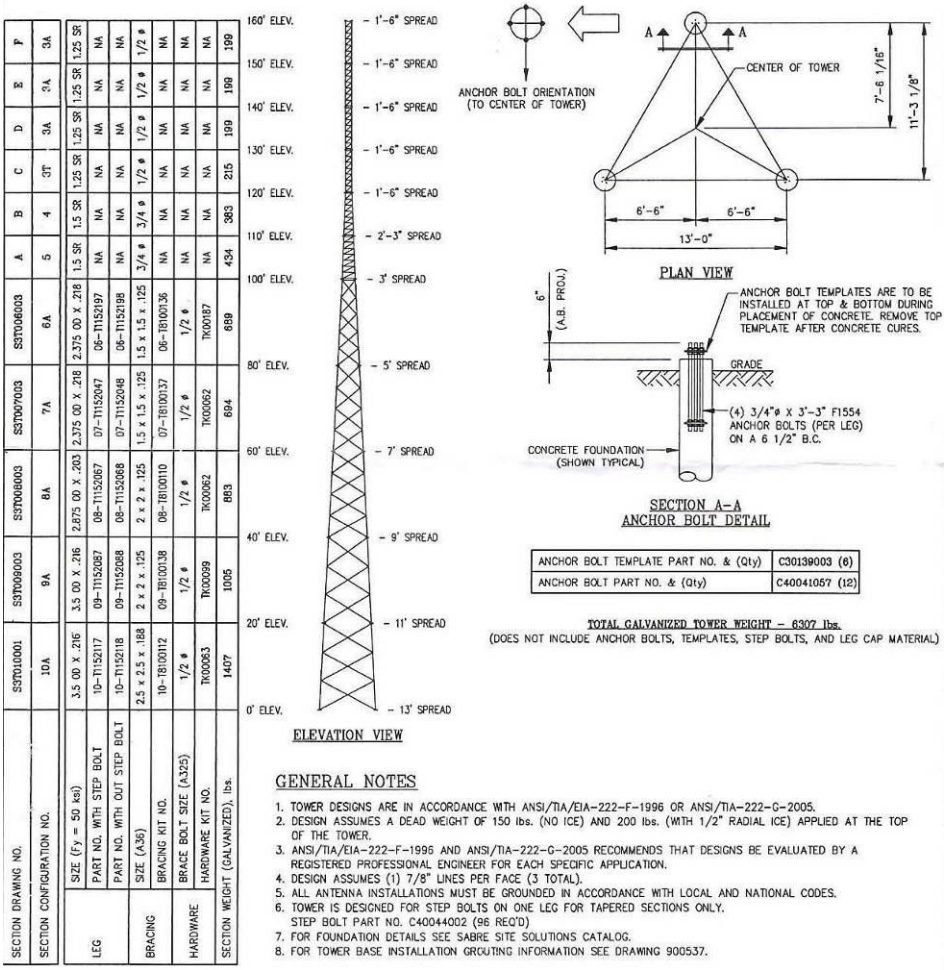

Environmental Assessment

Box Butte County Sheriff's Office

Hemingford, Nebraska

May 2010

FEMA

U.S. Department of Homeland Security

9221 Ward Parkway, Suite 300

Kansas City, MO 64114

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ACROYMS AND ABBREVIATIONS

BMP's	Best Management Practices
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CWA	Clean Water Act
DHS	Department of Homeland Security
DNL	Day-Night Average Sound Level
EA	Environmental Assessment
EO	Executive Order
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FIRMS	Flood Insurance Rage Maps
FPPA	Farmland Protection Policy Act
NAAQS	National Ambient Air Quality Standard
NeSHS	Nebraska State Historical Society
NEMA	Nebraska Emergency Management Agency
NEPA	National Environmental Policy Act
NGPC	Nebraska Game and Parks Commission
NHPA	National Historic Preservation Act
NPDES	National Pollution Discharge Elimination System
NRHP	National Register of Historic Places
SCS	Soil Conservation Service
SHSGP	State Homeland Security Grant Program
USACE	United States Army Corps of Engineers
USFWS	US Fish and Wildlife Service

1. INTRODUCTION

Funding for this project was awarded to the Nebraska Emergency Management Agency (NEMA) under the Department of Homeland Security's (DHS) Homeland Security Grant Program – State Homeland Security Grant Program (SHSGP). The project was authorized by the Panhandle Region PET Committee, who received funding in the amounts of $70,810.00 (tower and repeater) from the 2008 SHSGP for communications.

