

Endangered and Threatened Species Standard Procedures for General NPDES Permit Number NEP100000 for Pesticides Applications To, Over, or Near Waters of the State of Nebraska

*This document includes standard procedures that should be followed when applying pesticides to, over, or near waters of the State of Nebraska¹ in order to avoid adverse impacts to state listed endangered and threatened species. If pesticides applications to, over, or near waters of the state can follow the standard procedures below, then an individual consultation with the Nebraska Game and Parks Commission (NGPC) Environmental Analyst is not necessary. **If these standard procedures cannot be followed, an individual endangered and threatened species consultation with the NGPC Environmental Services Division will be necessary. Information on how to submit projects for consultation is located at the end of this document.***

Pesticides include, but are not limited to, algicides, antifouling agents, antimicrobials, attractants (except food), biocides, defoliants, desiccants, disinfectants and sanitizers, fungicides, fumigants, herbicides, insect growth regulators, insecticides, miticides, microbial pesticides, molluscicides, nematocides, ovicides, pheromones, plant growth regulators (excluding fertilizers or other plant nutrients), repellents, and rodenticides.

¹The terms “pesticide,” “near waters of the state,” and “waters of the state” are defined in **Part V of the General NPDES Permit Number NEP100000 For Pesticides, Applications To, Over, or Near Waters of the State of Nebraska.**

Standard Procedure for All Pesticide Applications To, Over, or Near Waters of the State.

This section includes standard procedures for all pesticide applications to, over, or near waters of the State.

- All label instructions should be followed.
- Pesticides that could drift should be applied when the wind speed is 10 mph or less.
- Pesticides that could drift should be applied using a large droplet size in order to minimize drift. Nozzles with higher rated flows and using the lowest recommended spray pressure for a nozzle will produce larger droplets.
- Pesticides that could drift should be applied using the appropriate type and orientation of nozzles to minimize the potential for drift.
- Pesticides should not run-off into areas occupied by listed species.
- Pesticides should not affect listed species.
- Pesticide that are not approved for aquatic use should not run-off into areas with flowing or standing water.

Pesticide Applications to, over, or near Category 1, 2 or 3 Saline Wetlands² or streams/creeks within ½ mile of Category 1, 2, or 3 Saline Wetlands in Lancaster or Saunders County, NE

This section includes standard procedures for applying pesticides to, over, or near Category 1, 2 or 3 Saline Wetlands in Lancaster or Saunders County, Nebraska or for applying pesticides to, over, or near streams/creeks within ½ mile of Category 1, 2, or 3 Saline Wetlands in Lancaster or Saunders County, Nebraska.

- Recommendations for pesticide applications to cut stumps or girdled trees:
 - 1) surfactants added to the base pesticide formulation should not be used without further consultation with the NGPC Environmental Services Division;
 - 2) each cut stump or girdled tree should be treated individually; and
 - 3) the herbicide should be applied directly to the cut stump or girdled trunk by means of a brush, drip bottle, roller, or other handheld implement that will not allow the herbicide to fall on non-target vegetation. Any other application method should not be used without further consultation with the NGPC Environmental Services Division.
- Recommendations for pesticide applications to phragmites, other noxious weeds, and non-desirable vegetation such as cattails, tall wheat-grass, and brome grass:
 - 1) pesticides should not be applied from May 15 – August 1 without further consultation with the NGPC Environmental Services Division;
 - 2) the pesticides should be applied with a backpack sprayer, handheld sprayer, ATV/truck/tractor mounted sprayer with hand operated wand/nozzle. Any other application method should not be used without further consultation with the NGPC Environmental Services Division; and
 - 3) a survey for saltwort (*Salicornia rubra*) should be conducted during the normal growing season (May 1 – September 30). If survey results are positive, further consultation with the NGPC Environmental Services Division will be necessary. If survey results are negative, the pesticide should be applied if using the recommendations above.
- Pesticides intended to kill insects, eggs or their larvae (including those intended to kill mosquitoes) should not be applied without further consultation with the NGPC Environmental Services Division.

² Gilbert, M. C. and R. G. Stutheit, eds. 1994. *Resource categorization of Nebraska's Eastern saline wetlands. Prepared for the Eastern Nebraska Saline Wetlands Interagency Study Project. U.S. Army corps of Engineers, Omaha District, and Nebraska Game and Parks Commission. 18 pp.*

Pesticide Applications within Stream and River Reaches of Concern for Listed Fish Species

This section includes standard procedures for applying pesticides to, over, or near stream and river reaches of concern for listed fish species. (See attached map.)

- Pesticides and/or surfactants that are toxic to fish should not be applied to, over, or near the stream and river reaches of concern for listed fish species.

- Surfactants, added to the base pesticide formulation, should not be applied directly to stream and river reaches of concern or allowed to run-off into stream or river reaches of concern without further consultation with the NGPC Environmental Services Division.
- Aquatic herbicides with the sole active ingredient imazapyr and labeled for use in aquatic systems is recommended for use to, over, or near the stream and river reaches of concern.

