

Draft Environmental Assessment  
Boone County, NE – Communication Tower  
Boone County, NE  
Homeland Security Grant Program (HSGP)

*July 9, 2015*



**FEMA**

**Federal Emergency Management Agency  
Department of Homeland Security  
9221 Ward Parkway, Suite 300  
Kansas City, MO 64114-3372**

# 1. PURPOSE AND NEED FOR ACTION

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Nebraska Regional Interoperability Network (NRIN) is a regional and Nebraska statewide wireless communications and data sharing network that is owned and governed by local governments. The purpose is to connect Public Safety Answering Points (PSAP), 911 centers, Emergency Operation Centers (EOCs), public safety agencies (e.g. law enforcement, fire), public power districts, weather service, emergency alert systems, and others regionally and statewide to enable them to use statewide communications resources and new and developing wireless technologies such as Next Generation 911 (NG-911). NRIN will allow PSAPs, 911 Centers, and EOCs to quickly access and share large amounts of information across the state, thereby improving response to emergencies and protecting lives and property. This information includes voice, video, pictures, text, documents, and other data. Potential uses include:

- 1) Pictures and data from a chemical spill could be transmitted from a first responder at the site to state or national experts to help identify the level of threat and determine the appropriate response.
- 2) Firefighters could receive building blueprints and an inventory of hazardous materials from a private business to help them combat a fire.
- 3) Local law enforcement could receive intelligence from the Nebraska State Patrol Fusion Center to assist in assessing a potential terrorist threat.
- 4) An EOC could receive real-time video, voice, and/or data from responders at the scene of a natural disaster.
- 5) This sharing of information isn't limited to emergency situations but also facilitates communication across state, city, and county government.

The primary data communications transport method will be microwave using telephone company grade microwave dish antennas and radios. To the maximum extent practicable, existing public and private tower infrastructure, such as communication towers, water towers, grain elevators, and buildings, are being used. However in some cases, new infrastructure, primarily communication towers, will be required. Once the NRIN system is fully built out, it will use ~200 tower locations.

The Nebraska Emergency Management Agency has applied through the Department of Homeland Security (DHS) Federal Emergency Management Agency (FEMA) State Homeland Security Grant Program (HSGP) for funding to build-out a portion of the East Central Region NRIN. This corresponds to DHS Grant 2013-SS- 00010. Specifically the proposed project is to construct the Boone County Microwave Point in the NRIN design.

The National Environmental Policy Act (NEPA) requires that Federal agencies evaluate the environmental impacts of their proposed actions on the natural and human environment before deciding to fund an action. The President's Council on Environmental Quality has developed a series of regulations for implementing NEPA that are captured in Title 40 of the Code of Federal Regulations, Parts 1500 through 1508. This project requires preparation of an Environmental Assessment (EA) to include an evaluation of alternative means of addressing the purpose and need and a discussion of the potential environmental impacts. An EA provides the evidence and analysis to determine whether the proposed Federal action will have significant adverse effect on the natural or human environment.

## **2. RANGE OF REASONABLE ALTERNATIVES**

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To the maximum extent practicable, existing public and private tower infrastructure, such as communication towers, water towers, grain elevators, and buildings, are being used. However in some cases, new infrastructure, primarily communication towers, will be required. The alternatives considered in Boone County include both existing sites and new communication towers.

In Boone County, the necessary three (3) NRIN microwave dishes are large, ranging in size from four (4) feet in diameter to eight (8) feet in diameter and will need to be placed at estimated elevations ranging from ~85 feet above ground level (AGL) to ~240 feet AGL on an individual tower (three [3] microwave dishes on a single tower). The equipment is heavy, and the towers supporting it need to be able to withstand 90 mile per hour (mph) wind load without damage. An eight (8) foot diameter microwave dish provides a potentially significant wind load factor at 90 mph wind gust.

### **2.1 EXISTING TOWER SITES**

In the range of practicable alternatives, Boone County considered both the tower they already hold the FCC registration (FCC Registration Number 1237833, AGL 81.7, 41-40-41.2N 098-00-46.4W, referred to as the Kohtz Tower)), as well as consideration of leasing space on existing cellular towers. The existing cellular towers within Boone County were quickly dismissed due to equipment height needs and load capacity of the existing cellular towers. Cellular towers are typically constructed to 199' AGL or less to simplify FCC licensing requirements due to minimal potential for adverse environmental impacts, and this doesn't offer sufficient height necessary for the microwave equipment.

The existing Boone County Tower was designed to have multiple antennas and equipment collocated on a single tower and holds the following equipment:

- 1) Boone County Courthouse, FCC Registration Number 0005925136
- 2) Boone County Sheriff's Office, FCC Registration Number 0010774479

The current Kohtz Tower does not have sufficient load capacity remaining to support the proposed NRIN microwave equipment.

