Thedford Substation would necessitate that the southern conceptual route have two circuits sited along U.S. Highway 83. The inclusion of the additional segment would introduce reliability concerns, increase Project cost and construction complexity, and increase impacts from the route along this segment due to more structures (parallel alignment) or taller structures with larger footprints (double-circuit structures). For these reasons, the southern conceptual route was eliminated from further consideration.

Section 3.7.7.2, *Whooping Crane, Direct and Indirect Effects*, of the FEIS, regarding the whooping crane, discusses collision risk to whooping cranes from the R-Project. Placing the R-Project line along existing corridors is unlikely to change the outcome of collision risk analyses.

Concern Statement 5.18-2: The R-Project transmission line should be routed to the east from the GGS to avoid impacts on the pristine historical trail area and sensitive wildlife habitat.

Response: The Service evaluated an easterly routing option from GGS in the FEIS. Six other transmission lines are located in this general area and another transmission line could not be accommodated without interfering with existing power lines, as explained in Section 2.6.7.1, *Eastern Route Adjustment*, of the FEIS.

Concern Statement 5.18-3: Several alternative transmission line routes have been proposed and these routes need to be explored and considered as alternatives rather than moving forward with NPPD's final route.

Response: The Service evaluated several routing options; all were eliminated for a variety of reasons as explained in Section 2.6.6, *Alternative Transmission Line Routes*, of the FEIS.

Concern Statement 5.18-4: The FEIS should reflect the fact that not all temporary disturbance caused by the northern conceptual route would be in areas already disturbed (e.g., adjacent to a highway ROW).

Response: Section 2.6.6.1, *Description of Conceptual Routes and Reasons for Elimination*, of the FEIS acknowledges and describes that not all disturbance associated with the northern conceptual route would be within existing ROWs.

Concern Statement 5.18-5: A more detailed discussion on the rationale for routes eliminated as an alternative and the selection of the preferred route should be included in the FEIS, including more detail on why a route would or would not meet the purpose and need of the proposed Project. Routes considered and dismissed would result in fewer impacts on the beetle and still meet the purpose and need.

Response: Section 2.6.6.1, *Descriptions of Conceptual Routes and Reasons for Elimination*, of the FEIS was expanded to include additional details and costs associated with alternative conceptual routes and further explain the reasons for eliminating from further consideration.

Concern Statement 5.18-6: Several commenters recommended the Service analyze certain suggested routes or route adjustments or conduct a more thorough analysis of other routes to avoid impacts on a variety of environmental resources.

Response: As noted in Section 1.4, *Purpose of the Service's Proposed Action*, of the FEIS, the Service is proposing to approve the R-Project HCP and issue a permit authorizing the take of the beetle under the ESA. The Service does not have authority to approve the R-Project itself or require that it to be sited in a specific location. The Service evaluated several routing options; all were eliminated for a variety of reasons, as explained in Section 2.6.6.1, *Descriptions of Conceptual Routes and Reasons for Elimination*, of the FEIS.

Concern Statement 5.18-7: Concern was expressed that the date of the *U.S. Fish and Wildlife Service R-Project Alternative Route Study* (Appendix B of the DEIS) is dated January 2016 while the DEIS is dated May 2017.

Response: The referenced study was completed in January 2016 as part of the EIS preparation process. This study was related to the development of conceptual alternative routes for the Service to consider. Input from this study was then used in to prepare Chapter 2, *Alternatives*, of the FEIS. Additional, relevant information raised after January 2016 and May 2017 is now incorporated into the FEIS.

AL350: Alternatives: Central Route Alternative Considered but Eliminated from Analysis

Concern Statement 5.19-1: The following statement regarding the central conceptual route is not based on scientific evidence and should be removed from the Final EIS: "...this route was also located in this area because there are generally fewer water features (Sandhills lakes and marshes) and wet meadows to avoid impacts on migratory birds, including whooping cranes."

Response: The statement in question has been removed from Section 2.6.6.1, *Descriptions of Conceptual Route and Reasons for Elimination*, of the FEIS to reflect that the central route would cross fewer wetlands but have more river crossings.

Concern Statement 5.19-2: The FEIS should acknowledge that another reason to eliminate the central conceptual route is the Service's lack of routing and siting authority, so consideration of its impacts in detail was neither necessary nor appropriate. The Service could not require NPPD to select an alternate route.

Response: Section 2.6.6.2, *Reasons for Elimination of the Central Route from Further Analysis*, of the FEIS has been revised to include additional information describing why the central route was eliminated, including the lack of routing and siting authority by the Service.

Concern Statement 5.19-3: The Southwest Power Pool (SPP) did not provide any initial guidance to NPPD that the eastern terminus could be anywhere in a three-county area. The SPP 2012 Notice to Construct specifically identified Holt County as the eastern terminus location, contingent on approval from the Western Area Power Administration. Furthermore, the DEIS states: "an economic analysis indicated the cost of building the central route segment was in the range of the cost for NPPD's analogous final route segment" and estimates the cost for central route as \$129,348,000 to \$144,720,000, compared to \$120,099,000 for NPPD's final route. However, this is a false comparison to NPPD's final route because the terminus is inappropriately located in southern Wheeler County rather than in Holt County, which inappropriately eliminates 20.6 miles of line that the alternative would have to include for a true cost comparison.

Response: Section 2.6.6.1, *Development of Conceptual Routes and Reasons for Elimination*, of the FEIS was revised to explain that the central route's eastern terminus was selected in an attempt to devise a route that would have comparable construction costs to NPPD's final route. Therefore, the FEIS continues to examine characteristics and costs of the central route with an eastern terminus in southern Wheeler County to NPPD's final route and its terminus in Holt County. Accordingly, costs of the central route were revised to subtract the costs associated with routing it northward to terminate in Holt County. Other costs and details for the central route were updated based on more specific information from NPPD.

Concern Statement 5.19-4: The central route alternative was ultimately eliminated as an alternative carried forward in Section 2.6.6 of the DEIS because it would add delays with respect to the in-service date identified by SPP, which is said to be part of NPPD's need for the Project. Section 2.6.6.3 states: "Not meeting the in-service date could result in transmission system reliability issues and not provide the urgently needed congestion relief at the GGS." However, an in-service date does not appear to be included in Section 1.7, *NPPD's Need for the R-Project*. USEPA recommends an expanded discussion on the significance and potential impacts from an in-service date later than the one identified by SPP, as it relates to potential environmental and natural resource benefits that may be realized through further assessing the Service's central alternative.

Response: Section 1.7.3, *Project Need Date*, was added to the FEIS to explain the need date (formerly called the "in-service date") of January 2018, for the R-Project in SPP's 2012 Notice to Construct and the consequences of not meeting this date. Section 2.6.6.2, *Reasons for Elimination of the Central Route from Further Analysis*, of the FEIS was revised to further explain the delays and costs associated with the consequences of missing the Project need date and how they relate to dismissing the alternative of the central conceptual route from further analysis.

Concern Statement 5.19-5: The ESA prohibits the Service from rejecting a practicable alternative that would lessen the adverse impact on a threatened species merely because there would be some delay in a preferred schedule for implementation. The DEIS states that the purpose and need of the action is to issue an incidental take permit for the beetle while conserving the species by minimizing and mitigating the impacts from the anticipated take to the maximum extent practicable. The mere fact that consideration of an alternative route will involve some unavoidable delay does not render the route non-"practicable"; if it did, then virtually any alternative could be eliminated from consideration simply because it does not conform to the permit applicant's preferred schedule.

This commenter also stated that the Service did not independently evaluate practicability of the alternative by "capitulating to NPPD's preferred schedule" and therefore, essentially "delegating to NPPD the determination of practicability."

Response: Section 10(a)(1)(B) of the ESA states that an incidental take permit *shall* be issued if the applicant will, to the maximum extent practicable, minimize and mitigate the impacts of the take of the covered species, among other requirements (emphasis added). The Service's HCP Handbook (2016) explains that as long as implementation of the HCP's minimization and mitigation measures will result in a full offset of the impacts of the take, the Service is not required to examine whether more or other measures are practicable. The Service and NPPD worked together to identify minimization and mitigation measures that would fully offset the impacts of take of the beetle from the R-Project. The HCP demonstrates that after implementing its minimization measures, impacts of take of the beetle would be fully offset by protecting and managing 500 acres of beetle habitat. NPPD currently has an option to purchase 600 acres of habitat that would be protected and managed in perpetuity. Thus, NPPD is more than fully

offsetting the impacts. Nevertheless, the Service considered five conceptual alternative routes that would have varying potentially reduced or increased levels of impacts on beetles. The development of a central conceptual route included a detailed refinement (see Section 2.6.6.1, *Descriptions of Conceptual Routes and Reasons for Elimination*, and Appendix B of the FEIS).

Considering the regulations at 40 CFR 1500–1508 that federal agencies must employ common sense in determining whether an alternative is practical or feasible, the Service determined that the central route alternative would not be reasonable. Section 2.6.6.2, *Reasons for Elimination of the Central Route from Further Analysis*, of the FEIS explains the reasons why the Service dismissed the central conceptual route alternative from further analysis. None of the reasons rely on merely a delay to a preferred schedule. Rather, the Service independently examined the *costs and consequences* associated with a 5-year delay along with other factors and costs to implement the central route alternative. Because the central route alternative would still likely cause some take of the beetle, NPPD would need to prepare a revised HCP to minimize and mitigate impacts of the take to the maximum extent practicable, among other requirements. Considering that the HCP for Alternative A would fully offset impacts of take to the beetle, the totality of the consequences of the central route’s 5-year delay, associated and other additional costs of over \$38,000,000, increased costs to rate payers, and impacts to power generation reliability, is not a practical or reasonable trade-off for similar results to the beetle.

AL400: Alternatives: New Alternatives or Elements

Concern Statement 5.20-1: Commenter notes that the Service has failed to hold NPPD accountable for fully implementing the Region 6 *Guidance for Minimizing Effects of Power Line Projects within the Whooping Crane Migration Corridor*, which states that power lines should be buried within 1 mile of suitable crane habitat. NPPD has not incorporated the burial of power lines into its mitigation plan and has not shown that burying lines near suitable crane habitat is infeasible. NPPD has, therefore, failed to show that it has minimized and mitigated the impacts of the Project to the maximum extent practicable, requiring denial of the permit. The DEIS and HCP do not include any analysis of the cost of burying lines only within 1-mile of suitable crane habitat, and provide no support for the claim that the overall cost would be infeasible.

Response: Take of the whooping crane is not anticipated and, therefore, would not be covered by the permit. Only species covered by the permit are required to meet the regulatory standard of minimizing and mitigating impacts of take to the maximum extent practicable. However, Section 2.6.5, *Underground Construction*, of the FEIS discusses burying the entire or parts of the R-Project transmission line in suitable crane habitat. This section also explains why this alternative was eliminated from further consideration.

CC100: Consultation and Coordination: General Comments

Concern Statement 5.21-1: The commenter believes coordination between the Service and NPPD for the R-Project should have started earlier in the planning process.

Response: As detailed in Section 1.8.3, *Agency Coordination*, of the FEIS, the initial teleconference among NPPD, NGPC, and the Service regarding the R-Project and the need for a permit occurred on May 24, 2012, with the first Project coordination meeting occurring on December 12, 2012, in Lincoln, Nebraska. The kickoff meeting to initiate preparation of the DEIS was convened in Columbus, Nebraska, with the Service, NPPD, NGPC, POWER Engineers, and the Louis Berger Team on August 4, 2014. Monthly coordination teleconferences involving staff representing these entities began in September 2014 to discuss the status of the draft HCP and preparation of the EIS.

Concern Statement 5.21-2: The commenter expressed concern that representatives from NGPC were not present for the three June 2017 public meetings during review of the DEIS.

Response: Staff from NGPC have participated in meetings involving development of the draft HCP and DEIS since the initial teleconference in May 2012 but were not available to attend the three public meetings associated with the public review of the DEIS.

Concern Statement 5.21-3: NPPD needs the Record of Decision approved so that it can begin construction of this critical Project in a timely manner.

Response: The Service considers this permit application a priority Project.

ON100: Other NEPA Issues: General Comments

Concern Statement 5.22-1: The NEPA process for the R-Project should carefully consider the risks that the Project would pose to wildlife and associated ecological habitat.

Response: Sections 3.6, *Wildlife*, and 3.7, *Special Status Species*, of the FEIS analyzes potential impacts on wildlife and special status species and their habitats.