The National Environmental Policy Act (NEPA) requires that Federal agencies evaluate the environmental impacts of their proposed actions and the natural and human environment before deciding to fund an action. The President's Council on Environmental Quality (CEQ) has developed a series of regulations for implementing the NEPA. These regulations are included in Title 40 of the Code of Federal Regulations (CFR), Parts 1500–1508, requiring the preparation of an Environmental Assessment (EA). EA documents must include an evaluation of alternative means of addressing the purpose and need for Federal action and a discussion of the potential environmental impacts of the proposed Federal action. An EA provides the evidence and analysis to determine whether the proposed Federal action will have a significant adverse effect on the human environment. An EA, related to a FEMA program, must be prepared according to the requirements of the Stafford Act and 44 CFR, Part 10. This section of the Federal Code requires that the Federal Emergency Management Agency (FEMA) take environmental considerations into account when authorizing funding or approving actions. This EA was conducted in accordance with both CEQ and FEMA regulations for NEPA.

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2. PURPOSE AND NEED

It is Box Butte County's objective to have complete radio coverage throughout Box Butte County. In a large portion of the NW County there are issues related to the loss of radio coverage at this time. Consequently, there is a need to ensure that the public safety telecommunication infrastructure is capable of providing and maintaining radio coverage, especially during an emergency event. Therefore, the specific need addressed in this proposal is that of providing sufficient system capability to achieve radio coverage throughout Box Butte County.

--*-*-*

3. ALTERNATIVES

NEPA requires the investigation and evaluation of reasonable project alternatives, including impacts to the natural and human environment as part of the planning process. This EA addresses: the Proposed Alternative and the No Action Alternative.

3.1No Action Alternative

Under the No Action Alternative, Box Butte public safety radio communications system would not receive a radio coverage upgrade. The current coverage is very unreliable and uneven over 5 miles from Hemingford. Consequently, the risk of coverage loss during an emergency event would continue to jeopardize command control, rescue, or event analysis operations.

3.2Construction of Telecommunications Facility at Box Butte County Site (Proposed Action)

The proposed project site is located in Box Butte County, Nebraska. The site is at 216 Box Butte, Hemingford Nebraska. The property is owned by Box Butte County. An aerial photo of the current site was obtained and is located in Appendix A. Action Communications has analyzed the proposed construction of telecommunication infrastructure at the Box Butte County site, including a 160-foot tower with antennas, cabling, an equipment cabinet, and associated electronic equipment, to provide needed radio coverage to its existing public safety radio communications system. Action Communications determined that the proposed Box Butte County tower project would successfully address radio coverage issues. The Saber Communications Corporation S3TL Series UL Self Supporting Tower will adequately handle the equipment to be installed.

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4. AFFECTED ENVIRONMENT AND POTENTIAL IMPACTS

The following table summarizes the potential impacts of the Proposed Action Alternative, and identifies conditions or mitigation measures to minimize those impacts, where appropriate. Following the summary table, each environmental area is treated in greater detail.

Affected Environment	Impacts	Mitigation
Soils	Construction activities may cause some disturbance, but effects to soils would be minor and temporary.	Strom water BMP during construction
Air Quality	Construction equipment may temporarily affect air quality; however, no long-term impacts are anticipated.	Measures to limit emission of fugitive dust, including watering down of construction areas.
Waters of the U.S. including Wetlands	Action is not located in or near wetlands.	N/A
Flood Plains	Action is not located in a floodplain	N/A
Water Quality	No surface water, no affects to ground water	N/A
Threatened and Endangered Species	The proposed alternative would have no effect on threatened or endangered species.	N/A
Cultural Resources	Coordination with the State Historic Preservation Officer concluded that the proposed alternative would have no affect on properties listed in the National Register of Historic Places	N/A
Socioeconomic Resources	The new communications tower would provide better coverage area for EMS	N/A
Environmental Justice	As the new communications tower would potentially benefit all citizens equally the proposed alternative would not have an adverse effect on minority or low-income populations	N/A
Cumulative Impacts including Land Use and Planning	The proposed alternative would be constructed on land zoned for general business districts under local zoning codes. Construction of a communications tower agrees with this use	N/A

4.1Physical Resources

4.1.1 Geology and Soils

The project site is located at elevation 4419' AMSL. According to the United States Department of Agriculture, Soil Conservation Service (SCS) Soil Survey of Box Butte County, Nebraska, issued in November 2006, there is one predominant soil type present at the proposed tower site. It is Alliance loam, 0 to 1 percent slopes. A Copy of the SCS map and soil classification descriptions can be found in Appendix C.

The farmland Protection Policy Act (FPPA) (p.l. 97-98, Sec. 1539-1549; 7 U.S.C. 4201, et seq.), which states that federal agencies must "minimize the extent to which federal programs contribute to the unnecessary conversion of farmland to nonagricultural uses," was considered in this EA. Prime farmland is characterized as land with the best physical and chemical characteristics for the production of food, feed, forage, fiber, and oilseed corps (USDA, 1989). Prime farmland is either used for food or fiber crops or is available for those crops; it is not urban, built-up land, or water areas. The proposed project site is not considered prime farmland.