### **2.2 PROPOSED ALTERNATIVE**

For practicable alternatives, Boone County focused the site selection process on existing sites under ownership of Boone County.

The proposed alternative is to construct a self-supporting 310' above ground level (AGL) communication tower at the Boone County Fairgrounds to support East Central Region of NRIN build-out. This site is on the outskirts southwest of the community of Albion at Latitude 41.6790083 degrees North and Longitude 98.0128361 West. This land is presently a mowed, grassy area at the fairgrounds; surrounding areas are largely agriculture.

As the tower exceeds 199' AGL, it will be required to have lighting to meet Federal Aviation Administration (FAA) safety requirements. FAA has an Advisory Circular 150/5345-43G, Specification for Obstruction Lighting Equipment and a certified equipment list, AC 150/5345-53, Airport Lighting Equipment Certification Program. While the FAA recommends the guidelines and standards in the AC for use in obstruction lighting equipment, use of the AC is generally not mandatory. However use of the AC is mandatory for all projects funded with Federal grant monies through the Airport Improvement Program (AIP), and FEMA finds that this is a sufficient Federal code and standard to mandate the same requirement for FEMA grant funding.

Boone County Emergency Management has indicated that the lighting will be provided via a TWR L864/L865 Dual Red (LED)/White Strobe Medium Intensity Obstruction Light. With dual obstruction lighting systems, the white obstruction lights turn off and red obstruction lights turn on when ambient light changes from twilight to night. Red obstruction lights turn off and white obstruction lights turn on when ambient light changes from night to twilight.

In addition to the proposed new communication tower, this project includes:

- 1) Excavation and construction of a 9' x 18' concrete slab supporting both the support building and the generator
- 2) Placement of a 9' x 12' pre-built support building
- 3) Installation of an 11 kW propane fueled generator
- 4) Trench from the existing road to the west to provide connection to existing electrical utility
- 5) Construction of a driveway for maintenance access by county employees

Any construction activities will use best management practices such as sediment control to avoid and minimize potential for environmental impacts associated with construction projects.

### **2.3 No ACTION ALTERNATIVE**

Under the No Action Alternative, Boone County would not install any new equipment as part of the NRIN system and would not be able to take advantage of the interoperability benefits and other benefits offered by NRIN.

### 3. AFFECTED ENVIRONMENT AND IMPACTS/CONSEQUENCES

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Effective March 26, 2015, DHS has implemented Management Directive 023-01, Implementation of the National Environmental Policy Act. This Directive established DHS implementing requirements of NEPA and CEQ regulations for implementing procedural provisions of NEPA. This is supplemented by DHS Instruction Manual 023-01-001-01. The Directive and Instruction Manual adopt and supplement to CEQ regulations and ensure environmental stewardship into DHS decision making as required by NEPA.

Within Instruction Manual 023-01-001-01, DHS has established Categorical Exclusions (CatEx), which are activities that do not need to undergo detailed environmental analysis in an EA or EIS because the activities have been determined to normally not have potential, individually or cumulatively, to have a significant effect on the human environment. Within this CatEx list, DHS has included CatEx E10 that may be applied by FEMA; *Federal Assistance for Communication Towers of Less than 400 Feet*. Application of this CatEx is clarified by the following; Federal assistance for the construction of communication towers when all of the following are met:

- (a) The total height is less than 400 feet above ground level,
- (b) The tower construction project has been reviewed by the Federal Communications Commission (FCC) and has been documented as meeting FCC environmental planning and historic preservation procedures,
- (c) The project is located farther than 660 feet from a Bald Eagle's nest or 0.6 miles from a Golden eagle nest,
- (d) The tower is not located on ridgelines or in coastal zones, bird staging areas, colonial nesting sites, 100- or 500-year floodplains, or wetlands, and
- (e) The lighting scheme meets all applicable U.S. Fish and Wildlife Service guidelines for reducing potential impacts to night-migrating birds.
- (f) This CatEx covers associated activities such as installation of fuel storage tanks, equipment buildings, security fencing and lighting, and access roads, and land disturbance activities typically associated with construction such as clearing, fill, and grading.

FEMA has not developed Component Supplemental Instructions that describe how FEMA will implement the requirements of DHS Directive 023-01 and the associated Instruction Manual 023-01-001-01. Thus FEMA CatEx are captured in 44 CFR Part 10, and FEMA cannot use DHS adopted CatEx. However, FEMA intends to develop this EA through incorporation of and reference to the DHS Administrative Record supporting the approval of the new list of DHS CatEx and will focus the environmental consequences analysis based on that Administrative Record.<sup>1</sup> FEMA has determined that this incorporation and reference is appropriate because:

- 1) The proposed tower height is 310 feet AGL, less than the DHS CatEx requirement of 400 feet AGL, and
- 2) The tower construction project will require an FCC license, the FCC license has been applied for, and a copy of the FCC license will be provided to FEMA.