Concern Statement 5.22-2: Several comments concerned management and publicizing of public meetings and difficulties in accessing the DEIS for review. The Service received requests to extend the public comment period for the DEIS for those reasons. One commenter noted that the public meetings were invalid because the Open Meetings Act was not prominently displayed.

Response: The Service was not able to directly extend the initial public review period because the required internal approvals could not be completed before the comment period closed. However, the Service reopened a second 60-day comment period from September 8, 2017, through November 7, 2017. The Service also made access to the DEIS more readily available by providing electronic copies of the DEIS to three additional libraries in the region immediately following the three public meetings conducted in June 2017 and sending out CDs of the DEIS and accompanying documents to members of the public upon request. Furthermore, notices were sent to all libraries (North Platte, Logan County, Hooker County, Garfield County, Ewing Township, Ainsworth, Valentine, Thomas County, and Sandhills Public Schools) following issuance of the Notice of Availability for the second public review period of the DEIS. The Service convened a Question and Answer Public Forum in October of 2017 regarding the R-Project.

The Open Meetings Act applies only to state agencies and committees. It does not apply to a meeting convened by a federal agency, such as the Service.

Concern Statement 5.22-3: The rationale for consideration of a permit by the Service rather than following the Service's established purpose of protecting the environment and endangered species is not clear and contradictory to its concern with the R-Project being located in such a fragile and undeveloped area as the Sandhills. The rationale for issuance of a permit should be explained in the FEIS.

Response: Section 1.9, *U.S. Fish and Wildlife Service's Decisions and Related Actions*, of the FEIS describes the criteria for issuing a permit and the decision to be made by the Service related to the R-Project. Section 10(a)(2)(B) of the ESA requires that the Service issue a permit if the applicant meets all the permit issuance criteria (50 CFR 17.22(b)(2)). Therefore, the Service cannot simply deny a permit because of concerns not related to ESA-listed species (e.g., the Sandhills).

Concern Statement 5.22-4: Information should be provided in the FEIS on the process or action that would be implemented if an endangered species was affected by the R-Project (e.g., paying a fine). Would NPPD be required to pay a fine for killing beetles or whooping cranes if they apply for a permit?

Response: Applying for a permit involving the incidental take of listed species does not require payment of a fine for the take. However, the applicant must show how they would minimize and mitigate for impacts associated with the take of such species. The applicant must also demonstrate in its HCP that the funding is available to implement the minimization and mitigation measures. This topic is addressed in Chapter 6, *Regulatory and Permit Requirements*, of the FEIS.

Concern Statement 5.22-5: NPPD should be encouraged to conduct further studies to address public comments generated during the NEPA process.

Response: In preparation of the FEIS, additional impact analyses were conducted for wildlife, paleontological resources and cumulative impacts related to future wind energy development and added to the FEIS.

Concern Statement 5.22-6: The FEIS should also clarify whether additional NEPA documentation would be required for the transmission and collector lines and substations associated with wind energy projects?

Response: Developers of future wind energy projects that interconnect to the R-Project may be required to obtain federal authorization if some aspect of their project involves a federal action (e.g., issuance of a permit for take of a federally listed species or authorization to connect to a federally owned and managed transmission line). Federal authorizations are typically subject to NEPA. Section 4.4, *Cumulative Impact Analysis*, of the FEIS has been revised to clarify when additional NEPA documentation would be required for future wind energy projects.

Concern Statement 5.22-7: The R-Project is not just about the beetle; the DEIS should address all environmental resources within the Sandhills.

Response: Chapter 3, *Affected Environment and Environmental Consequences*, of the FEIS addresses 17 environmental resource topics, including soils and geology, vegetation, special status species, wildlife, socioeconomics, environment justice, noise, cultural resources, health and safety, and visual resources.

Concern Statement 5.22-8: Because the take of migratory birds is an inevitable result of the R-Project, under the plain terms of the Migratory Bird Treaty Act (MBTA), the Project cannot lawfully proceed in the absence of a permit issued by the Service in accordance with its own regulations. Additionally, because of the likelihood of collision and disturbance to bald eagles from the R-Project, it is clear that the Project cannot lawfully proceed in the absence of a permit

issued pursuant to the Bald and Golden Eagle Protection Act (BGEPA) and the MBTA. By the same token, the Service cannot issue a permit/HCP authorizing the Project without simultaneously ensuring that the Project would be constructed and operated in such a manner as to comply with BGEPA, including BGEPA's permitting requirement. To do otherwise would place the Service in legal jeopardy under the Administrative Procedure Act, which prohibits federal agency action that is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law."

Response: NPPD has voluntarily prepared an MBCP to address species covered by the MBTA. After review of the minimization measures in the MBCP for this Project, the Service's Region 6 Migratory Bird Management Office stated that the expected risk to bald or golden eagles is low and take of a bald or golden eagle is not anticipated (see Sections 3.7.2 and 3.7.3). If a permit were to be issued for the R-Project under the ESA, the Service would not issue separate permits for MBTA and BGEPA compliance.

On December 22, 2017, the U.S. Department of the Interior's (DOI) Office of the Solicitor Memorandum M-37050 titled *The Migratory Bird Treaty Act Does Not Prohibit Incidental Take* (<https://www.doi.gov/sites/doi.gov/files/uploads/m-37050.pdf>) concludes that the MBTA's prohibitions on pursuing, hunting, taking, capturing, killing, or attempting to do the same apply only to affirmative actions that have as their purpose the taking or killing of migratory birds, their nests, or their eggs. This memorandum only applies to agencies within DOI.

The Service issued Guidance on the recent M-Opinion affecting the MBTA on April 11, 2018, and on June 14, 2018, titled *Destruction and Relocation of Migratory Bird Nest Contents* (<https://www.fws.gov/policy/m0407.pdf>, <https://www.fws.gov/policy/a1m0407.pdf>). The net effect of DOI Memorandum M-37050 is that all DOI agencies, including the Service, have adopted the policy that unintentional or incidental take of migratory birds and/or migratory bird nests that are active, is not a violation of the take prohibition of MBTA. Per DOI Memorandum M-37050 and DOI policy, MBTA take prohibitions only apply to direct and purposeful actions where the intent is to take migratory birds or their active nests with eggs or young.

Concern Statement 5.22-9: Will the transcripts of the three public meetings be made available for public access and review? The public comment period should not be closed until all requested information has been made available for public review.

Response: The entire transcript from each of the three public meetings is part of the Administrative Record and can be made available upon request. Additionally, these transcripts were separated into comments from each individual and processed as individual comments that were coded, assigned to a specific concern statement, and responses prepared. All substantive comments emerging from the three public meetings are included in this *Analysis of Public Comments report*.

Concern Statement 5.22-10: Does the Service consider the potential effects of herbicide spraying when evaluating whether to issue a permit to NPPD for the R-Project?

Response: Section 3.5.2, *Vegetation, Direct and Indirect Effects*, of the FEIS addresses the issue of herbicide spraying. The limited use of herbicide for ROW maintenance and control of noxious weeds during restoration is not expected to cause take of the beetle. The Service's Section 7 Biological Opinion analyzes all expected take of the beetle, which does not include herbicide use.

Concern Statement 5.22-11: Commenter questions the rationale for a number of conclusions reached in the DEIS, including: 1) justification for eliminating alternative routes, 2) the rationale for not including whooping cranes as a covered species, 3) low impact rating for migratory birds, 4) decisions regarding cultural resources using incomplete data, 5) soils impact assessment, and 6) weak cumulative impact analysis.

Response: Each of the issues raised by the commenter were also raised by numerous other public commenters. The Service responded to each issue captured by concern statements under the appropriate code for each topic. The responses to these concern statements indicate where text of the FEIS has been revised, as appropriate, to address these issues and concerns.

Concern Statement 5.22-12: The entire R-Project final route should be assessed for potential effects upon cultural resources, not just the permitted area.

Response: The effects analysis conducted for Section 3.10, *Cultural Resources*, in the FEIS involved the entire route, not just the federal undertaking associated with issuance of the permit. However, the scope of the federal undertaking was modified after issuance of the DEIS and now includes the following:

1. *American Burying Beetle Permit Area*—The segment of the R-Project transmission line where the permit authorizes incidental take of the beetle. The permit area encompasses the route from Stapleton, Nebraska to the Holt County Substation.
2. *Bird Flight Diverter Segments*—All segments of the R-Project transmission line where bird flight diverters are to be installed to avoid take of the whooping crane, Interior least tern, and piping plover.
3. *Offsite American Burying Beetle mitigation areas*—A 600-acre parcel in Blaine County for which NPPD has an option to purchase for purposes of offsite beetle mitigation. Management of that parcel as mitigation for take is part of the Undertaking.

For purposes of the Section 106 consultation, the APE for direct effects is defined as: 1) for the transmission line, the APE is 150 feet on each side of centerline for a 300-foot-wide survey corridor; 2) for the access routes that occur outside the transmission line survey corridor, the APE is 50 feet on each side of centerline for a 100-foot-wide survey corridor; and 3) for all work areas, the APE includes the work area and the area 50 feet beyond the perimeter of the work area including pulling and tensioning sites, fly yards/assembly areas, and construction yard/staging areas. The APE for indirect effects is an area 10 miles on either side of the transmission line centerline within the scope of the undertaking for a 20-mile-wide corridor. Additional

information regarding the revised APE can be found in Section 3.10.4, *Area of Potential Effects*, of the FEIS.

Concern Statement 5.22-13: A commenter questions how important it is to know exactly where the transmission line would be placed to complete an accurate assessment of potential impacts.

Response: Minor adjustments made throughout the routing and easement acquisition process are typical when developing a transmission line route. As noted in Section 3.1, *Approach to Characterizing Baseline Conditions and Conducting Effects Evaluation, Environmental Effects*, of the FEIS, disturbance acres as analyzed in the FEIS are conceptual and based on a preliminary design. As such, some of the disturbance areas may and likely will change between the conceptual and final design with a goal to reduce total disturbance and impacts on areas of concern to landowners. NPPD would consider minor adjustments to the proposed route design only if they would not increase the total temporary and permanent disturbance amounts above what was reported for the final route in the FEIS and would not increase impacts on other sensitive resource areas (e.g., wetlands, cultural resources, biological resources). Thus, as noted in the Section 3.1 of the FEIS, the disturbance estimates as reported provide an adequate basis for the analysis of environmental effects.

Concern Statement 5.22-14: The R-Project description needs to be modified to include future wind energy project locations; the impacts of the entire project must be evaluated. Surveys of beetle habitat should be conducted and the locations of wind energy projects moved if they cross suitable beetle habitat.

Response: The federal action requiring NEPA analysis associated with the R-Project is the issuance of a permit for take of the beetle and implementation of its terms and conditions, which includes the HCP and associated conservation measures. The federal action does not authorize the R-Project transmission line nor any wind energy projects that may connect to the R-Project in the future. The cumulative effects of future wind energy development connecting to the R-Project are discussed within the impact analysis for each environmental topic contained in Chapter 4, *Cumulative Impacts*. NEPA documentation may need to be prepared if some aspect of the project involves a federal action (e.g., issuance of a permit for incidental take of a federally listed species or authorization of a connection to a federally owned and managed transmission line). Section 4.4, *Cumulative Effects Analysis*, of the FEIS has been revised to clarify when additional NEPA documentation would be required for future wind energy projects.

Concern Statement 5.22-15: Why is the APE under NHPA not the entire 225 miles of NPPD's final route for the R-Project?

Response: Potential effects on cultural resources are addressed for the entire route in the FEIS. The scope of the federal undertaking was modified after issuance of the DEIS and now includes the following:

1. *American Burying Beetle Permit Area*—The segment of the R-Project transmission line where the permit authorizes incidental take of the beetle. The permit area encompasses the route from Stapleton, Nebraska to the Holt County Substation.
2. *Bird Flight Diverter Segments*—All segments of the R-Project transmission line where bird flight diverters are to be installed to avoid take of the whooping crane, Interior least tern, and piping plover.
3. *Offsite American Burying Beetle Mitigation Areas*—A 600-acre parcel in Blaine County for which NPPD has an option to purchase for purposes of offsite beetle mitigation. Management of that parcel as mitigation for take is part of the Undertaking.