No Action Alternative – Under the No Action Alternative, no impact to seismicity, geology, or soils would occur.

Proposed Action Alternative – Under the Proposed Action, no impacts to seismicity or geology are anticipated. Construction activities could cause short-term impacts to soils. Appropriate Best Management Practices (BMP's) would be used during the construction phase.

4.1.2 Air Quality

The Clean Air Act requires the U.S. Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. The Act established two types of national air quality standards: primary standards set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly and secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation and buildings. The current criteria pollutants are: Carbon Monoxide (CO), Nitrogen Dioxide (NO2), Ozone (O3), Lead (Pb), Particulate Matter (PM10), and Sulfur Dioxide (SO2).

No Action Alternative – Under the No Action alternative, there would be no impacts to air quality because no construction would occur.

Proposed Action Alternative - Under the Proposed Action, there could be short-term minor impacts to air quality during the construction phase due to heavy equipment use. Measures would be taken to limit emission of fugitive dust, including watering down of construction areas. No long-term impacts to air quality are anticipated.

4.2 Water Resources

The United States Army Corps of Engineers (USACE) is responsible for permitting and enforcement functions dealing with building into or discharging dredge or fill material into Waters of the United States. USACE regulations for building or working in navigable waters of the United States are authorized by the Rivers and Harbors Act of 1899. These regulations go together with Section 404 of the Clean Water Act, which establishes the USACE permit program for discharging dredged or fill material. The regulations are often used together because building in navigable waters of the United States also constitutes discharging dredged or fill material into water of the United States. In addition to regulating construction or work being done in navigable water of the United States, USACE regulates discharging into wetlands through the Section 404 permit program.

Field reconnaissance performed on December 2, 2009 did not observe defined surface drainage features, such as rivers, creeks, ponds, etc., on or immediately adjacent to the subject property. Additionally, the Alliance loam described in Section 4.1 is characterized as "well-drained" and not indicative of hydric soils, one of the three criteria required determining the presence of a wetland. As such, the site does not exhibit Waters of the United States.

4.2.1 Water Quality

Water resources at the site were investigated as part of the Environmental Assessment. There are four wells in the area of the tower site, one of these is an inactive domestic well and the other three are active irrigation wells. There are two more domestic wells registered directly north of state highway 71, and three irrigation wells registered to the west of the site. Letters from Upper Niobrara White Natural Resource District and US Army Corps of Engineers state there will be no effect to the waters from the proposed tower. (Appendix B)

No Action Alternative - Under the No Action alternative, no impacts to surface or ground water resources would occur.

Proposed Action Alternative - Under the Proposed Action, potential impacts to surface or ground water resources would be minimal, due to the type of activity and the small size of the project area (less than 5 acres). A National Pollution Discharge Elimination System (NPDES) permit is not necessary for this project.

4.2.2 Wetlands

The U.S. Army Corps of Engineers (USACE) regulates the discharge of dredged or filled material into waters of the U.S., including wetlands, pursuant to Section 404 of the Clean Water Act (CWA). Additionally, Executive Order 11990 (Protection of Wetlands) requires federal agencies to avoid, to the extent possible, adverse impact of wetlands. A formal request was sent to the USACE Omaha District to determine if the proposed project would impact any known wetlands. In a response letter dated September 25, 2009 (Appendix B), USACE indicated that there would be no apparent impacts to waters of the United States, including jurisdictional wetlands, and

that a Department of the Army permit pursuant to Section 404 would not be required for the proposed tower project.

No Action Alternative - Under the No Action alternative, no impacts to wetlands would occur.

Proposed Action Alternative - Under the Proposed Action, no impacts to wetlands are anticipated, because the proposed project site is not located in or near a wetland.

4.2.3 Floodplains

Executive Order (EO) 11988 (Floodplain Management) requires federal agencies to take action to minimize occupancy and modification of the floodplain. Specifically, EO 11988 prohibits federal agencies from funding construction in the 100-year floodplain unless there are no practicable alternatives. Flood Insurance Rate Maps (FIRMs) are used to identify the regulatory 100-year Floodplain for the National Flood Insurance Program. Consistent with EO 11988, FIRMs were examined during the preparation of this EA. This project is not within the 100-year floodplain as indicated on FIRM panel # 3104160006A for Box Butte County, Nebraska (Appendix A)

4.2.4 Terrestrial and Aquatic Environment

A formal request was submitted to the Nebraska Game and Parks Commission (NGPC) to determine if the proposed project will impact any state Wilderness Areas or Wildlife Preserves. A response letter, dated September 25, 2009 (Appendix B), was received from NGPC, which says the project will not impact any park areas or wildlife management as there are none located in the area.

No Action Alternative - Under the No Action alternative, no impacts to terrestrial or aquatic environments would occur.