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<sup>1</sup> The full *SYNOPSIS OF ADMINISTRATIVE RECORD TO SUPPORT PROPOSED NEW CATEGORICAL EXCLUSIONS UNDER THE NATIONAL ENVIRONMENTAL POLICY ACT* (Dec 2014) can be found at:

[http://www.dhs.gov/sites/default/files/publications/CATEXs\\_admin%20record\\_version\\_Final\\_Dec2014\\_508compliantversion.pdf](http://www.dhs.gov/sites/default/files/publications/CATEXs_admin%20record_version_Final_Dec2014_508compliantversion.pdf). The section relevant to this environmental assessment is on pages 46-50. The section includes reference to and discussion of five (among hundreds) of findings of no significant impact for grant projects for communications towers that are between 280 and 600 feet tall.

Based on this reference, FEMA will limit the analysis of environmental consequences to only the proposed alternative and only to the following environmental consequences:

- 1) Historic Preservation considerations,
- 2) Biological and species impacts, including migratory birds, and
- 3) Floodplain and wetland impacts.

### **3.1 HISTORIC PRESERVATION CONSIDERATIONS**

Section 106 of the National Historic Preservation Act (NHPA) requires Federal agencies to take into account of the effect of their undertakings on historic properties through consultation with the relevant State Historic Preservation Officers (SHPO), Tribal Historic Preservation Officers (THPO) for Federally-recognized tribes, and Native Hawaiian organizations (NHOs). Historic properties are those listed in, or eligible for listing in, the National Register of Historic Places (NRHP). Many of the towers funded by FEMA are also regulated by the FCC, and this proposed project is an example, and the FCC as a Federal agency is required to comply with Section 106 NHPA.

FEMA has issued NHPA Guidance for Communication Facilities (<http://www.fema.gov/pdf/government/grant/bulletins/info351.pdf>). In the FCC Tower Construction Notification System (TCNS), Nebraska SHPO is not a participating party. In the FCC E-106 System, Nebraska is not a participating state.

Boone County Emergency Management coordinated directly with the Nebraska State Historical Society (NSHS) to identify known NRHP properties in the affected area, and to determine potential for presence of archaeological properties that may not have been surveyed. NSHS identified that construction of the proposed communication tower and related facilities are unlikely to impact any cultural resources listed or eligible for listing on the National Register and that a determination of *no historic properties affected* is appropriate for this undertaking.

### **3.2 BIOLOGICAL AND SPECIES IMPACTS, INCLUDING MIGRATORY BIRDS**

Under Section 7 of the Endangered Species Act (ESA), Federal agencies must review proposed actions to ensure they are not likely to jeopardize the continued existence of a listed threatened or endangered species or to destroy or adversely modify its critical habitat. Under the Migratory Bird Treaty Act (MBTA), Federal undertakings are prohibited from taking of migratory birds, eggs, young, and/or active nests.

Boone County Emergency Management coordinated directly with the U.S. Department of the Interior, Fish and Wildlife Service (FWS) to identify potential impacts to threatened or endangered species or for potential impacts to migratory birds. FWS identified that due to present use of the property that it appears unlikely that the proposed project would result in adverse effects to threatened or endangered species. FWS also identified that no trees, undisturbed grasslands or other habitats for migratory bird nesting would be removed or impacted by construction of the communication tower.

However, FWS did identify that tall, lighted towers are a significant hazard to migrating birds and are responsible for several million bird mortalities (take) annually; especially true of night-migrating, Neotropical songbirds that are attracted to, and become trapped within, the glow of certain types of tower lighting. When towers are guyed, mortality increases substantially due to birds colliding with guy wires as they circle the tower in the lights. FWS appreciated the effort Boone County made to substantially reduce take by designing the tower as self-supporting instead of guyed, and by locating in an area to minimize potential for migratory bird strikes. FWS recommends the following tower lighting to be used to further reduce take of night-migrating songbirds as well as other migratory birds:

- 1) Minimum number of pilot warning and obstruction avoidance lighting required by the Federal Aviation Administration (FAA). Unless otherwise required by the FAA, only white (preferable) or red strobe lights should be used at night, and these should be the minimum number, minimum intensity authorized by the FAA and flash between 27 and 33 flashes per minute. Light emitting diode (LED) lights are less expensive than incandescent lights and are more effective at reducing take. The use of constant red or pulsating (beacon) red warning lights at night should be avoided.
- 2) Security lighting for on-ground facilities should be down-shielded and/or motion-sensor activated to limit such lighting to within the tower compound.