For purposes of the Section 106 consultation, the APE for direct effects is defined as: 1) for the transmission line, the APE is 150 feet on each side of centerline for a 300-foot-wide survey corridor; 2) for the access routes that occur outside the transmission line survey corridor, the APE is 50 feet on each side of centerline for a 100-foot-wide survey corridor; and 3) for all work areas, the APE includes the work area and the area 50 feet beyond the perimeter of the work area including pulling and tensioning sites, fly yards/assembly areas, and construction yard/staging areas. The APE for indirect effects is an area 10 miles on either side of the transmission line centerline within the scope of the undertaking for a 20-mile-wide corridor. Additional information regarding the revised APE can be found in Section 3.10.4, *Area of Potential Effects*, of the FEIS.

Concern Statement 5.22-16: Several items identified in the scoping report as concerns of the general public were not adequately addressed in the DEIS and need further analysis.

Response: The concerns referenced in the comment below were included in the Scoping Summary Report (Appendix A, *Scoping Summary Report*, of FEIS) as examples of concerns expressed by members of the general public. These concerns were factored into the visual effects analysis conducted for the entire route discussed in Section 3.12, *Visual Resources and Aesthetics*, of the FEIS.

HCP100: Draft Habitat Conservation Plan

Concern Statement 5.23-1: While Section 6.2.1 of the HCP refers to the “avoidance of sub-irrigated wet meadow and mesic grassland,” it appears multiple tower structures would be placed in this habitat type, especially in southern Holt County. Please confirm whether this is a correct statement.

Response: Section 6.2.1, *Conservation Plan, Avoidance and Minimization Measures*, of the HCP provides details as to how wet meadows and mesic grasslands were identified for avoidance and specifically states: “to the extent feasible, sites were located to avoid impacts on verified and potential wetlands.” A complete avoidance of all sub-irrigated wet meadows and mesic grasslands was not possible in design of the R-Project. As described in Section 6.3, *Other Regulatory Requirements and Permits*, of the EIS, the U.S. Army Corps of Engineers administers Section 404 regulating discharge of dredged or fill materials in the jurisdictional wetlands and waters of the United States. NPPD is working with the U.S. Army Corps of Engineers on any issues related to jurisdictional wetlands.

Concern Statement 5.23-2: What is the anticipated effect of herbicide spraying on beetle habitat and the health of the beetle population along the R-Project transmission line? Would beetle food source carcasses still be safe for consumption after spraying?

Response: Section 6.0, *Herbicide Use*, of the Restoration Management Plan and Sections 2.4.3, *Noxious Weed Management*, 2.4.4, *ROW Tree Clearing*, and 2.7.3, *ROW Vegetation Management Program*, of the HCP describe herbicide use. NPPD’s expected use of herbicides would primarily be associated with the possible need to control noxious weeds, while restoring vegetative cover to disturbed areas. The application of herbicide treatments for noxious weeds would not result in take of the beetle or impact their carrion food sources because spraying would be targeted specifically to noxious weed populations and would not be broadcast across large portions of the landscape. Additionally, herbicide spraying would be completed during the day when individuals are underground, eliminating the possibility that herbicides could be applied directly to a beetle. Application of restricted-use herbicides would be approved by Service and NGPC and would be applied by a licensed applicator. Once restoration is complete, NPPD would discontinue the use of herbicides in these areas. Application of herbicides to control noxious weeds would have a positive effect on local native vegetation, likely creating better habitat for the beetle and its food sources. Restoration of the vegetative cover to disturbed areas, therefore, is anticipated to have a positive effect on beetle habitat and the health of the beetle population.

Concern Statement 5.23-3: While conducting beetle surveys, other parameters should be measured; including soil temperature, wind speed and direction, and humidity.

Response: Biologists, who are permitted under Section 10(a)(1)(A), completed the ESA beetle surveys for the R-Project strictly following the Service’s established survey protocol—*Region 6*

Presence/Absence Survey Protocol, American burying beetle (Nicrophorus americanus) (USFWS 2016). These survey protocols require that surveyors collect the necessary precipitation, temperature, and wind information from the closest weather station to the survey site to establish that surveys were conducted when conditions were favorable for beetle activity. This information is included by the surveyor on the survey data collection form, which is submitted to the Service for review.

Concern Statement 5.23-4: Concern was expressed about the use of herbicides on property that is certified organic. One commenter asks whether NPPD would have the authority to spray herbicides on land that has been classified as organic by the USDA, NRCS, yet was obtained through eminent domain. Another commenter also asks whether landowners can participate in the decision as to what herbicides would be applied to their properties.

Response: NPPD would work with all landowners, including those landowners who are involved with organic farming/agriculture. Landowners would need to notify NPPD of specific requirements and be willing to meet with NPPD to help determine the best approach for meeting all needs, including ensuring that organic labeling requirements can be met.

Concern Statement 5.23-5: Concern was expressed that unknown weed seeds or undesirable plants may be introduced during R-Project restoration, causing harm to existing “ecological” sites.

Response: Section 5.2, *Noxious Weeds, Preventive Measures*, of the Restoration Management Plan; Section 2.4.3, *Noxious Weed Management*, of the HCP; and Section 3.5, *Vegetation*, of the FEIS describe preventative measures to minimize the spread of noxious weeds. Section 2.4.3, *Noxious Weed Management*, of the HCP states seed mixes would be certified noxious weed free.

Concern Statement 5.23-6: The draft HCP uses the term “to the maximum extent practicable” when describing mitigation measures for the beetle. The commenter asks who determines what is practicable.

Response: Before issuing a permit, the ESA requires the Service to determine that the applicant would minimize and mitigate the impact of the taking to the maximum extent practicable (16 United States Code [U.S.C.] 1539(a)(2)(B)). This determination is made by the Service in a set of permit findings.

Concern Statement 5.23-7: Concern was expressed that steel lattice towers have never been used in the Sandhills and that they might affect the water table or the quality of groundwater due to corrosion of the steel structures.

Response: The foundation of the steel lattice towers would be screw-in helical piers that would not affect the water table. NPPD contracted corrosion specialists to analyze groundwater and any potential effects it may have on the steel foundations. Groundwater samples were taken at 22

different locations along the route. The water and soil sampling results confirmed some corrosive potential in the Project area. NPPD enlisted a second corrosion expert to review and confirm the data. In response, a protective coating would be applied to the steel lattice towers to ensure the integrity of the steel and prevent corrosion impacts on groundwater. In addition, NPPD would install test anchors that can be monitored during the life of the Project for corrosion.

Concern Statement 5.23-8: Commenter is concerned about the potential of increased lightning strikes because of the presence of the transmission line tower structures and the increased risk to grazing cattle.

Response: There is no danger of lightning refracting off the towers and killing livestock. Section 2.1.4, *Overhead Shield (Ground) Wires*, of the HCP describes the overhead shield (ground) wires that would be installed on the R-Project transmission line to protect the transmission line conductors from direct lightning strikes. All electrical current from lightning strikes would be transferred through the shield wires and structures to the ground. The use of shield wires on transmission lines is an industry standard for lightning-strike protection.

Concern Statement 5.23-9: Would NPPD wash all equipment before leaving one person's property and entering another's property?

Response: As indicated in Section 5.2, *Noxious Weeds, Preventive Measures*, of the Restoration Management Plan, all construction vehicles and equipment that have been in areas known to contain noxious weeds would be cleaned before entering and leaving the ROW. Construction vehicles and equipment would also be cleaned when entering each county for the first time, regardless of where the equipment or vehicles worked previously. Equipment and vehicles would be cleaned using a high-pressure washer or air compressor.

Concern Statement 5.23-10: Concern was expressed about the disposal method of trees and brush removed from the R-Project ROW, particularly eastern red cedar.

Response: The contractor that NPPD hires to engage in tree clearing would be responsible for proper disposal of trees and brush. The contractor would be allowed to make arrangements with landowners for handling and disposal. How trees and brush are disposed after removal can also depend on the type of trees or brush removed. No eastern red cedar trees would be moved to locations beyond which it naturally occurs during NPPD's tree removal process. Eastern red cedar is a native tree prevalent throughout Nebraska in both intentional plantings, such as shelterbelts, and natural establishments.

Concern Statement 5.23-11: Concern was expressed about the creation of access roads and the damage that would be done to the fragile soils of the Sandhills and the ecosystem overall. Areas along the proposed route do not have existing roads in proximity.

Response: Section 2.4.9.5, *Access for Construction*, of the FEIS and Section 2.4.5, *Access for Construction*, of the HCP describe access for construction. NPPD has committed to using existing roads and two-tracks, wherever feasible, to access transmission line structure locations during construction. The HCP and FEIS acknowledge that areas within the Sandhills do not have an existing road network. In these areas, overland access would be used to the greatest extent possible where existing access is not available; would be conducted with low-ground-pressure tracked or rubber-tired equipment; would not require improvements (blading or fill); and would involve driving over vegetation rather than removing it. In addition, NPPD would coordinate with landowners to identify ways to minimize land disturbance when siting necessary access.

Concern Statement 5.23-12: Concern was expressed that the gravel used for access roads would mix with the shallow topsoil layer and be removed (with the gravel) at the construction is complete. The commenter also asks about the final deposition of the gravel/soil mixture and what material would be used to replace any displaced topsoil.

Response: Section 2.4.9.5, *Access for Construction*, of the FEIS and Section 2.4.5, *Access for Construction*, of the HCP describe access for construction. As noted in Section 2.4.5 of the HCP, “improvements to existing access (including two-tracks) and new access routes may require blading and the placement of fill material on geofabric where required.” Placement of fill on geofabric would eliminate any mixture of gravel with the topsoil. Using matting is another option that would avoid the mixture of fill material with topsoil. Upon completion of construction, all fill, including gravel, would be removed; soils would be de-compacted; and the area would be re-vegetated to the appropriate specifications. NPPD would restore all temporary work areas and access roads to original conditions to the greatest extent feasible. If initial restoration efforts are unsuccessful, NPPD would continue to implement restoration measures until restoration goals are met as specified in the Restoration Management Plan. In addition, NPPD has and would continue to coordinate with landowners to identify ways to minimize land disturbance when siting necessary access.

Concern Statement 5.23-13: Concern was expressed that the topsoil and groundwater table of sub-irrigated grass meadows would be severely affected during R-Project construction activities, including siting of a pulling and tension site in sub-irrigated wet meadows, particularly during wet years.

Response: Using construction matting to reduce potential impacts on wetlands, sub-irrigated wet meadows, and mesic grasslands is addressed in Sections 2.4.5, *Access for Construction*, 2.4.9, *Pulling and Tensioning Sites*, and 2.6.1, *Helicopter Construction*, of the HCP. Construction matting would be removed upon completion of construction.

Concern Statement 5.23-14: What would the down draft from helicopter usage do to the sandy soils around steel lattice tower structures?

Response: No material impacts are anticipated from helicopter downdraft at structure locations. However, as noted in Section 2.6.1, *Helicopter Construction*, of the HCP, “matting or the use of a water truck may be required to spray the site to reduce dust.”

The areas where structures would be placed by helicopter are in grass stabilized sand areas. No structures would be placed in existing blowout areas. If a helicopter is used to set a monopole, there is no open hole because the holes are filled with concrete to form the foundation on which the pole would be placed. For steel lattice tower installation, NPPD typically uses helical pier anchors for the foundation, and the anchors screw into the ground, so again there is no open hole at the time a structure is set by the helicopter.

If the rotor wash blows some sand or other loose surface materials, the R-Project construction contractor would wet the area or use matting to contain the dust or materials that may blow. Helicopters are used in lots of construction areas, and NPPD has used helicopters to install structures in many different land types and has found no documentation indicating that helicopter down draft causes any impacts that cannot be controlled by wetting the area and/or using matting.

Concern Statement 5.23-15: Concern was expressed about the effects of helicopter use on cattle grazing during construction of the R-Project because of enrollment in NRCS’s Conservation Stewardship Program rotational grazing plans cannot be altered. Rotational grazing plans may conflict with NPPD’s construction schedule.

Response: Sections 3.8.2.2, *Land Use, Alternative A: Tubular Steel Monopole and Steel Lattice Tower Structures*, and 3.17.2.2, *Socioeconomics, Alternative A: Tubular Steel Monopole and Steel Lattice Tower Structures*, of the FEIS discuss potential impacts on livestock and grazing during construction. As indicated in those sections, NPPD would coordinate with landowners to determine whether cattle are in an area and what options are available to relocate them before helicopter use begins. NPPD would work with landowners to determine the actual extent of potential impacts or disruption of use that the landowner may experience. It is not likely that the use of entire pastures would be restricted, particularly if specific areas can be fenced. NPPD would work with each landowner on a case-by-case basis to determine the best management approach and potential extent of impacts. Ultimately, the landowner and NPPD would negotiate settlement terms and arrangements.