Proposed Action Alternative - Under the Proposed Action, no impacts to terrestrial or aquatic environments would occur.

4.3 Biological Resources

Native or naturalized vegetation, wildlife, and the habitats in which they occur are collectively referred to as biological resources. Existing information on plant and animal species and habitat types in the vicinity of the proposed alternative was reviewed for the presence of any species listed as threatened or endangered by Federal or State agencies to assess their sensitivity to the effects of the alternatives. The Endangered Species Act (ESA) of 1973 causes the conservation, protection, and restoration of threatened or endangered plants and animals and their habitats. The ESA charges Federal agencies to conserve threatened or endangered species, and all Federal agencies must ensure any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of an endangered or threatened species or result in the destruction of critical habitat for these species.

The Nebraska Game and Parks Commission (NGPC) were contacted to evaluate the proposed site for crucial wildlife habitats and threatened or endangered species. The NGPC indicates no such state-listed habitat or species will be significantly affected by the proposed project. See Appendix B for agency correspondence.

4.3.1 Threatened and Endangered Species and Critical Habitat

Construction of the proposed alternative will have no adverse affect on federally or state-listed habitat or threaten or endangered species.

Under the no action alternative, construction activities would not take place, and there would be no potential impacts to biological resources.

4.3.2 Migratory Birds

Under the Migratory Bird Treaty Act, taking, killing or possessing migratory birds is unlawful. Migratory birds are a federal trust resource that the USFWS is authorized to protect, and the Service has put forth recommendations for communication tower design and height to mitigate collision-related mortality. A formal request was submitted to the US Fish and Wildlife Service (USFWS) to determine if the proposed project will impact any migratory Birds. A response letter dated November 16, 2009 (Appendix B), was receive from USFWS, which says the project is not likely to adversely affect any migratory birds.

No Action Alternative - Under the No Action alternative, no impacts to migratory birds would occur.

Proposed Action Alternative - Under the Proposed Action, tower design and location would mitigate collision-related bird mortality. Sensitive bird habitats are not present in the project area and the tower would not be located in a flyway area.

4.4 Cultural and Historic Resources

Consideration of impacts to cultural resources is mandated under Section 106 of the National Historic Preservation Act (NHPA), as amended and implemented by 36 CFR Part 800. The regulations require identifying significant cultural resources that may be impacted by the alternatives. Cultural resources are prehistoric and historic sites, structures, districts, artifacts, or any other physical evidence of human activity considered important to a culture, subculture, or community for scientific, traditional, religious, or other reasons.

Cultural resources determined to be potentially significant under NHPA are subject to protection from adverse impacts resulting from an undertaking. To be considered significant, a cultural resource must meet one or more of the criteria established by the National Park Service that would make that resource eligible for inclusion in the National Register of Historic Places (NRHP). The term “eligible for inclusion in the NRHP” includes all properties that meet the NRHP listing criteria, which

are specified in the Department of Interior regulations Title 36 CFR 60.4 and NRHP Bulletin 15. Therefore, sites not yet evaluated may be considered potentially eligible for inclusion in the NRHP and, as such, are afforded the same regulatory consideration as nominated properties. Whether prehistoric, historic, or traditional, significant cultural resources are referred to as "historic properties."

The Nebraska State Historical Society, (NeSHS) was contacted as part of the completing the EA. The NeSHS responded in a letter dated September 22, 2009 (Appendix B) that their review of the proposed site area relative to the State's cultural resources files, according to 36 CFR 800, indicates that there should be no effect on the properties listed on the National Register of Historic Places or identified by the State of Nebraska.

4.4.1 Cultural and Historic Resource Consequences

The Nebraska State Historical Society (NeSHS), in a letter dated September 22, 2009, determined that construction of a telecommunications facility does not contain recorded historic resources. (Appendix B)

Proposed Action Alternative - Under the Proposed Action, no impacts to cultural resources are anticipated. If historic or archaeological materials are discovered during construction, all ground disturbing activities shall cease and FEMA/NSHS will be notified.

4.4.2 Indian Coordination and Religious Sites

Section 106 of the NHPA requires consultation with Federally-recognized Indian tribes who may have potential cultural interests in the project area, and acknowledges that tribes may have interests in geographic locations other than their seat of government. A formal request was sent to the tribes to determine if they may have any potential cultural interests in the project area. The one response received back stated that the Santee Sioux Nation has no objection to the proposed project. (Appendix B for response and example of letters submitted)

No Action Alternative - Under the No Action Alternative, no impacts to Indian religious or archaeological sites would occur.

Proposed Action Alternative - Under the Proposed Action, no impacts to Indian religious or archaeological sites are anticipated.