FWS lighting recommendations are required in order for FEMA to tier from the DHS NEPA Directive and Instruction. The proposed project uses a dual obstruction lighting system with strobe that meets FAA AC 150/5345-43G; the white obstruction lights turn off and red obstruction lights turn on when ambient light changes from twilight to night. Red obstruction lights turn off and white obstruction lights turn on when ambient light changes from night to twilight. Boone County Emergency Management has indicated that the lighting will be provided via a TWR L864/L865 Dual Red (LED)/White Strobe Medium Intensity Obstruction Light. The specification provides that nighttime flash rate is thirty (30) flashes/minute with a tolerance of +/- two (2) flashes per minute. This puts the range of operation at 28-32 flashes per minute, within the range FWS recommends. In addition, the nighttime strobe is provided by LED; FWS has indicated that LED lighting is more effective at reducing take.

In addition, Boone County Emergency Management coordinated directly with the Nebraska Game and Parks Commission (NGPC) to identify potential impacts to state species resources and for potential impacts to Bald eagle or Golden eagle or nests. NGPC identified no impacts to state parks, state recreation areas, state wildlife management areas, or state-listed threatened or endangered species. In addition, NGPC identified no records of bald or golden eagle nests in the vicinity of the project, and no suitable habitat for eagles would be impacted. NGPC reiterated potential for migratory birds through bird strikes and reinforced FWS lighting recommendations.

### **3.3 FLOODPLAIN AND WETLAND IMPACTS**

Executive Orders 11988 (EO 11988), Floodplain Management, and 11990, Protection of Wetlands, require Federal agencies to reduce the risk of flood loss, minimize the impacts of floods on human safety, health and welfare, and preserve natural and beneficial floodplain and/or wetland values. Prior to taking any action in or affecting floodplains and/or wetlands, Federal agencies are required to follow a consistent, open, and transparent eight (8) step decision-making process that both considers alternatives outside the floodplain and/or wetland that accomplishes the same results, long-term impacts associated with occupancy of the floodplain and/or wetland, and a no-action alternative. 44 CFR Part 9 provides FEMA implementing regulations to meet these EO 11988 obligations.

Boone County participates in the National Flood Insurance Program (NFIP) and has an effective Flood Insurance Rate Map (FIRM) that identifies 100-year floodplains. FIRM Map Number 31011C0325C with an effective date of December 6, 1999 identifies that this project is outside the mapped floodplain.

The FWS National Wetland Inventory (NWI) mapper was used to screen for presence of wetlands. The NWI map indicates several isolated wetland parcels, but none in the immediate vicinity and likely to be impacted by the proposed project. The included sediment control during construction will ensure no potential impacts to isolated wetlands shown on the NWI map.

  
*Nebraska*  
STATE HISTORICAL SOCIETY

21 April 2015

Thomas Smith  
Coordinator  
Region 44 Emergency Management  
PO Box 666  
Fullerton NE, 68638

RE: HP# 1504-113-01; Communications Tower, Boone County Fairgrounds, Albion, Boone  
County

Dear Mr. Smith:

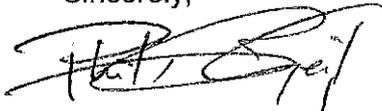
Thank you for submitting the information and maps for the above referenced project for SHPO review and comment according to 54 U.S.C. 306108 (formerly Section 106 of the National Historic Preservation Act of 1966, as amended) and implementing regulations at 36 CFR Part 800.

According to the information that you provided along with a check of NESHPO records, I believe that construction of the proposed communication tower and related facilities are unlikely to impact any cultural resources listed on or eligible for listing on the National Register. I believe that a determination of *no historic properties affected* is appropriate for this undertakings.

Please be advised that this opinion does not necessarily reflect that of any Native American Tribes that might have an interest in the area nor does it touch upon Traditional Cultural Properties, if they exist in the area. Also, there is always the possibility that buried or otherwise obscured cultural or human remains might be discovered in the project area. If such a discovery occurs, please contact this office immediately.