Concern Statement 5.23-16: A commenter asks who pays for access and any associated damages during relocation of the distribution lines.

Response: Relocation of distribution lines, including access, is considered part of R-Project construction. NPPD would be responsible for all costs associated with distribution line relocation and would compensate landowners for any damages.

Concern Statement 5.23-17: The HCP should be modified to clarify who would have responsibility for maintaining the grounding of metal fences, metal gates, and pipelines near or within the ROW for the next 50 years.

Response: Section 2.7.2, *Safety*, of the HCP describes safety aspects of operating and maintaining the completed R-Project transmission line. All fences, metal gates, and pipelines that cross or are within the transmission line ROW would be grounded to prevent electrical shock. NPPD operation and maintenance personnel would be responsible for maintaining electrical grounds.

Concern Statement 5.23-18: Commenter is concerned about the vagueness of language in the draft HCP concerning how landowners would be compensated for damages to property during emergency repairs, considering the limited access and the severity of winter storms in the Sandhills.

Response: NPPD would compensate landowners for damages to property that occurs during performance of emergency repairs.

Concern Statement 5.23-19: More than a single aerial survey should have been conducted for blowout penstemon during the blooming period.

Response: Section 3.3.10, *Blowout Penstemon (Penstemon haydenii)*, of the HCP identifies blowout penstemon surveys conducted in support of the R-Project in 2015 and 2016 with no blowout penstemon found. Surveys were also conducted in 2017, and no blowout penstemon were found. The HCP will be revised to reflect the completion of all surveys and results, including those conducted in 2017.

RMP100: Draft Restoration Management Plan

Concern Statement 5.24-1: The Restoration Plan needs to be more definitive about how restoration activities following emergency repairs would be implemented and how NPPD would work to control access and associated disturbance during implementation of these type of activities. This plan should be referenced in the FEIS.

Response: Section 2.4.13.6, *Emergency Repairs*, of the HCP states that areas disturbed during emergency repairs would be restored if conditions require restoration efforts. Section 3.5.2.2, *Vegetation, Alternative A: Tubular Steel Monopole and Steel Lattice Tower Structures*, of the FEIS states the same avoidance and minimization measures applied during construction would be applied during emergency repairs and restoration activities. Chapter 3.0, *Restoration*, of the Restoration Management Plan has been updated to expressly state that disturbance from emergency repairs would be restored if conditions require restoration efforts. These restoration efforts would be held to the same performance standard identified for initial construction, which is discussed in Section 4.2, *Performance Standards*, of the Restoration Management Plan.

As noted in Section 2.7.6 of the HCP, necessary access for emergency repairs would follow the same access scenarios identified for construction, to the extent practicable. Instances where the same access identified for construction may not be used include repairs that require larger equipment than was used during construction, stream crossings that have changed due to changes in stream course during permit duration, and landowner construction of a new road or two-track that is more efficient for emergency repair access.

Concern Statement 5.24-2: The Restoration Management Plan should be more definitive as to what activities would actually be implemented rather than using vague terminology, such as “we may do this or we may do that.”

Response: The R-Project traverses a wide range of ecological conditions even within the Sandhills. Those conditions range from very dry (xeric) to very wet (mesic), and the plant communities, some of which have been modified from native communities to increase production from grassland and haylands, are highly variable. Because of this variation, definitive statements about the methods used to restore lands would limit NPPD’s ability to use the local knowledge, respond to landowner desires, and address unique situations when determining the best approach at restoring any given location. Therefore, instead of definitive restoration activities, NPPD must meet the definitive restoration success criteria, as presented in the HCP and Restoration Management Plan, for restoration to be considered successful. Section 6.4, *Performance and Success Criteria*, of the HCP and Section 4.2, *Performance Standards*, of the Restoration Management Plan describe the restoration success criteria.

Additionally, Section 6.5, *Adaptive Management*, of the HCP and Section 4.4, *Restoration Adaptive Management*, of the Restoration Management Plan address an adaptive management strategy that NPPD would implement if restoration is not successful after initial efforts. Section 6.2.2, *Mitigation Measures*, of the HCP and Section 1.1.1, *Restoration Zones*, of the Restoration Management Plan also describe the establishment of an escrow account to provide funding to

implement measures that ensure meeting success criteria for restoration of beetle habitat if NPPD is no longer undertaking efforts to meet such criteria.

Concern Statement 5.24-3: The Restoration Management Plan (and FEIS) should discuss whether any of the proposed distribution lines scheduled to be relocated would be placed directly beneath the R-Project transmission line within the same ROW. Of particular concern is placement of the distribution line over a wet meadow used by sandhill cranes directly below the transmission line.

Response: Section 2.6.2, *Distribution Power Line Relocation*, of the HCP addresses distribution line relocation. Because of power-line spacing regulations required for maintaining facilities, the existing distribution power lines would be relocated outside the R-Project ROW or, in the case of underground lines, to the extreme edge of the R-Project ROW. Section 4.1, *Whooping Crane*, of the HCP, Section 6.2 of the MBCP, *Installation of Bird Flight Diverters to Minimize Collision*, and Sections 3.6.2.2, *Wildlife, Alternative A: Tubular Steel Monopole and Steel Lattice Tower Structures*, 3.7.2, *Bald Eagle*, 3.7.3, *Golden Eagle*, 3.7.4, *Interior Least Tern*, 3.7.5, *Piping Plover*, 3.7.6, *Rufus Red Knot*, and 3.7.7, *Whooping Crane*, of the FEIS address line marking to reduce avian collision.

In wet meadow areas, the static wire of the transmission line would be marked with bird flight diverters. Based on studies that include hundreds of thousands of observations of sandhill crane behavior at power lines, they very rarely fly under a power line. Morkill and Anderson (1991) observed over 350,000 sandhill crane interactions with power lines, and none flew below the line. Therefore, any distribution line in proximity to a transmission line is unlikely to be hit by cranes because the birds would pass over the transmission line.

Concern Statement 5.24-4: The Restoration Management Plan should be modified to indicate that construction vehicles would be washed prior to entering a different landowner's property and to discuss the possibility of infiltration into the soils by contaminants during washing due to porous soils. Concerns were also expressed about the use of materials from other regions that may contain noxious or invasive weeds listed in Nebraska. Mulching for seedbeds should be done with "certified weed free" hay rather than "inspected" hay.

Response: Section 5.2, *Preventive Measures*, of the Restoration Management Plan, Section 2.4.3, *Noxious Weed Management*, of the HCP, and Section 3.5, *Vegetation*, of the FEIS describe preventative measures to minimize the spread of noxious weeds. Preventative measures include the inspection of source material to ensure that it is noxious weed-free before use and transport. That inspection is intended to identify any noxious weeds listed in Nebraska.

Section 5.2 of the Restoration Management Plan indicates that all construction vehicles and equipment that have been in areas known to contain noxious weeds would be cleaned before entering and leaving the ROW. Construction vehicles and equipment also would be cleaned when entering each county for the first time, regardless of where the equipment or vehicles

worked previously. Equipment and vehicles would be cleaned using a high-pressure washer or air compressor.

The identified cleaning methods would not contaminate soils, surface water, or groundwater. Construction vehicles and equipment used on the construction site would be properly maintained and serviced to prevent fuel and oil leaks. Any sediment and weed seeds contained in the runoff from washing construction vehicles and equipment would either remain on the ground surface at the cleaning site or would be contained onsite with erosion and sediment control measures to prevent runoff into nearby streams.

Options for mulching seedbeds include, but are not limited to, purchasing certified weed-free hay or straw, specifying that hay or straw be from sources located in the Sandhills, contracting with local landowners for hay from native meadows, and using hay from local areas restored in the past with native grasses. These options would all be weed free. Language has been added to the Restoration Management Plan that describes the various approaches that may be used.

Concern Statement 5.24-5: The temporary disturbances referred to in the Restoration Management Plan are actually long term because of the fragility of the Sandhills soils and the difficulty of restoring native vegetation.

Response: The term *temporary disturbance*, as used in the Restoration Management Plan, the FEIS, and the HCP, is used to describe an area where the vegetative cover and/or soils have been disturbed, but where actions would be taken to restore the vegetative cover. This term is distinguished from *permanent disturbance* where the vegetative cover of a disturbed area is not restored but is replaced by a non-vegetated area, such as a substation, a pole foundation, or other infrastructure, that is left in place. See Table 4-1, *Temporary and Permanent Disturbance Estimates for R-Project Activities*, of the HCP for a complete accounting of temporary and permanent disturbance acres.

NPPD would restore all temporary work areas and access roads to original conditions to the greatest extent feasible. If initial restoration efforts are unsuccessful, NPPD would continue to implement restoration measure until restoration goals are met. NPPD's restoration planning team; private landowners; local USDA, NRCS staff; and other rangeland experts would be consulted regarding the appropriate techniques, seed mix, and rate to re-vegetate areas disturbed during construction.

Concern Statement 5.24-6: If an irrigation well is located within the ROW of NPPD's final route, who pays for the relocation of the well and who determines the location of the new well?

Response: NPPD is responsible for the cost of the well relocation. NPPD would work with the landowner to identify a mutually agreed upon new well location that would allow for the well to serve the landowner, meet well-siting standards, and meet safety clearance criteria. As stated in Section 2.6.3, *Well Relocation*, of the HCP, new wells would likely be relocated approximately 150 feet from their current locations.

Concern Statement 5.24-7: The Restoration Management Plan discusses use of “temporary fencing” to keep cattle out of restored area; who pays for and maintains the fencing? Would NPPD remove the fencing when restoration is complete?

Response: NPPD is responsible for the cost of materials for temporary fencing. NPPD is also responsible for making arrangements and paying for maintenance of the fence. On past projects, NPPD has at times worked out a mutual agreement with landowners whereby the landowners monitor and maintain the fence while NPPD provides the materials or reimburses landowners for materials and labor. As noted in Section 3.3.5, *Restoration Area Protection*, of the Restoration Management Plan, temporary fencing may be in place “until such time that vegetation is adequately restored.” NPPD would be responsible for making arrangements to remove the fence when there is no longer a need. In some instances, an arrangement is made with the landowner to complete removal, allowing the landowner to keep the fencing materials (e.g., posts, wire, and solar charger) and be reimbursed for labor. Section 3.3.5 of the Restoration Management Plan has been revised to clarify NPPD’s responsibilities with respect to fencing for restoration purposes.

Concern Statement 5.24-8: The Restoration Management Plan indicates that seeding of restoration areas might be deferred until after the growing season if it is part of a pasture rotation system. Would this mean that the entire pasture could not be grazed? If so, would the landowner be reimbursed for the lost grazing period and other damages?

Response: NPPD would work with landowners to determine the actual extent of potential impacts or disruption of use that the landowner may experience. It is not likely that the use of entire pastures would be restricted, particularly if specific areas can be fenced. NPPD would work with each landowner on a case-by-case basis to determine the best management approach and potential extent of damages. Ultimately, the landowner and NPPD would negotiate settlement terms and arrangements.

Concern Statement 5.24-9: Section 4.1 of the Restoration Management Plan indicates that reference plots would be sampled each year until the success criteria have been achieved. Who developed the success criteria and who would ultimately determine whether these criteria have been met? Would the landowners be able to participate in this process?

Response: Section 6.4, *Performance and Success Criteria*, of the HCP and Section 4.0, *Monitoring*, of the Restoration Management Plan present the restoration success criteria. NPPD developed and the Service approved the success criteria as a means to ensure that beetle habitat is restored. NPPD would determine whether the success criteria have been met by having qualified restoration specialists complete surveys of restored areas using the methodology identified in Section 4.0 of the Restoration Management Plan. The Service would review the results of Effectiveness Monitoring as described in Section 4.3, *Effectiveness Monitoring Reporting*, of the Restoration Management Plan and Section 6.6, *Reporting*, of the HCP.

Landowners would be able to participate in the restoration process as described in the Restoration Management Plan, if they so choose.

Concern Statement 5.24-10: What chemicals is NPPD planning to use for vegetation control and what would be the effect be on wildlife? Would NPPD's use of these chemicals limit landowners' ability to produce organic products free of chemicals? Do landowners have the option of not having herbicides applied to their properties, primarily for the purpose of raising organic products? Also, can landowners select not to have shrubs or trees, which have been approved to exist within the ROW, sprayed or damaged? Who within NPPD would approve these requests?