4.5 Socioeconomic Resources

4.5.1 Noise

Noise is generally defined as unwanted sound. Sound is most commonly measured in decibels (dB) on the A-weighted scale, which is the scale most similar to the range of sounds that the human ear can hear. The Day-Night Average Sound Level (DNL) is an average measure of sound. The DNL descriptor is accepted by federal agencies as a standard for estimating sound impacts and

establishing guidelines for compatible land uses. EPA guidelines, and those of many other federal agencies, state that outdoor sound levels in excess of 55 dB DNL are “normally unacceptable” for noise-sensitive land uses such as residences, schools, or hospitals. A letter dated September 15, 2009 from the Panhandle Public Health District states that they perceive no health risks and have no knowledge of any significant impacts on public health. The letter also states the new tower would be beneficial in assisting with communication efforts in the event of a public health emergency in Box Butte County. (Appendix B)

No Action Alternative – Under the No Action alternative, no impacts to noise would occur.

Proposed Action Alternative – Under the Proposed Action, temporary short-term increases in noise levels are anticipated due to construction activities and the use of heavy equipment. The proposed project does not readily create noise. There do not appear to be any noise sensitive land uses within the area of potential effect.

4.5.2 Environmental Justice

Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations) mandates that federal agencies identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority and low-income populations.

No Action Alternative – Under the No Action Alternative, there would be no disproportionately high and adverse effects on minority or low-income populations. All populations could potentially be adversely affected by a loss of radio coverage during an emergency.

Proposed Action – Under the Proposed Action, no disproportionately high and adverse impacts on minority or low-income populations are anticipated. The radio coverage upgrade would benefit all populations by improving communication related to public safety.

4.6 Cumulative Impacts

Cumulative impacts are those effects on the environment that result from the incremental effect of an action when added to past, present and reasonably foreseeable future actions, regardless of what agency (federal or nonfederal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time. There are no known on-going or planned projects in the vicinity of the proposed project site. Therefore, no cumulative impacts are anticipated.

-*-*-*-

5 LIST OF PREPARERS

5.1 Preparers

Jesse Scherer, Action Communications Inc. 308-632-7836
Rick L. Derr, Action Communications Inc. 308-632-7836

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6 PARTIES CONSULTED AND REFERENCES

Panhandle Public Health District
Kim Engel, Director
808 Box Butte Ave
Hemingford, NE 69348
308- 487-3600

Nebraska State Historical Society
L. Robert Puschendorf, Deputy State Historic Preservation Officer
1500 R Street
Lincoln, NE 68501
402-471-3270

US Department of Interior, Fish and Wildlife Service Nebraska Field Office
Ann L. Carlson, Acting Field Supervisor
203 West Second St
Grand Island, NE 68801
308-382-6468

Nebraska Game and Parks Commission
Carey Grell, Environmental Analyst
2200 N 33rd St
Lincoln, NE 68503
402-471-0641

Department of the Army Corps of Engineers, Omaha District
John L. Moeschen, Nebraska State Program Manager
8901 South 154th Street Suite 1
Omaha, NE 58138
888-835-5971

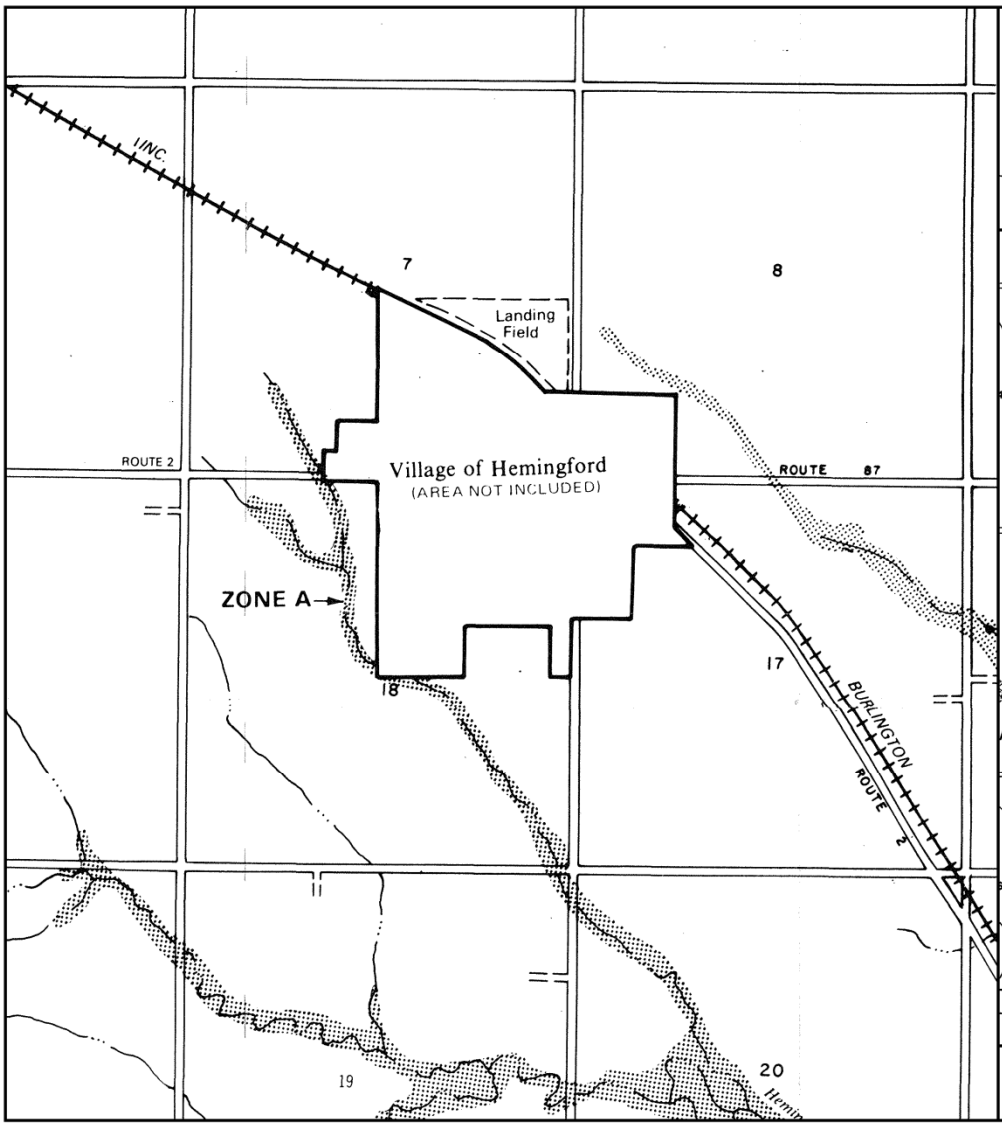
Upper Niobrara White Natural Resources District
Lynn D. Webster, Assistant Manager
430 East Second Street
Chadron, NE 69337
308-432-6190