Should you have any questions, please do not hesitate to call this office at 402-471-2609 or by email at [phil.geib@nebraska.gov](mailto:phil.geib@nebraska.gov)

Sincerely,



Phil R. Geib  
Preservation Archaeologist

1500 R Street  
PO Box 82554  
Lincoln, NE 68501-2554  
p: (800) 833-6747  
(402) 471-3270  
f: (402) 471-3100  
[www.nebraskahistory.org](http://www.nebraskahistory.org)

# United States Department of the Interior



## FISH AND WILDLIFE SERVICE

Ecological Services  
Nebraska Field Office  
9325 South Alda Road  
Wood River, Nebraska 68883

May 26, 2015

**FWS-NE: 2015-218**

Mr. Thomas Smith  
Region 44 Emergency Management Coordinator  
P.O. Box 666  
Fullerton, NE 68638

**RE: Proposed 310-foot Self-Support Radio Tower at the Boone County Fairgrounds, Boone County, Nebraska.**

Dear Mr. Smith,

This responds to your April 14, 2015, request for review of the subject project by the U.S. Fish and Wildlife Service (Service). Region 44 Emergency Management is proposing to construct a 310-foot self-support radio tower, communications building, and propane-fueled generator in the southwest corner of the Boone County Fairgrounds in Albion in Boone County, Nebraska. The proposed tower will enhance Public Safety Agency communications and is part of the infrastructure for the State of Nebraska's Communications Plan. The proposed tower site is located within the fairgrounds, on a mowed grassy area; adjacent areas are agricultural fields and rural development.

The Service has responsibility for conservation and management of fish and wildlife resources for the benefit of the American public under the following authorities: 1) Endangered Species Act of 1973; 2) Fish and Wildlife Coordination Act; 3) Bald and Golden Eagle Protection Act; and 4) Migratory Bird Treaty Act (MBTA). The National Environmental Policy Act requires compliance with all of these statutes and regulations.

### **Endangered Species Act**

Based on the information you have provided to date, **it appears unlikely that your project would result in adverse effects to trust resources under our authority.** This conclusion is based on information supplied in your April 14, 2015, letter. The proposed tower is located in a mowed grassy area on Boone County Fairground's property on the outskirts of the City of Albion; surrounding land is used for agriculture. Should changes to the proposed project occur or new information regarding fish and wildlife resources become available, further consultation with the Service should be initiated to assess any potential impacts.

All federally listed species under ESA are also State-listed under the Nebraska Nongame and Endangered Species Conservation Act. However, there are also State-listed species that are not federally listed. To determine if the proposed project may affect State-listed species, the Service recommends that the project proponent contact Carey Grell

([carey.grell@nebraska.gov](mailto:carey.grell@nebraska.gov)) and Michelle Koch ([michelle.koch@nebraska.gov](mailto:michelle.koch@nebraska.gov)), Nebraska Game and Parks Commission, 2200 N. 33<sup>rd</sup> Street, Lincoln, NE 8503-0370.

## **Migratory Bird Treaty Act**

### Tower Proximity to Habitat for Migratory Birds

As you are aware, the MBTA, (16 U.S.C. 703-712: Ch 128, as amended) prohibits the taking of migratory birds, eggs, young, and/or active nests. The project site is located in a mowed grassy area and the adjacent areas are agriculture, making it unlikely that the site will be used for nesting by breeding migratory birds. It appears no trees, undisturbed grasslands or other habitats used for migratory bird nesting would be removed or impacted by construction of the communications tower. Therefore, timing of project construction to avoid the breeding bird season is not necessary in this instance.

### Tower Lighting

Tall, lighted towers are a significant hazard to migrating birds and are responsible for several million bird mortalities (take) annually; take of migratory birds is prohibited by the MBTA. This is especially true with night-migrating, neotropical songbirds that are attracted to, and become trapped within, the glow of certain types of tower lighting. When a cell tower is guyed, mortality increases substantially due to birds colliding with the guy wires as they circle the tower in the lights. The Service appreciates efforts made to substantially reduce take by designing the tower as self-supporting instead of guyed and by locating at the fairgrounds in Boone County.

Because the proposed radio tower will be lighted (as required since it is greater than 199ft tall), the Service recommends the following tower lighting be used to further reduce take of night-migrating songbirds as well as other migratory birds at the site.

- 1) The proposed tower should have the minimum number of pilot warning and obstruction avoidance lighting required by the Federal Aviation Authority (FAA). Unless otherwise required by the FAA, only white (preferable) or red strobe lights should be used at night, and these should be the minimum number, minimum intensity authorized by the FAA, and flash between 27 and 33 flashes per minute<sup>1</sup>. Light emitting diode (LED) lights are less expensive than incandescent lights and are more effective at reducing take. The use of constant red or pulsating (beacon) red warning lights at night should be avoided.
- 2) Security lighting for on-ground facilities should be down-shielded and/or motion-sensored to limit such lighting to within the tower compound.

The Service appreciates the opportunity to review and comment on the subject project proposal. If you have any questions regarding these comments, please contact me at [eliza\\_hines@fws.gov](mailto:eliza_hines@fws.gov) or telephone number (308) 382-6468, extension 204.