Response: Section 6.0, *Herbicide Use*, of the Restoration Management Plan and Sections 2.4.3, *Noxious Weed Management*, 2.4.4, *ROW Tree Clearing*, and 2.7.3, *ROW Vegetation Management Program*, of the HCP describe herbicide use for the R-Project. As stated in these sections, herbicide application would be limited to areas with noxious weed infestations and tree stumps that remain in the ROW; no large-scale application of herbicides is anticipated as part of the R-Project. Determination of the herbicides to be applied would be done on a case-by-case basis and would depend largely on the vegetation to be controlled. Other factors include weather conditions, time of year, and surrounding land use. All herbicides would be applied in accordance with label instructions.

NPPD would work with all landowners, including those landowners who are involved with organic farming/agriculture, and consider proposed modifications to NPPD's plan for herbicide use. Landowners would need to notify NPPD of specific requirements and be willing to work with NPPD to help determine the best approach for meeting all needs, including ensuring that the organic labeling requirements can be satisfied.

As stated in Section 2.4.4, *ROW Tree Clearing*, of the HCP, the removal of mature trees under or near conductors would be done to provide adequate electrical clearance based on North American Electric Reliability Corporation and National Electrical Safety Code standards. For safety purposes, NPPD's practice is to not allow trees or shrubs in the ROW, unless otherwise approved by NPPD. Landowner requests related to trees/shrubs on the ROW should be made through NPPD's Land Management Department and would be managed on a case-by-case basis.

Concern Statement 5.24-11: If NPPD alters wildlife habitat during construction of the R-Project, would it purchase similar habitat as mitigation for this loss?

Response: While habitat disturbances would occur during construction, such disturbances would not result in alteration of wildlife habitat to the degree that would necessitate purchase of mitigation lands, other than for the beetle (see Section 3.6.2, *Wildlife, Direct and Indirect Effects*). NPPD is committed to restoring areas where temporary disturbances occur. As described in Section 6.2.2, *Conservation Plan, Mitigation Measures*, of the HCP, to offset temporary and permanent disturbance impacts on beetle habitat, NPPD has secured an Option to Purchase approximately 600 acres of mitigation lands in fee title that is as suitable beetle habitat.

Concern Statement 5.24-12: The R-Project calls for the complete removal of trees in the ROW. Complete removal would mean removal of entire shelterbelts of trees planted by landowners to protect building sites.

Response: Section 2.4.4, *ROW Tree Clearing*, of the HCP describes tree clearing for the R-Project. As part of the routing process, NPPD identified wooded areas, such as shelterbelts, and considered routing opportunities that would avoid these areas. When all routing factors were considered, avoidance of all tree removal was not possible. For those areas where tree removal was determined to be necessary, NPPD is committed to working with landowners to determine whether removal of trees can be avoided or minimized through minor adjustments to the transmission line on specific parcels (micro-siting), where such adjustments do not result in greater impacts on other land uses or environmental resources.

Concern Statement 5.24-13: Is buffalo grass among the plants and seed mixture NPPD would use to restore disturbed areas?

Response: Buffalo grass is not included in the seed mixes referenced in the Restoration Management Plan. The seed mixes included in the Restoration Management Plan are standard baseline mixes that have been identified for upland areas in the Sandhills by the USDA and NRCS. As stated in the Restoration Management Plan, NPPD would work with landowners to determine specific seed mixes necessary for certain areas. While some pastures may have buffalo grass as a common or dominant species, other pastures may not. If particular landowners have buffalo grass or some other species not listed in the seed mix in their pasture(s), NPPD would work with the individual landowner to develop an appropriate seed mix.

Concern Statement 5.24-14: Section 3.2.4 of the Restoration Management Plan calls for using hay harvested from Conservation Reserve Program (CRP) lands as mulch, but because only a limited amount of hay is harvested from CRP lands, would NPPD actually be using wheat straw as mulch?

Response: Use of hay harvested from CRP lands is included as one option for mulch. Other mulch options, as described in Section 3.2.4, *Erosion Protection*, of the Restoration Management Plan, include native grass hay, wheat straw, or hay. Mulch is used as a means to help stabilize disturbed areas to reduce the risk of wind or water erosion while vegetative cover is being re-established. When available, mulch sources that also carry native seed certainly provide additional value. As availability of such sources may be limited, other sources such as wheat straw would still serve the primary purpose of minimizing wind or water erosion.

Concern Statement 5.24-15: What are *practical* means to habitat restoration as used in the Restoration Management Plan?

Response: The term *practical* is used twice in the document—once related to seeding and once related to use of temporary fencing. In both instances, the term is used in the general sense to

indicate that if the use of one seeding method or fencing practice is not going to be effective in a given situation, then another method would be used to achieve the same objective (e.g., spreading of seed or isolating an area).

Concern Statement 5.24-16: Temporary electric fencing should be used for the entire ROW rather than just selected sites; NPPD should be responsible for maintaining the fence until restoration is complete.

Response: NPPD would provide temporary fencing and maintain it as necessary along disturbed areas where fencing would be beneficial to achieving restoration objectives. Disturbance would not occur along the entire ROW, and restoration would not be required along the entire ROW. Fencing the entire 225-mile length of the ROW would not only be unnecessary but also cause additional and unwarranted disturbance.

Concern Statement 5.24-17: Restoration success should be measured on a 100-percent basis rather than 80 percent as stated in the Restoration Management Plan.

Response: The 80 percent coverage identified in the Restoration Management Plan is one of the criteria that must be met for the restoration to be considered successful. The 80 percent criterion provides a measure to determine that a suitable amount of vegetative cover has been achieved to minimize erosion, allow for the plant community to re-establish, and provide suitable beetle habitat. USEPA's *Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices* considers vegetative cover with a density of 70 percent to be a suitable mitigation measure to prevent erosion. NPPD would complete restoration activities until the performance and success criteria are met on all restoration areas.

Concern Statement 5.24-18: A 5-year monitoring period is insufficient to determine successful restoration of disturbed lands in the Sandhills. Monitoring for the R-Project should be extended by 15 to 20 years and should be conducted by an unbiased party (e.g., NRCS or University of Nebraska).

Response: NPPD anticipates that restoration would be successful on most, if not all, areas within an initial 5-year period. As stated in Section 4.2, *Performance Standards*, of the Restoration Management Plan: "If performance standards are not met within the five-year monitoring period, adaptive management measures, as described in Section 4.4, *Restoration Adaptive Management*, would be implemented and monitoring would be extended until the standards are met." Monitoring is the responsibility of NPPD. However, the Service would review each monitoring report and make it available to public upon request.

Concern Statement 5.24-19: Restoration parameters within the Restoration Management Plan should not differentiate between Zone 1 and Zone 2 areas; they should be treated the same.

Response: As stated in Section 1.1.1, *Restoration Zones*, of the Restoration Management Plan, Zone 1 is defined as disturbance areas within the HCP permit area where disturbance may affect beetle habitat, and Zone 2 is defined as disturbance areas located outside the HCP permit area where disturbance would not affect beetle habitat. This same section also indicates that for Zone 2: “NPPD will employ the same restoration methodologies and monitoring as within Zone 1.”

Concern Statement 5.24-20: What is the source of seeds to be used by NPPD for restoration efforts for the R-Project? What is meant by the term native species and varieties (e.g., are seeds from the Sandhills)? Would seed packages be weed free?

Response: Section 3.3.4, *Seed Mixes*, of the Restoration Management Plan describes in detail how seed mixes, including baseline seed mixes currently identified for use in the Sandhills region, would be selected. As noted in Section 3.3.4, “seed mixes would be certified noxious weed free.” Also as indicated in the Restoration Management Plan, seed mixes may vary and may need to be modified to be compatible with the surrounding vegetation. Specific sources of seed have not been identified at this time. The Restoration Management Plan has been modified to indicate that NPPD would use Nebraska seed varieties when available.

Concern Statement 5.24-21: The proposed seed mixture contained in the Restoration Management Plan should be modified to contain at least 15 percent forbs species.

Response: The seed mixes identified in the Restoration Management Plan are baseline eastern Sandhills seed mixes intended for semi-arid, mesic grassland and wet meadows. As indicated in the plan, seed mixes required may vary and may need to be modified to be compatible with the surrounding vegetation. The variation in vegetative prevalence across the landscape is one of the purposes for using surrounding vegetation to adjust seed mix. If the surrounding vegetation indicates that inclusion of forbs is necessary, the seed mix would be adjusted to include a percentage of forbs representative of the surrounding landscape.

MBCP100: Draft Migratory Bird Conservation Plan

Concern Statement 5.25-1: A stated purpose of the draft MBCP is to “...memorialize NPPD’s commitment to conserve migratory birds.” Concern was expressed that migratory birds are not adequately addressed in the draft MBCP; for example, the issue of fog and potential collision with transmission line shield wires and conductors has not been addressed. Concern was expressed that bird flight diverters would not be sufficient to protect birds, including whooping cranes, from colliding with power lines during dense fog.

Response: Section 5.1.2, *Potential Effects from Operation and Maintenance*, of the MBCP addresses potential impact from avian collision. That section also directs the reader to the APLIC document titled *Reducing Avian Collision with Power Lines: State of the Art 2012* for an in-depth discussion of avian collision factors. Sections 6.2, *Installation of Bird Flight Diverters to Minimize Collision*, and 6.12, *Species Specific Avoidance and Minimization Measures*, of the MBCP describe avoidance and minimization measures that NPPD would implement to reduce collision risk. For instance, NPPD has agreed to apply avian flight diverters to reduce the likelihood of collision by increasing the visibility of the line to birds under all conditions, including fog. Diverters with reflective and glow-in-the-dark surfaces, which are believed to be more effective at reducing avian, including whooping cranes, collision in low-light conditions, would be used at river crossings and other areas identified as areas of bird use during low-light conditions.

See also Sections 3.6.1.4, *Wildlife, Species*; 3.6.2.2, *Wildlife, Alternative A: Tubular Steel Monopole and Steel Lattice Tower Structures*; and 3.7.2, through 3.7.7, *Special Status Bird Species*; of the FEIS and Sections 4.1.2, *Whooping Crane, Potential Effects from Maintenance and Operation*, and 4.1.3, *Whooping Crane, Avoidance and Minimization Measures*, of the HCP for further discussions of avian collision risk and minimization measures. See Section 6.0, *Avoidance and Minimization Strategy*, of the MBCP for a description of other avoidance and minimization measures that NPPD has implemented and would implement to reduce impacts on migratory birds including route selection to avoid avian concentration areas in the study area; use of existing roads and two-tracks for access where available; siting of work areas in previously disturbed areas; helical pier foundations in the Sandhills; helicopter construction of lattice towers; seasonal restrictions and pre-construction surveys during the migratory bird nesting season; adherence to APLIC design standards to eliminate electrocution; restoration of temporary disturbance areas; and additional species-specific measures for federally protected bird species.

Concern Statement 5.25-2: Concern was expressed that placement of 123 miles of bird flight diverters along the R-Project transmission line and another 123 miles on existing transmission lines is not adequate mitigation because the R-Project is located within the Central Flyway and crosses a number of ecologically sensitive habitats with high concentrations of migratory birds, including whooping cranes. The potential for increased mortality from migrating birds colliding with power lines is high, especially in areas like Birdwood Creek, which often has dense fog in the mornings.

Response: Section 3.6, *Wildlife*, and Section 3.7, *Special Status Species*, of the FEIS and Section 5.1.2, *Potential Effects from Operation and Maintenance*, in the MBCP describe the potential impacts on migratory bird species, which includes potential collision with the completed transmission line. Based on this collision risk, NPPD has agreed to implement avoidance, minimization, and mitigation measures to reduce this risk, including the installation of bird flight diverters. The APLIC document titled *Reducing Avian Collisions with Power Lines: The State of the Art in 2012* states that the effectiveness for bird flight diverters ranges from a 50- to 80-percent reduction in avian collision, and the effectiveness of spiral bird flight diverters is a 90-percent collision reduction.