Santee Sioux Nation
Cora L. Jones, Secretary
108 Spirit Lake Avenue West
Niobrara, NE 68760
402-857-2772

APPENDIX A

FIGURES

Box Butte Ave
W103°04'17.76"



FLOOD HAZARD BOUNDARY MAP

BOX BUTTE COUNTY, NEBRASKA

UNINCORPORATED AREA

PAGE 6 OF 16

(SEE MAP INDEX FOR PAGES NOT PRINTED)

EFFECTIVE DATE:

AUGUST 23, 1977

COMMUNITY-PANEL NO.

310416 0006 A

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

FEDERAL INSURANCE ADMINISTRATION

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

APPENDIX B

AGENCY CORRESPONDENCE

Upper Niobrara White Natural Resources District

Serving Box Butte, Dawes, Sheridan and Sioux Counties

430 East Second Street * Chadron, Nebraska 69337 * Phone (308) 432-6190
Fax (308) 432-6187 * www.unwnrd.org

October 27, 2009

Jesse Scherer
Action Communications
315 West 27th Street
Scottsbluff NE 69361

Dear Jesse:

In response to your request concerning the number of ground water wells in the area of a potential tower site in the NW Quarter of Section 18 Township 27 Range 49 in Box Butte County, I have researched the registered wells in the area.

There are 4 wells in this section, of these one is an inactive domestic well and the other three are active irrigation wells. There are two more domestic wells registered directly north of state highway 71, and three irrigation wells registered to the west of said site. Also the community of Hemingford has public water supply wells in the area.

As to the matter of the tower affecting the ground water aquifer, as long as the tower's construction does not intersect the saturated formations, there should not be any substantial effect.

Please feel free to contact me with any questions.

Regards,

Lynn D. Webster
Assistant Manager

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
NEBRASKA REGULATORY OFFICE – WEHRSPANN
8901 SOUTH 154TH STREET, SUITE 1
OMAHA, NEBRASKA 68138-3635

https://www.nwo.usace.army.mil/html/od-rne/nehome.html

REPLY TO
ATTENTION OF

September 24, 2009

Jesse Scherer
Action Communications
315 West 27th Street
Scottsbluff, NE 69361

RE: 2009-2361-WEH / Box Butte County Sheriff's Office Communications Tower

Dear Mr. Scherer:

This letter pertains to your correspondence received in our office on September 17, 2009, for the above-referenced project. The project involves the construction of a new 160-foot communications tower and a 20 by 20 by 3-foot pad for the Box Butte County Sheriff's Office in Hemingford, Nebraska. The project is located in the vicinity of 42.316244°, -103.073359°, WGS in Section 18, Township 27 North, Range 49 West in Box Butte County, Nebraska.

Based on the information provided, the project will not involve a regulated discharge of fill material into any wetlands or waters of the U.S. Therefore, the activity is not subject to Department of the Army (DA) regulatory authorities and no permit pursuant to Section 404 of the Clean Water Act is required from the U.S. Army Corps of Engineers (Corps).