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<sup>1</sup> New lighting requirements adopted by the FAA in late-2012 to reduce avian mortality from obstructions <http://www.airporttech.tc.faa.gov/safety/downloads/TC-TN12-9.pdf>

Sincerely,

A handwritten signature in blue ink, appearing to read "Eliza Hines".

Eliza Hines  
Nebraska Field Supervisor

cc: NGPC; Lincoln, NE (Attn: Carey Grell, Michelle Koch)



2200 N. 33rd St. • P.O. Box 30370 • Lincoln, NE 68503-0370 • Phone: 402-471-0641

June 3, 2015

Tom Smith  
Region 44 Emergency Manager  
P.O. Box 666  
309 Esther St  
Fullerton, NE 68638

**RE: Construction of a 310-foot self-support communications tower, located on the southwest corner of the Boone County Fairgrounds in Albion, Boone County**

Dear Mr. Smith:

Nebraska Game and Parks Commission (NGPC) staff members have reviewed the information for the proposal identified above. The purpose of the tower is to enhance public safety agency communications and operational interoperability.

The proposed project will not impact any NGPC State Park, State Recreation Area, or State Wildlife Management Areas, as none are located in the immediate project area.

Based on our review of the information provided, aerial photographs, and the Nebraska Natural Heritage database, the project is located within the range of the state-listed endangered whooping crane (*Grus americana*) and state-listed threatened western prairie fringed orchid (*Platanthera praeclara*). However, there is no suitable habitat for these species in the project area, and therefore we have determined that the project is not likely to adversely affect state-listed threatened or endangered species.

We have grown increasingly concerned about the recent increase in tower construction across Nebraska and impacts that this might have on populations of migratory birds. Siting of new towers does have the potential to adversely impact migratory birds depending on the tower height, presence of guy wires, and lighting. The U.S. Fish and Wildlife Service has adopted several guidelines to eliminate or minimize a tower's potential to cause unnecessary bird mortality. We support these guidelines, which are summarized below. New communications equipment should be collocated on existing towers or other structures, when feasible. If a new tower must be constructed, it is encouraged to be located within an existing cluster of towers, and located to avoid wetlands, riparian areas, known bird concentration areas, and migration corridors. These towers should be no more than 199 feet above ground level using construction techniques that do not require guy wires. If the Federal Aviation Administration (FAA) requires aviation safety lights, the tower should have the minimum number of pilot warning and obstruction avoidance lighting required by the FAA. Unless otherwise required by the FAA, only white (preferable) or red strobe lights should be used at night, and these should be the minimum number, minimum intensity, and flash between 27 and 33 flashes per minute. The use of solid red or pulsating

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OutdoorNebraska.org

(beacon) red warning lights at night should be avoided. Any security lighting for on-ground facilities and equipment should be down shielded to keep the light within the boundaries of the site.

As we understand it, the proposed tower will be constructed to a height above 199-feet; however, we recognize that the tower has been designed as a self-support structure without the use of guy wires, as recommended by the guidelines. If lighting is required on the tower, we recommend compliance with the lighting guidelines, as mentioned above. Adherence to the guidelines should avoid and minimize impacts to migratory birds during operation of the tower.

The following is guidance for addressing migratory bird impacts during construction of the project. Under the Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703-712: Ch 128 *as amended*) construction activities in grassland, wetland, stream, and woodland habitats that would otherwise result in the taking of migratory birds, eggs, young, and/or active nests should be avoided. The primary nesting season for migratory birds is from April 1 to July 15. However, some species of migratory birds are known to nest outside of this period. Construction activities associated with the tower project that involves vegetation removal should be scheduled to avoid impacting migratory bird nesting. If this is not feasible, then a survey will be needed. The U.S. Fish and Wildlife Service, Ecological Services Office in Grand Island can be contacted for information on how to avoid the unnecessary take of migratory birds.