Section 6.2, *Installation of Bird Flight Diverters to Minimize Collision*, of the MBCP and Section 4.1.3, *Whooping Crane, Avoidance and Minimization Measures*, of the HCP fully describe the use of bird flight diverters on the R-Project. Placing bird flight diverters on 123 miles of the R-Project and 123 miles of existing transmission line would be completed to achieve compliance with the Service's *Region 6 Guidance for Minimizing Effects from Power Line Projects within the Whooping Crane Migration Corridor*. By placing bird flight diverters on 123 miles of the R-Project and at least 123 miles of existing transmission line, NPPD would greatly reduce the likelihood of avian collision for all species, as acknowledged in the Service's Region 6 guidelines. Using avian flight diverters would increase the visibility of the line to birds under all conditions, including fog. The placement of line marking devices on the R-Project is based on portions of the line within 1 mile of potentially suitable whooping crane stopover habitat. By marking all portions of the R-Project within 1 mile of potentially suitable habitat and an equal amount of existing lines within the 95 percent sighting corridor for whooping cranes identified by the Service, NPPD would meet the Region 6 guidelines. The Region 6 guidelines state: "marking new and an equal length of existing line length in the migration corridor maintains the baseline condition" from the threat of avian collision.

PN100: Purpose and Need: NPPD's Need for the R-Project

Concern Statement 5.26-1: NPPD has previously stated that the R-Project would not be constructed to accommodate future wind energy projects, so this statement in the FEIS should be clarified.

Response: The FEIS states in Section 1.7, *NPPD's Need for the R-Project*, that one of the three needs for the R-Project is to “provide transmission access to renewable energy resources (i.e., wind energy projects) in an area of Nebraska with wind resources.”

Concern Statement 5.26-2: NPPD has publicly stated that electricity transmitted on the R-Project transmission line would be exported out-of-state, so this issue in the FEIS should be clarified.

Response: As noted in Section 1.7, *NPPD's Need for the R-Project*, of the FEIS, NPPD's purpose and need for the R-Project includes helping to ensure the reliability of the electrical grid, which goes beyond the borders of Nebraska. Once on the grid, electrons are not identifiable as to origin or destination, and they do not stop at state boundaries. However, as noted in Section 1.7, the R-Project would provide a direct benefit to the existing Nebraska area transmission system by increasing the transfer capability across the NPPD system, which lessens the risk of load interruptions from storm damage or other issues on the transmission system. The R-Project would also reduce congestion within Nebraska, which would provide NPPD's customers with access to the lowest-cost generation resources to serve the load within the market.

Concern Statement: 5.26-3 NPPD has not provided an adequate explanation to landowners as to why the R-Project must have a substation at Thedford. The FEIS should provide a more detailed explanation for locating the substation in this location.

Response: As noted in Section 1.7, *NPPD's Need for the R-Project*, of the FEIS, the R-Project was first identified in SPP's *2012 Integrated Transmission Plan 10-Year Assessment Report*, which identified the purpose of the Project as providing access for wind development in Cherry County, providing parallel paths for key contingencies in Nebraska for west-to-east flows, relieving congestion, increasing transfer capability, and mitigating reliability concerns. SPP's subsequent *High Priority Incremental Load Study* identified the need for a new substation at Thedford to address overloads and voltage violations. As noted in the DEIS, this established Thedford as the intermediate terminal point between the GGS and the interconnection with the new substation located in Holt County.

Concern Statement 5.26-4: SPP's *2012 Integrated Transmission Plan 10-Year Assessment Report* describes some examples of projects that provide varied benefits. The document states: “the Gentleman-Cherry Co.–Holt Co. 345 kV line in Nebraska has been proposed chiefly to provide access for wind development in Cherry Co.” But this line also provided parallel paths for key contingencies in Nebraska for west to east flows, relieved congestion, increased transfer

capability, and mitigated reliability concerns. Can an explanation be provided as to why the SPP report states that the general Project route was proposed “chiefly” to cater to wind developers, yet NPPD describes the routing as just an added bonus to be placed in a high wind area?

Response: As described in Section 1.7, *NPPD’s Need for the R-Project*, of the FEIS, the R-Project is intended to: 1) provide for significant reliability benefits to the existing western Nebraska area transmission system by increasing the west-east power transfer capability across the NPPD system, 2) reduce significant congestion issues by providing an additional outlet path from the GGS, and 3) provide transmission access to renewable energy resources (i.e., wind projects) in an area of Nebraska with wind resources. This intended purpose is supported by the quoted language from SPP’s *2012 Integrated Transmission Plan 10-Year Assessment Report*. In the summer of 2012, after SPP issued its *2012 Integrated Transmission Plan 10-Year Assessment Report*, NPPD experienced extreme peak load growth that resulted in load shedding to the customers in north-central Nebraska because of the lack of transmission capacity in that area. During the irrigation season when load was shed, NPPD was forced to lease expensive mobile generators to serve the irrigation customers. These conditions resulted in an increased focus on the need for the R-Project to increase reliability and decrease congestion. Even if no wind projects were built, the R-Project is necessary for reliable and efficient operation of the grid.

Concern Statement 5.26-5: Commenters raised the following questions: What guarantee does the Service have that the information being presented to them from NPPD in regards to this Project is factual? Can stakeholders and the general public have confidence that the Service is making the best decision for Nebraska, the Sandhills region, and the wildlife and natural resources? Or is this decision being coerced to meet the demands of the SPP and the executive staff at NPPD?

Response: Per Council on Environmental Quality regulations, the Service may request that the applicant provide information for possible use in the preparation of NEPA documentation, but the agency must independently evaluate the information submitted and is responsible for its accuracy (40 CFR 1506.5(a)). The Service has independently evaluated the information submitted by NPPD and presented it in the FEIS and is confident in its accuracy. The Service has also reviewed the HCP and is confident in the accuracy of information contained in the HCP.

There is no data or evidence of political interference or bias on the Service’s evaluations and decisions. While we respect and understand that some members of the public disapprove of the R-Line, the Service’s decision to develop an HCP and issue an incidental take permit to NPPD is based on a thorough analysis of the best available scientific information and relevant regulations and policy. This decision was made independent of any undue influence from NPPD or the SPP.

Concern Statement 5.26-6: A commenter expresses concern that NPPD has not been truthful about the stated purpose for the R-Project because it initially indicated the need for the Project was to relieve congestion to ensure sufficient power for irrigation pivots in the northeast corner

of Nebraska. Additionally, the commenter notes NPPD initially indicated the R-Project was not intended to accommodate future wind energy.

Another commenter stated that ample documentation indicates that the primary purpose of the R-Project is to accommodate future wind power generation and the issues of increasing reliability and relieving congestion are secondary to this primary purpose.

Another commenter believes the stated purpose and need for the R-Project is false and highly speculative and believes the real reason the Project is being built is so the SPP can have an additional east/west high capacity transmission line through the central part of the United States and to maintain the functionality of the GGS.

Response: As described in Section 1.7, *NPPD's Need for the R-Project*, of the FEIS, the R-Project is intended to: 1) provide for significant reliability benefits to the existing western Nebraska area transmission system by increasing the west-east power transfer capability across the NPPD system, 2) reduce significant congestion issues by providing an additional outlet path from the GGS, and 3) provide transmission access to renewable energy resources (i.e., wind projects) in an area of Nebraska with wind resources. This intended purpose is supported by the language in SPP's *2012 Integrated Transmission Plan 10-Year Assessment Report*. In the summer of 2012, after SPP issued its *2012 Integrated Transmission Plan 10-Year Assessment Report*, NPPD experienced extreme peak load growth that resulted in load shedding to the customers in north-central Nebraska because of the lack of transmission capacity in that area. During the irrigation season when load was shed, NPPD was forced to lease expensive mobile generators to serve the irrigation customers. These conditions resulted in an increased focus on the need for the R-Project to increase reliability and decrease congestion. Even if no wind projects were built, the R-Project is necessary for reliable and efficient grid operation.

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APPENDIX A:
CORRESPONDENCE REPORT FOR PUBLIC COMMENTS RECEIVED ON
R-PROJECT TRANSMISSION LINE DRAFT ENVIRONMENTAL IMPACT
STATEMENT

Table A-1. Correspondences Received

| Correspondence ID | Date Received | Commenter Name | Affiliation | Address | Number Substantive Comments | Number Non-Substantive Comments | Total Comments |
|-------------------|---------------|------------------|--|----------------|-----------------------------|---------------------------------|----------------|
| 01 | 5/12/2017 | Jean Publieee | | | 0 | 1 | 1 |
| 02 | 5/19/2017 | Gordon Moshman | | Omaha, NE | 1 | 0 | 1 |
| 03 | 5/23/2017 | Barb Otto | | Spencer, NE | 3 | 0 | 3 |
| 04 | 6/9/2017 | Michael Hutchins | American Bird Conservancy | Washington, DC | 8 | 3 | 11 |
| 05 | 6/12/2017 | Jim Haugland | | Sutherland, NE | 6 | 0 | 6 |
| 06 | 6/12/2017 | Linda K. Tacey | | Sutherland, NE | 11 | 0 | 11 |
| 07 | 6/12/2017 | Muriel Clark | North Platte/ Lincoln County Visitors Bureau | Sutherland, NE | 7 | 0 | 7 |
| 08 | 6/13/2017 | Tywla Witt | | Theford, NE | 8 | 2 | 10 |
| 09 | 6/13/2017 | Barbara Welch | | Theford, NE | 4 | 3 | 7 |
| 10 | 6/13/2017 | Jim Ducey | | Valentine, NE | 7 | 2 | 9 |
| 11 | 6/13/2017 | Dan Welch | | Brownlee, NE | 2 | 4 | 6 |
| 12 | 6/13/2017 | Frank Utter | | Brewster, NE | 8 | 1 | 9 |
| 13 | 6/13/2017 | Tom Witt | | Theford, NE | 4 | 0 | 4 |
| 14 | 6/13/2017 | Craig Miles | | Theford, NE | 2 | 1 | 3 |
| 15 | 6/13/2017 | Wayne Eatinger | | Theford, NE | 1 | 2 | 3 |
| 16 | 6/13/2017 | Brent Steffen | | Theford, NE | 5 | 0 | 5 |
| 17 | 6/13/2017 | Steve Moreland | | Merriman, NE | 1 | 0 | 1 |
| 18 | 6/13/2017 | Leslie Koubek | | Theford, NE | 1 | 1 | 2 |

| Correspondence ID | Date Received | Commenter Name | Affiliation | Address | Number Substantive Comments | Number Non-Substantive Comments | Total Comments |
|-------------------|---------------|-----------------------|-------------|-----------------|-----------------------------|---------------------------------|----------------|
| 19 | 6/13/2017 | Melanie Coffman | | Halsey, NE | 9 | 1 | 10 |
| 20 | 6/13/2017 | Caleb Miles | | Brownlee, NE | 2 | 1 | 3 |
| 21 | 6/13/2017 | Anne Anderson-Bennett | | Red Oak, IA | 1 | 0 | 1 |
| 22 | 6/13/2017 | Carol Neiman-Lewis | | Thedford, NE | 6 | 6 | 12 |
| 23 | 6/13/2017 | Merial Rhoades | | Brewster, NE | 3 | 0 | 3 |
| 24 | 6/13/2017 | Barbara Welch | | Thedford, NE | 7 | 2 | 9 |
| 25 | 6/13/2017 | Sam Miles | | Valentine, NE | 0 | 1 | 1 |
| 26 | 6/13/2017 | Dan Welch | | Brownlee, NE | 2 | 0 | 2 |
| 27 | 6/13/2017 | Anonymous | | | 0 | 1 | 1 |
| 28 | 6/13/2017 | Craig Miles | | Thedford, NE | 1 | 0 | 1 |
| 29 | 6/14/2017 | Amy Ballagh | | Burwell, NE | 13 | 0 | 13 |
| 30 | 6/14/2017 | Lynn Ballagh | | Burwell, NE | 11 | 0 | 11 |
| 31 | 6/14/2017 | Walt Schacht | | Lincoln, NE | 2 | 0 | 2 |
| 32 | 6/14/2017 | Troy Petersen | | Ewing, NE | 5 | 2 | 7 |
| 33 | 6/14/2017 | Dave Hutchinson | | Rose, NE | 7 | 4 | 11 |
| 34 | 6/14/2017 | James Lowery II | | Burwell, NE | 2 | 4 | 6 |
| 35 | 6/14/2017 | Justin Mitchell | | Burwell, NE | 0 | 1 | 1 |
| 36 | 6/14/2017 | Barb Otto | | Holt County, NE | 0 | 1 | 1 |
| 37 | 6/14/2017 | Jared Drenth | | Bassett, NE | 1 | 1 | 2 |
| 38 | 6/14/2017 | Sue Hutchinson | | Rose, NE | 2 | 0 | 2 |