If, in the future, you plan to place fill material in any waters of the United States please provide this office with an application for review for possible permit requirements.

Although a DA permit is not required for this project, this does not eliminate the requirement that you obtain any other applicable Federal, State, Tribal and/or Local permits as required.

The Omaha District, Regulatory Branch is committed to providing quality and timely service to our customers. In an effort to improve customer service, please take a moment to complete our Customer Service Survey found on our website at http://per2.nwp.usace.army.mil/survey.html. If you do not have Internet access, you may call and request a paper copy of the survey that you can complete and return to us by mail or fax.

If you have any questions regarding this determination, please contact Phil Rezac at the above address or call (402) 896-0896 and refer to file number **2009-2361-WEH.**

Sincerely,

John Moeschen

John L. Moeschen
Nebraska State Program Manager

Copy Furnish:
Box Butte County Sheriff's Office (Tammy Mowry)

Nebraska Game and Parks Commission
2200 N. 33rd St. / P.O. Box 30370 / Lincoln, NE 68503-0370
Phone: 402-471-0641 / Fax: 402-471-5528 / www.OutdoorNebraska.org

September 25, 2009

Jesse Scherer
Action Communications
315 West 27th Street
Scottsbluff, NE 69361

RE: Construction of a 160-foot self-support communication tower within the city limits of Hemingford, Box Butte County

Dear Mr. Scherer:

Nebraska Game and Parks Commission (NGPC) staff members have reviewed the information for the proposal identified above.

Based on our review of the Nebraska Natural Heritage database and aerial photographs, we have determined that the project as described will have no adverse affect on state-listed threatened or endangered species. The proposed project will not impact any NGPC State Park, State Recreation, or State Wildlife Management Areas, as none are located in the immediate project area.

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, flashing white strobe lights should be used at night, with at least a 3-4 second dark phase between flashes, instead of a solid red or pulsating beacon. Current research indicates that solid or pulsating (beacon) red lights attract night-migrating birds at a much higher rate than white strobe lights. Red strobe lights have not yet been studied. Any security lighting for on-ground facilities and equipment should be down shielded to keep the light within the boundaries of the site.

We acknowledge that the proposed tower will be constructed within the city limits of Hemingford, and as a self-support structure as recommended by the above-mentioned guidelines. If lighting is required on the tower, we encourage compliance with the lighting guidelines mentioned above. Adherence to the guidelines should avoid and minimize impacts to migratory birds.

Thank you for the opportunity to review this proposal. If you have any questions regarding these comments, please contact me at (402) 471-5423.

Sincerely,

Carey Grell

Carey Grell
Environmental Analyst
Realty and Environmental Services Division

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
Nebraska Field Office
203 West Second Street
Grand Island, Nebraska 68801

November 16, 2009

FWS-NE: 2010-136

Jesse Scherer
Action Communications
315 West 27th Street
Scottsbluff, NE 69361

RE: Communication Tower, Box Butte County, Nebraska

Dear Mr. Scherer:

This responds to your September 15, 2009, request to the U.S. Fish and Wildlife Service (Service) regarding the subject project. 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 (ESA), 2) Fish and Wildlife Coordination Act, 3) Bald and Golden Eagle Protection Act, and 4) Migratory Bird Treaty Act. The National Environmental Policy Act (NEPA) requires compliance with all of these statutes and regulations.

Based on the information submitted, the Service concurs that the proposed project will have no adverse affects to fish and wildlife resources protected under the above authorities. Should changes to the proposed project occur or new information regarding fish and wildlife resources become available, this determination is no longer valid. Further consultation with the Service will be necessary.

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 Michelle Koch, Nebraska Game and Parks Commission, 2200 N. 33rd Street, Lincoln, NE 68503-0370.

The Service appreciates the opportunity to review and comment on the subject project proposal. If you have any questions regarding these comments, please contact Robert Harms of this office at Robert_Harms@fws.gov or telephone number (308) 382-6468, extension 17.

Sincerely,

For Ann L. Carlson,
Acting Field Supervisor

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

Nebraska
STATE HISTORICAL SOCIETY

September 22, 2009

Jesse Scherer
Action Communications
315 W 27th
Scottsbluff, NE 69361

RE:

hp_num	city	descr
0909-117-01	HEMINGFORD	160 FT LAW ENFORCEMENT COMMUNICATION TOWER

Dear Ms. Scherer:

Thank you for submitting the referenced project proposal for our review and comment. Our comment on this project and its potential to affect historic properties is required by Section 106 of the National Historic Preservation Act of 1966, as amended, and implementing regulations 36 CFR Part 800.

Given the information provided, in our opinion there will be no historic structures affected by the project as proposed. Should any changes in the project be made or in the type of funding or assistance provided through federal or state agencies, please notify this office of the changes before further project planning continues.