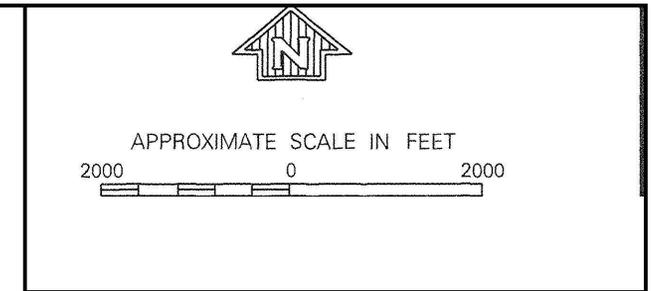
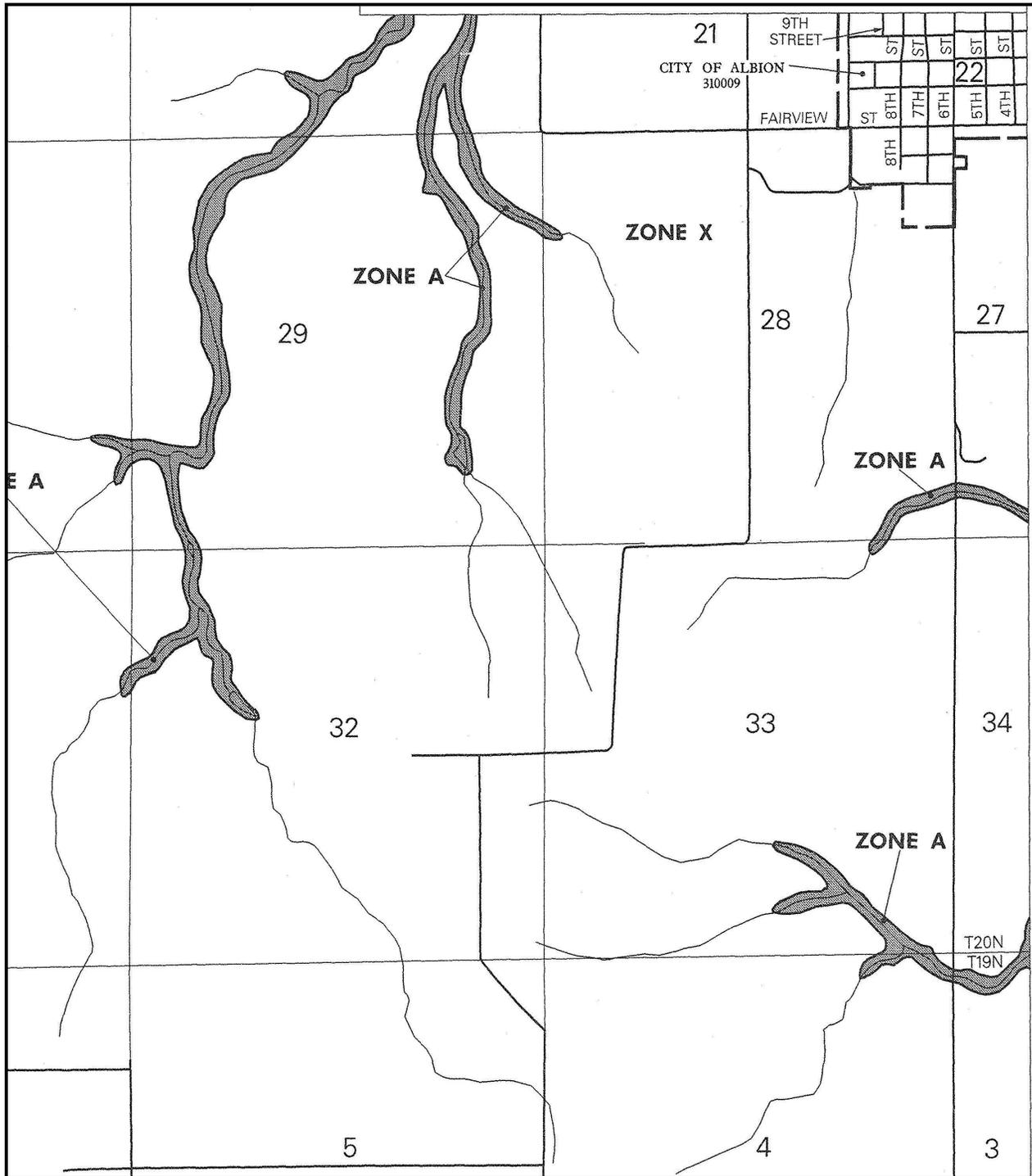
We do not have any records of bald or golden eagle nests in the vicinity of the project. Based on review of the aerial photograph, there does not appear to be any suitable habitat for eagles that would be impacted by the project.

Thank you for the opportunity to review this proposal. If you have any questions regarding these comments, please contact me at (402) 471-5423 or [carey.grell@nebraska.gov](mailto:carey.grell@nebraska.gov).

Sincerely,

A handwritten signature in blue ink that reads "Carey Grell". The signature is written in a cursive style with a large, looping 'C' and 'G'.