| Correspondence ID | Date Received | Commenter Name | Affiliation | Address | Number Substantive Comments | Number Non-Substantive Comments | Total Comments |
|-------------------|---------------|-------------------------------------|--|----------------|-----------------------------|---------------------------------|----------------|
| 39 | 6/14/2017 | Tonya Wilson, Ty Wilson, Lex Wilson | | Burwell, NE | 1 | 1 | 2 |
| 40 | 6/14/2017 | Anonymous | | | 1 | 0 | 1 |
| 41 | 6/15/2017 | Melanie Coffman | | Halsey, NE | 7 | 0 | 7 |
| 42 | 6/16/2017 | Harold Switzer | | Burwell, NE | 1 | 1 | 2 |
| 43 | 6/20/2017 | Shirley McIntosh | | Theford, NE | 1 | 1 | 2 |
| 44 | 6/28/2017 | Linda K. Tacey | | Sutherland, NE | 7 | 2 | 9 |
| 45 | 7/9/2017 | Jim Haugland | | Sutherland, NE | 3 | 0 | 3 |
| 46 | 7/11/2017 | Alison Krohn | | Lincoln, NE | 0 | 1 | 1 |
| 47 | 7/11/2017 | Lucas Nelsen | Center for Rural Affairs | Lyons, NE | 1 | 3 | 4 |
| 48 | 7/11/2017 | Tom Kent | Nebraska Public Power District (NPPD) | Columbus, NE | 14 | 2 | 16 |
| 49 | 7/11/2017 | Dixie Hollenbeck | | Theford, NE | 0 | 1 | 1 |
| 50 | 7/11/2017 | Judith Rath | Diamond R Ranch; Preserve the Sandhills, LLC | Theford, NE | 1 | 3 | 4 |
| 51 | 7/11/2017 | Chase D. Rath | | Theford, NE | 0 | 1 | 1 |
| 52 | 7/11/2017 | Tyler D. Rath | | Theford, NE | 1 | 2 | 3 |
| 53 | 7/12/2017 | Devyn Ballagh | | | 0 | 1 | 1 |
| 54 | 7/12/2017 | Amy Ballagh | | | 4 | 4 | 8 |

| Correspondence ID | Date Received | Commenter Name | Affiliation | Address | Number Substantive Comments | Number Non-Substantive Comments | Total Comments |
|-------------------|---------------|----------------------------|---|---------------|-----------------------------|---------------------------------|----------------|
| 55 | 7/13/2017 | Edward H. Chu | United States Environmental Protection Agency, Region 7 | Lenexa, KS | 4 | 0 | 4 |
| 56 | 8/4/2017 | Dixie Hollenbeck | | Theford, NE | 0 | 1 | 1 |
| 57 | 9/12/2017 | Clay Long | | Brunswick, MO | 1 | 2 | 3 |
| 58 | 9/12/2017 | Tom Demory | | | 1 | 0 | 1 |
| 59 | 9/12/2017 | Rodney J. Palmer | Brush Creek Ranch, LLC (represented by Palmer Law Group, LLC) | Ainsworth, NE | 23 | 1 | 24 |
| 60 | 9/12/2017 | Glenda Phipps | | Whitman, NE | 0 | 1 | 1 |
| 61 | 9/12/2017 | Glenda Phipps | | Whitman, NE | 0 | 1 | 1 |
| 62 | 9/12/2017 | Rodney J. Palmer | | | 0 | 1 | 1 |
| 63 | 10/18/2017 | Carolyn Semin | | Kilgore, NE | 1 | 2 | 3 |
| 64 | 10/24/2017 | Anonymous* | | | | | |
| 65 | 10/25/2017 | Anonymous* | | | | | |
| 66 | 10/25/2017 | Ann Moshman | | Omaha, NE | 6 | 0 | 6 |
| 67 | 10/25/2017 | Mollie Gordon | | Kearney, NE | 0 | 1 | 1 |
| 68 | 10/27/2017 | Shirley McIntosh | McIntosh Ranch LLC | | 3 | 0 | 3 |
| 69 | 10/27/2017 | Mickey and Melanie Coffman | | Halsey, NE | 6 | 3 | 9 |
| 70 | 10/30/2017 | Rick Otto | | | 0 | 1 | 1 |

| Correspondence ID | Date Received | Commenter Name | Affiliation | Address | Number Substantive Comments | Number Non-Substantive Comments | Total Comments |
|-------------------|---------------|----------------------------|----------------|------------------|-----------------------------|---------------------------------|----------------|
| 71 | 10/30/2017 | Lloyd and Shirley Mcintosh | | Thedford, NE | 3 | 0 | 3 |
| 72 | 10/30/2017 | Audrey Willard | | Sioux Falls, SD | 1 | 0 | 1 |
| 73 | 10/31/2017 | WC Simonson | | | 3 | 1 | 4 |
| 74 | 10/31/2017 | Glenda Phipps | | Whitman, NE | 8 | 0 | 8 |
| 75 | 10/31/2017 | Susan Stickney | | Stapleton, NE | 5 | 3 | 8 |
| 76 | 10/31/2017 | Anonymous* | | | | | |
| 77 | 10/31/2017 | Mike Young | | Valentine, NE | 1 | 0 | 1 |
| 78 | 10/31/2017 | Eric Morrison | | United States | 0 | 1 | 1 |
| 79 | 11/1/2017 | David Walz | | North Platte, NE | 6 | 1 | 7 |
| 80 | 11/1/2017 | PT Simonson | | | 3 | 1 | 4 |
| 81 | 11/2/2017 | Jim Haugland | | | 1 | 0 | 1 |
| 82 | 11/3/2017 | Timothy Andersen | | Mullen, NE | 1 | 0 | 1 |
| 83 | 11/7/2017 | Merrial Rhoades | | Thedford, NE | 4 | 1 | 5 |
| 84 | 11/7/2017 | Paul Leahy | | Lincoln, NE | 1 | 0 | 1 |
| 85 | 11/7/2017 | Kevin Willert | Duck Bar Ranch | Valentine, NE | 6 | 0 | 6 |
| 86 | 11/7/2017 | Muriel Clark | | Sutherland, NE | 3 | 2 | 5 |
| 87 | 11/7/2017 | Debra Sitz | | Burwell, NE | 1 | 0 | 1 |
| 88 | 11/7/2017 | Pam Moody | | Purdum, NE | 2 | 2 | 4 |
| 89 | 11/7/2017 | Wayne Eatinger | | Thedford, NE | 2 | 1 | 3 |
| 90 | 11/7/2017 | Julie Olson | | Mullen, NE | 1 | 2 | 3 |

| Correspondence ID | Date Received | Commenter Name | Affiliation | Address | Number Substantive Comments | Number Non-Substantive Comments | Total Comments |
|-------------------|---------------|--|----------------------------------|--------------------|-----------------------------|---------------------------------|----------------|
| 91 | 11/7/2017 | Charlene Reiser McCorming | | Valentine, NE | 0 | 1 | 1 |
| 92 | 11/7/2017 | Janet Steffen | | Valentine, NE | 0 | 1 | 1 |
| 93 | 11/7/2017 | Tyler Rath | | Thedford, NE | 1 | 0 | 1 |
| 94 | 11/7/2017 | William Felton | | Chadron, NE | 0 | 1 | 1 |
| 95 | 11/7/2017 | Jim Owen | | Redwood Valley, CA | 1 | 2 | 3 |
| 96 | 11/7/2017 | Jim Barta (represented by Jeff Fortenberry) | Barta Cattle Company | Fremont, NE | 1 | 0 | 1 |
| 97 | 11/7/2017 | Robert Miller | | Lincoln, NE | 4 | 1 | 5 |
| 98 | 11/7/2017 | Aaron Simonson | | Mullen, NE | 3 | 4 | 7 |
| 99 | 11/7/2017 | Elizabeth Lewis (represented by Eric Glitzstein) | Meyer Glitzenstein & Eubanks LLP | Washington, DC | 11 | 2 | 13 |
| 100 | 11/7/2017 | Gerry West | | Lisco, NE | 7 | 0 | 7 |
| 101 | 11/7/2017 | Tyler Rath | | Thedford, NE | 1 | 0 | 1 |
| 102 | 11/7/2017 | Anonymous* | | | | | |
| 103 | 11/7/2017 | Mike Young | | Valentine, NE | 1 | 1 | 2 |
| 104 | 11/7/2017 | G A Osborn | | | 1 | 2 | 3 |
| 105 | 11/7/2017 | LeRoy and Kay Wolfenden | | Valentine, NE | 1 | 2 | 3 |
| 106 | 11/7/2017 | Terry and LaDene Madson | | Nelson, NE | 3 | 2 | 5 |
| 107 | 11/7/2017 | Ransom Sitz | | Fort Collins, CO | 2 | 1 | 3 |

| Correspondence ID | Date Received | Commenter Name | Affiliation | Address | Number Substantive Comments | Number Non-Substantive Comments | Total Comments |
|-------------------|---------------|-------------------|---------------------------------|------------------|-----------------------------|---------------------------------|----------------|
| 108 | 11/7/2017 | James Ducey | | Valentine, NE | 32 | 34 | 66 |
| 109 | 11/7/2017 | Tyler Rath | | Thedford, NE | 2 | 0 | 2 |
| 110 | 11/7/2017 | David Walz | David Walz Ranch LLC | North Platte, NE | 0 | 2 | 2 |
| 111 | 11/7/2017 | Mike Young | | Valentine, NE | 0 | 1 | 1 |
| 112 | 11/7/2017 | Craig Miles | | Thedford, NE | 2 | 3 | 5 |
| 113 | 11/7/2017 | Carla Ericksen | | Lincoln, NE | 1 | 2 | 3 |
| 114 | 11/7/2017 | James Roseberry | | Dunning, NE | 2 | 0 | 2 |
| 115 | 11/7/2017 | Tyler Rath | | Thedford, NE | 1 | 0 | 1 |
| 116 | 11/7/2017 | Tyler Rath | | Thedford, NE | 1 | 0 | 1 |
| 117 | 11/7/2017 | Ann Warren | | Thedford, NE | 2 | 2 | 4 |
| 118 | 11/7/2017 | Jared M. Margolis | Center for Biological Diversity | Eugene, OR | 10 | 2 | 12 |
| 119 | 11/7/2017 | Tyler Rath | | Thedford, NE | 1 | 0 | 1 |
| 120 | 11/7/2017 | Rose Stehno | | South Jordan, UT | 5 | 3 | 8 |
| 121 | 11/7/2017 | Greg Petersen | | Philip, SD | 1 | 1 | 2 |
| 122 | 11/7/2017 | William Stetter | | | 4 | 3 | 7 |
| 123 | 11/7/2017 | Allison Stark | | | 1 | 2 | 3 |
| 124 | 11/7/2017 | Jared M. Margolis | Center for Biological Diversity | Eugene, OR | 0 | 1 | 1 |
| 125 | 11/7/2017 | Dave Hutchinson | | Bassett, NE | 1 | 0 | 1 |

| Correspondence ID | Date Received | Commenter Name | Affiliation | Address | Number Substantive Comments | Number Non-Substantive Comments | Total Comments |
|-------------------|---------------|--------------------|-------------|----------------|-----------------------------|---------------------------------|----------------|
| 126 | 11/7/2017 | James Roseberry | | Dunning, NE | 0 | 1 | 1 |
| 127 | 11/7/2017 | Tyler Rath | | Thedford, NE | 0 | 1 | 1 |
| 128 | 11/7/2017 | Carol Neiman-Lewis | | | 0 | 2 | 2 |
| 129 | 11/7/2017 | Dotty Roseberry | | Dunning, NE | 1 | 0 | 1 |
| 130 | 11/7/2017 | Marjorie Manning | | Valentine, NE | 1 | 2 | 3 |
| 131 | 11/7/2017 | Tracy Bradley | | Brewster, NE | 5 | 0 | 5 |
| 132 | 11/7/2017 | Susan Hutchinson | | Bassett, NE | 1 | 0 | 1 |
| 133 | 11/7/2017 | Amber Fleecs | | | 8 | 2 | 10 |
| 134 | 11/7/2017 | Robert Kinsey | | Lincoln, NE | 9 | 9 | 18 |
| 135 | 11/7/2017 | Katie Foster | | | 3 | 0 | 3 |
| 136 | 11/7/2017 | Twyla Witt | | Thedford, NE | 3 | 6 | 9 |
| 137 | 11/7/2017 | Brent Steffen | | Kearney, NE | 20 | 7 | 27 |
| 138 | 11/7/2017 | Tyler Rath | | Thedford, NE | 1 | 0 | 1 |
| 139 | 11/7/2017 | Tyler Rath | | Thedford, NE | 1 | 0 | 1 |
| 140 | 11/7/2017 | Prentice Steffen | | Santa Cruz, CA | 0 | 1 | 1 |
| 141 | 11/7/2017 | Jodi Lee | | Sutherland, NE | 1 | 1 | 2 |
| 142 | 11/7/2017 | Tyler Rath | | Thedford, NE | 1 | 0 | 1 |
| 143 | 11/7/2017 | Tyler Rath | | Thedford, NE | 1 | 0 | 1 |
| 144 | 11/7/2017 | Timothy Foster | | | 2 | 1 | 3 |