Please retain this correspondence and your documented finding in order to show compliance with Section 106 of the National Historic Preservation Act, as amended. If you have any questions, please contact Jill Dolberg at 402-471-4773.

Sincerely,

L. Robert Puschendorf
Deputy State Historic Preservation Officer
Nebraska State Historic Preservation Office

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

Santee Sioux Nation

COUNCIL HEADQUARTERS / MUSEUM

Chairman: Roger Trudell
Vice Chairman: David Henry
Treasurer: Robert Campbell
Secretary: Cora Jones

108 Spirit Lake Avenue West
Niobrara, NE 68760-7219
Phone: (402) 857-2772
FAX: (402) 857-2779

Subject; Santee Sioux Nation's response to your respective request that is governed under Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations (36 CFR Part 800).

To Whom it may concern:

Project : Hemingford Nebraska 27 North 29 West Section 18

The purpose of this letter is to inform you that the Santee Sioux Nation has no objection to your proposed project unless any cultural , natural resources and/or places with traditional cultural significance within the project are found. Then we want to be notified immediately.

We, also, want to be consulted in the event of any NEPA or Section 106 reviews which reflect any cultural significance that are specific to our Dakota culture.

Sincerely,

Cora L. Jones, Secretary

Santee Sioux Nation

September 10, 2009

Omaha Tribal Council
P.O. Box 368
Macy, NE 68039

To whom it may concern:
Box Butte County is working on constructing a new communications tower. The tower will be 160 feet tall. This tower will enhance the Sheriff's office communications in the area. The plan is in compliance with the state of Nebraska Communications plan.

Section 106 of the NHPA requires consultation with Federally recognized Indian Tribes who may have potential cultural interests in the project area, and acknowledges that tribes may have interests in geographic locations other than their seat of government. Box Butte County needs an opinion from your organization on the tower site before we can proceed.

The tower site will be located in the city limits of Hemingford Nebraska. It is in the northeast quarter of 27 north 49 west section 18.

We would appreciate your organizations opinion on this project. Please contact me if you have any questions or need additional information.

Thank you for your time and consideration.

Jesse Scherer
Action Communications
E-mail: jscherer@actcom.net

Panhandle
Public Health District

Public Health
Prevent. Promote. Protect.

P O Box 337 • 808 Box Butte Avenue • Hemingford, NE 69348 • (308)487-3600 • www.pphd.org

September 15, 2009

Jesse Scherer
Internet Support Technician
Action Communications
315 West 27th Street
Scottsbluff, NE 69361

Dear Jesse

Panhandle Public Health District is supportive of the Box Butte County Sheriff's Department communication tower in Hemingford. The new tower will serve the public safety for emergency response agencies and Emergency Management. This tower should not present any undue public health risk to Box Butte County residents.

Sincerely,

Kim Engel

Kim Engel
Director

APPENDIX C

SOIL SURVEY

United States Department of Agriculture

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Box Butte County, Nebraska

November 6, 2009

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://soils.usda.gov/sqi/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (http://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://soils.usda.gov/contact/state_offices/).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Soil Data Mart Web site or the NRCS Web Soil Survey. The Soil Data Mart is the data storage site for the official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the

individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Units

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other

Special Line Features
- Gully
- Short Steep Slope
- Other

Political Features
- Cities

Water Features
- Oceans
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

MAP INFORMATION

Map Scale: 1:583 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 13N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Box Butte County, Nebraska
Survey Area Data: Version 9, Oct 29, 2009

Date(s) aerial images were photographed: 7/28/2006

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Box Butte County, Nebraska (NE013)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
5100	Alliance loam, 0 to 1 percent slopes	1.2	100.0%
Totals for Area of Interest		**1.2**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Box Butte County, Nebraska

5100—Alliance loam, 0 to 1 percent slopes

Map Unit Setting

Elevation: 3,000 to 5,000 feet
Mean annual precipitation: 16 to 18 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 120 to 140 days

Map Unit Composition

Alliance and similar soils: 99 percent
Minor components: 1 percent

Description of Alliance

Setting

Landform: Plains
Down-slope shape: Linear
Across-slope shape: Linear

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: 40 to 60 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Available water capacity: Moderate (about 8.4 inches)

Interpretive groups

Land capability classification (irrigated): 1
Land capability (nonirrigated): 2c
Ecological site: Loamy 14-17" P.Z. (R064XY015NE)

Typical profile

0 to 8 inches: Loam
8 to 16 inches: Silty clay loam
16 to 20 inches: Silt loam
20 to 46 inches: Very fine sandy loam
46 to 60 inches: Weathered bedrock

Minor Components

Lodgepole, frequently ponded

Percent of map unit: 1 percent
Landform: Playas
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: Clayey Overflow (R064XY027NE)

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