Carey Grell  
Environmental Analyst Supervisor  
Planning and Programming Division



**NATIONAL FLOOD INSURANCE PROGRAM**

**FIRM**  
**FLOOD INSURANCE RATE MAP**

**BOONE COUNTY,  
 NEBRASKA AND  
 INCORPORATED AREAS**

**PANEL 325 OF 575**  
 (SEE MAP INDEX FOR PANELS NOT PRINTED)

| CONTAINS:<br>COMMUNITY               | NUMBER | PANEL | SUFFIX |
|--------------------------------------|--------|-------|--------|
| ALBION CITY OF                       | 310009 | 0325  | C      |
| BOONE COUNTY<br>UNINCORPORATED AREAS | 310008 | 0325  | C      |

**MAP NUMBER  
 31011C0325 C**

**EFFECTIVE DATE:  
 DECEMBER 6, 1999**



Federal Emergency Management Agency

JOINS PANEL 0350

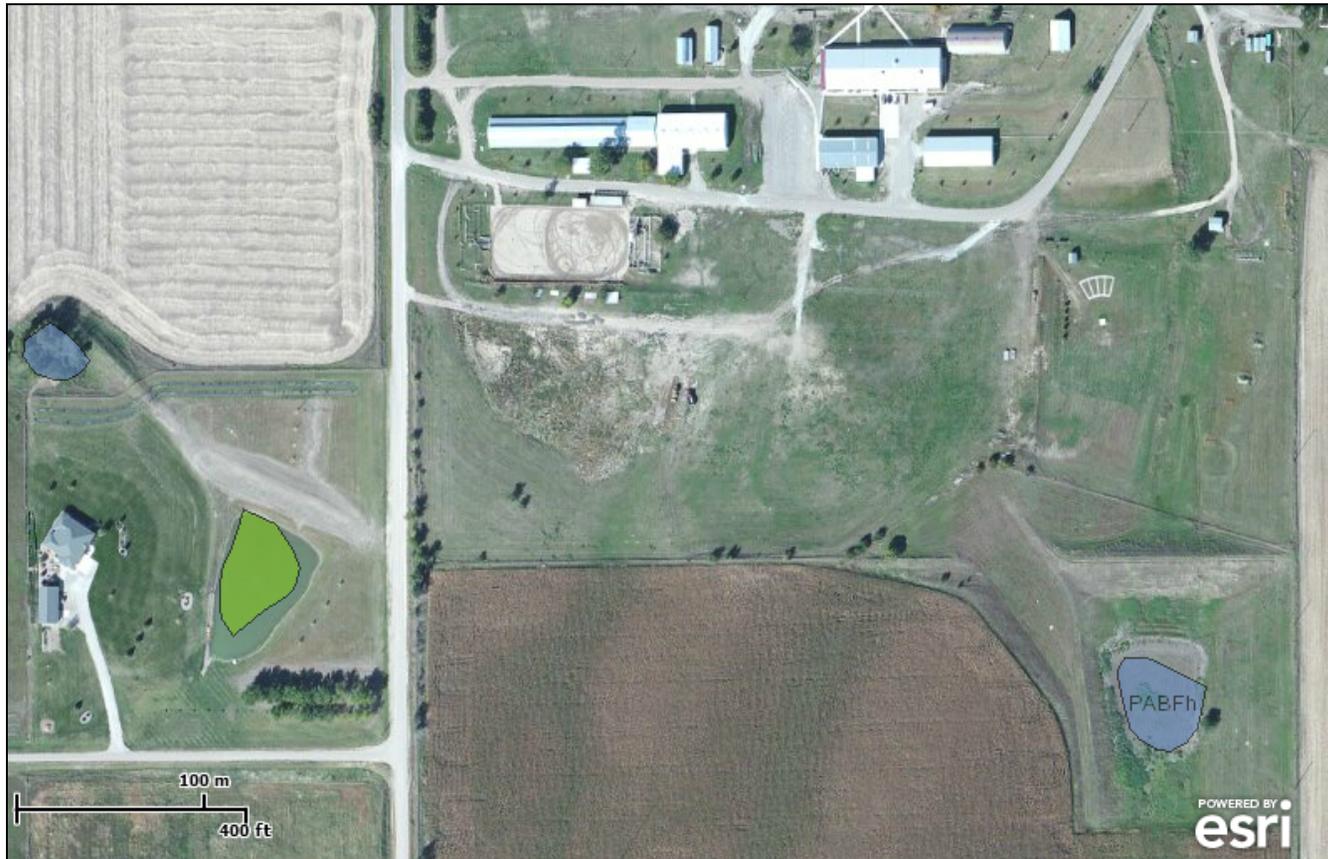
This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at [www.msc.fema.gov](http://www.msc.fema.gov)



# U.S. Fish and Wildlife Service National Wetlands Inventory

HSGP  
2013-SS-00010

Jun 12, 2015



## Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

## Riparian

- Herbaceous
- Forested/Shrub

## Riparian Status

- Digital Data

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

## User Remarks:

Boone County Communication Tower