| Correspondence ID | Date Received | Commenter Name | Affiliation | Address | Number Substantive Comments | Number Non-Substantive Comments | Total Comments |
|-------------------|---------------|-------------------|---------------------------------|---------------|-----------------------------|---------------------------------|----------------|
| 145 | 11/7/2017 | Jared M. Margolis | Center for Biological Diversity | Eugene, OR | 0 | 1 | 1 |
| 146 | 11/7/2017 | Prentice Steffen | | | 0 | 1 | 1 |
| 147 | 11/7/2017 | Jared M. Margolis | Center for Biological Diversity | Eugene, OR | 0 | 1 | 1 |
| 148 | 11/7/2017 | Vicki Ray | | Thedford, NE | 1 | 1 | 2 |
| 149 | 11/7/2017 | Tyler Rath | | Thedford, NE | 1 | 0 | 1 |
| 150 | 11/7/2017 | Sarah Drenth | | Bassett, NE | 0 | 1 | 1 |
| 151 | 11/7/2017 | Judith Rath | | Thedford, NE | 7 | 1 | 8 |
| 152 | 11/7/2017 | Sarah Drenth | | Bassett, NE | 1 | 1 | 2 |
| 153 | 11/7/2017 | Barbara Welch | | Thedford, NE | 0 | 1 | 1 |
| 154 | 11/7/2017 | Bette Nygren | | | 4 | 0 | 4 |
| 155 | 11/7/2017 | Tonya Wilson | | Burwell, NE | 0 | 3 | 3 |
| 156 | 11/7/2017 | Craig Andersen | | Wood Lake, NE | 7 | 5 | 12 |
| 157 | 11/8/2017 | Nicholette Mills | | | 2 | 0 | 2 |
| 158 | 11/8/2017 | Frank Utter | | Brewster, NE | 1 | 0 | 1 |
| 159 | 11/8/2017 | George Cunningham | Sierra Club | | 5 | 3 | 8 |
| 160 | 11/8/2017 | Aaron Price | Gracie Creek Ranch, LTD | | 7 | 1 | 8 |
| 161 | 11/8/2017 | Amy Ballagh | | | 32 | 1 | 33 |
| 162 | 11/8/2017 | Whitney Marshall | | | 1 | 0 | 1 |
| 163 | 11/8/2017 | Lynn Ballagh | | Burwell, NE | 16 | 0 | 16 |

| Correspondence ID | Date Received | Commenter Name | Affiliation | Address | Number Substantive Comments | Number Non-Substantive Comments | Total Comments |
|-------------------|---------------|----------------------------|---------------------|-------------|-----------------------------|---------------------------------|----------------|
| 164 | 11/8/2017 | Devyn Ballagh | | | 11 | 0 | 11 |
| 165 | 11/8/2017 | Tyler Rath | | Theford, NE | 2 | 3 | 5 |
| 166 | 11/8/2017 | Lucinda Marshall | | | 1 | 2 | 3 |
| 167 | 11/8/2017 | Tiffany Ballagh | | | 3 | 0 | 3 |
| 168 | 11/8/2017 | Chase Rath | | Theford, NE | 0 | 1 | 1 |
| 169 | 11/8/2017 | James Fleecs | | | 14 | 1 | 15 |
| 170 | 11/14/2017 | Michael George | Ducks Unlimited | | 5 | 1 | 6 |
| 171 | 11/15/2017 | Charlie Fote | Whitetail Farms LLC | | 8 | 7 | 15 |
| 172 | 11/15/2017 | Jon and Michelle McFarland | | | 0 | 1 | 1 |
| 173 | 11/30/2017 | Carol Neiman Lewis | | | 4 | 4 | 8 |

APPENDIX B:
CODING STRUCTURE FOR PUBLIC COMMENTS RECEIVED ON
R-PROJECT TRANSMISSION LINE DRAFT ENVIRONMENTAL IMPACT
STATEMENT

CODING STRUCTURE FOR PUBLIC COMMENTS RECEIVED ON R-PROJECT TRANSMISSION LINE DRAFT ENVIRONMENTAL IMPACT STATEMENT

Analysis of public comments received during the two public review periods for the R-Project DEIS involved separating statements made by the public into discrete comments and assigning codes based on the topic and nature of each comment. Correspondences received during the two 60-day public comment periods included statements submitted online through the Regulations.gov comment portal, written statements submitted via mail or email, and verbal and written statements provided at any of the three public meetings. Verbal comments received at the public meetings were extracted from official meeting transcripts documented by court reporters. Correspondences were numbered in the order in which they were received. Comments assigned to a substantive code (as defined below) were interpreted and analyzed to identify issues and themes within each comment code and concern statements drafted. A response was drafted for each concern statement developed for the substantive comments. Comments that were assigned to a non-substantive code (as defined below) did not require a response, thus concern statements were not drafted.

Substantive comments are those that:

- Question, with reasonable basis, the accuracy of the information in the DEIS
- Question, with reasonable basis, the adequacy of the environmental analysis of the DEIS
- Present reasonable alternatives other than those presented in the DEIS
- Cause changes or revisions in the DEIS

Non-Substantive comments are those that:

- Are in favor of or against the Proposed Action or alternatives without reasoning that meet the criteria for a substantive comment
- Only agree or disagree with policy or resource decisions without justification or supporting data that meet the criteria for a substantive comment;
- Do not pertain to the Project area or the Project
- Are vague or open-ended questions

| Code | Code Name | Substantive | Examples of Comments for this Code |
|-------|---|-------------|--|
| AE100 | Affected Environment: All Resource Categories | Yes | Relates to the current condition of resources categories of the study area (and for some resource categories the region, including the uniqueness of the Sandhills landscape); either questioning the description in the DEIS, or offering new information related to its current condition, ecosystem habitat, etc. |
| EC100 | Environmental Consequences: Soils and Geology | Yes | Substantive comments pertaining to the potential impacts soil (i.e., soil associations, erodible soils, prime farmland, sensitive soil) and geological resources (i.e., bedrock, surficial, and mineral resources) could face as a result of HCP implementation and construction of the R-Project. |

| Code | Code Name | Substantive | Examples of Comments for this Code |
|-------|--|-------------|---|
| EC200 | Environmental Consequences: Water Resources | Yes | Substantive comments pertaining to the potential impacts water resources (i.e., surface waters, aquifers, groundwater, 303(d) impaired waters, floodplains) could face as a result of HCP implementation and construction of the R-Project. |
| EC300 | Environmental Consequences: Wetlands | Yes | Substantive comments pertaining to the potential impacts wetland resources could face as a result of HCP implementation and construction of the R-Project. |
| EC400 | Environmental Consequences: Vegetation | Yes | Substantive comments pertaining to the potential impacts vegetation resources (i.e., vegetation types, systems, and communities and noxious weeds) could face as a result of HCP implementation and construction of the R-Project. |
| EC500 | Environmental Consequences: Fish & Wildlife | Yes | Substantive comments pertaining to the potential impacts fish and wildlife resources (i.e., species and their habitats) could face as a result of HCP implementation and construction of the R-Project. |
| EC600 | Environmental Consequences: Special Status Species | Yes | Substantive comments pertaining to the potential impacts special status species (i.e., federal and state-listed species and their habitats) could face as a result of HCP implementation and construction of the R-Project. |
| EC650 | Environmental Consequences: Whooping Cranes | Yes | Substantive comments pertaining to the potential impacts whooping cranes could face as a result of HCP implementation and construction of the R-Project. |
| EC700 | Environmental Consequences: Cultural Resources | Yes | Substantive comments pertaining to the potential impacts cultural resources or historic properties could face as a result of HCP implementation and construction of the R-Project. |
| EC800 | Environmental Consequences: Visual Resources | Yes | Substantive comments pertaining to the potential impacts visual resources (i.e., visual quality of the landscape, visual character, viewers) could face as a result of HCP implementation and construction of the R-Project. |
| EC900 | Environmental Consequences: Recreation and Tourism | Yes | Substantive comments pertaining to the potential impacts upon enjoyment of recreational activities and tourism to the Sandhills as a result of HCP implementation and construction of the R-Project. |

| Code | Code Name | Substantive | Examples of Comments for this Code |
|--------|---|-------------|---|
| EC1000 | Environmental Consequences: Human Health and Safety | Yes | Substantive comments pertaining to the potential impact to human health and safety that could occur as a result of HCP implementation and construction of the R-Project. |
| EC1100 | Environmental Consequence: Climate Change | Yes | Substantive comments pertaining to the potential impacts on climate change as a result of HCP implementation and construction of the R-Project. |
| EC1200 | Environmental Consequences: Noise | Yes | Substantive comments pertaining to the potential impacts on noise as a result of HCP implementation and construction of the R-Project |
| CI100 | Cumulative Impacts: General | Yes | Substantive comments pertaining to the cumulative impacts selected for analysis, or the actual analysis of cumulative impacts. |
| CI200 | Cumulative Impacts: Future Renewable Energy Projects | Yes | Substantive comments pertaining to future renewable energy projects (e.g., future wind energy projects, solar projects, additional power lines, and energy infrastructure development) as part of the cumulative impact analysis. |
| AL100 | Alternatives: Alternative A | Yes | Comments pertaining to Alternative A. Includes comments presenting specific rationale, suggestions to revise/alter the alternative, and which cite specific reasons why the alternative is preferred over the others. |
| AL200 | Alternatives: Alternative B | Yes | Comments pertaining to Alternative B. Includes comments presenting specific rationale, suggestions to revise/alter the alternative, and which cite specific reasons why the alternative is preferred over the others. |
| AL300 | Alternatives: Alternative Transmission Line Routes Eliminated from Further Study | Yes | Comments pertaining to alternative transmission line routes that were considered by FWS and then eliminated from detailed analysis in the DEIS. |
| AL350 | Alternatives: Central Route Alternative Transmission Line Routes Considered but Eliminated from Analysis) | No | Comments pertaining to the Central Route that was considered by FWS and then eliminated from detailed analysis in the DEIS. |
| AL400 | Alternatives: New Alternatives or Elements | Yes | Any new alternative or alternative element that the commenter believes should have been included in the DEIS. |

| Code | Code Name | Substantive | Examples of Comments for this Code |
|--------|---|-------------|--|
| OT100 | Other AE/EC Topics | Yes | Comments suggesting additional analysis of AE/EC resource topics that were not considered in the DEIS. |
| CC100 | Consultation and Coordination: General Comments | Yes | Suggestions of agencies/individuals/etc. to contact for consultation and/or coordination relating to the HCP/DEIS. Comments on public comment meetings, or the public comment period and input are included under ON100. |
| ON100 | Other NEPA Issues: General Comments | Yes | Comments pertaining to the NEPA process in general and /or NEPA requirements; this also includes comments on the DEIS planning process, such as comments on the Project schedule and public involvement. |
| HCP100 | Draft Habitat Conservation Plan | Yes | Comments pertaining to the content of the draft HCP prepared by NPPD. |
| RMP100 | Draft Restoration Management Plan | Yes | Comments pertaining to the content of the draft Restoration Management Plan prepared by NPPD. |
| MB100 | Draft Migratory Bird Conservation Plan | Yes | Comments pertaining to the content of the draft Migratory Bird Conservation Plan prepared by NPPD. |
| MT100 | Miscellaneous Topics: General Comments | No | Comments not relating specifically to the DEIS or draft HCP. This includes any items outside the scope of the DEIS/draft HCP. |
| OPP100 | General Opposition to the R-Project and DEIS | No | General opposition to the R-Project and the content of the DEIS; requests that the incidental take permit not be issued. |
| PN100 | Purpose and Need: NPPD's Need for the R-Project | Yes | Substantive comments related to the three stated purposes for constructing the R-Project transmission line and associated substations. |
| SUP100 | General Support for the R-Project, DEIS and HCP | No | General support expressed for the R-Project and the DEIS. |
| DUP100 | Duplicate Correspondence | No | Exact duplicate entry; same commenter and comment text. |