Pesticide Applications within the Range of American Burying Beetle

This section includes standard procedures for applying pesticides to, over, or near waters of the state within the range of American burying beetle (*Nicrophorus americanus*). (See attached range map.)

- Pesticides can be applied to, over, or near waters of the state within the range of American burying beetle if the pesticide is being applied within city limits, in row crop fields or alfalfa fields.
- Except for within city limits, row crop fields or alfalfa fields, surfactants added to the basic pesticide formulat should not be applied to, over, or near waters of the state within the range of American burying beetle from June 7 - September 1 without further consultation with the NGPC Environmental Services Division.
- Except for within city limits, row crop fields or alfalfa fields, any pesticide intended to kill insects, eggs, or their larvae should not be applied to, over, or near waters of the state within the range of American burying beetle from June 7 - September 1 without further consultation with the NGPC Environmental Services Division.

Pesticide Applications within the Range of American Ginseng

This section includes standard procedures for applying pesticides to, over, or near waters of the state within the range of American ginseng (*Panax quinquefolium*). (See attached range map.)

- If defoliant, desiccant, herbicide, or plant growth regulator need to be applied to, over, or near waters of the state in mature oak woodlands within the range of American ginseng, then a survey for American ginseng should be conducted prior to pesticide application. Surveys should be conducted during the growing season (May – August). If survey results are positive, further consultation with the NGPC Environmental Services Division will be necessary. If survey results are negative, the pesticide can be applied.

Pesticide Applications within the Range of Blowout Penstemon

This section includes standard procedures for applying pesticides to, over, or near waters of the state within the range of blowout penstemon (*Penstemon haydenii*). (See attached range map.)

- If defoliant, desiccant, herbicide, or plant growth regulator need to be applied to, over, or near waters of the state adjacent to blowouts within the range of blowout penstemon, then a survey for blowout penstemon should be conducted prior to pesticide application. Surveys should be conducted during the blooming season (June - July). If survey results are positive, further consultation with the NGPC Environmental Services Division will be necessary. If survey results are negative, the pesticide can be applied.

Pesticide Applications within the Range of Colorado Butterfly Plant

This section includes standard procedures for applying pesticides to, over, or near waters of the state within the range of Colorado butterfly plant (*Gaura neomexicana* ssp. *coloradensis*). The **range of Colorado butterfly plant** is in Kimball County within ½ mile of Lodgepole Creek from the City of Kimball west to the county line.

- If defoliants, desiccants, herbicides, or plant growth regulators need to be applied to, over, or near waters of the state within the range (see above) of Colorado butterfly plant, then a survey for this species should be conducted prior to pesticide application. Surveys should be conducted during the blooming season (August). If survey results are positive, further consultation with the NGPC Environmental Services Division will be necessary. If survey results are negative, the pesticide can be applied.

Pesticide Applications within the Range of Piping Plover and Interior Least Tern

This section includes standard procedures for applying pesticides to, over, or near waters of the state within the range of Piping Plover (*Charadrius melodus*) and Interior Least Tern (*Sternula antillarum athalassos*). (See attached range map.)

- Pesticides may be applied to, over, or near waters of the state within the range of plovers and terns from August 16 – April 14, which is outside of the plover and tern nesting season.
- Aircraft (i.e. helicopters, airplanes, etc.) should not be used to apply pesticides to, over, or near waters of the state within the range of plovers and terns during the plover and tern nesting season (April 15 – August 15) without further consultation with the NGPC Environmental Services Division.
- For all other means of applying pesticides during the plover and tern nesting season (April 15 – August 15) other than by aircraft, such as by airboats or by ATV from the bank, then a plover and tern survey should be conducted within ¼ mile of the application area if plover and tern nesting habitat (sandbars, sand pits, sandy beaches, etc.) is present within that area. Surveys should be conducted within 3 days of the pesticide application. If plovers or terns are nesting within ¼ mile of the application area, further consultation with the NGPC Environmental Services Division will be necessary.
 - In order to avoid unnecessary duplication of survey efforts and disturbance to nesting birds resulting from survey activities, it is recommended that the applicant contact Michelle Koch (402-471-5438), Environmental Analyst Supervisor, NGPC, prior to conducting a survey. Several segments of river and some sand and gravel pits are monitored weekly for plover and tern use by different agencies/entities, and it is possible the application area has already been surveyed.
- Bird repellents should not be applied to, over, or near waters of the state within the range of piping plovers or interior least terns during the nesting season (April 15 – August 15) without further consultation with the NGPC Environmental Services Division.

Pesticide Applications within the Range of River Otter

This section includes standard procedures for applying pesticides to, over, or near waters of the state within the range of river otter (*Lontra canadensis*). (See attached range map.)

- Attractants, intended to attract mammals, should not be used/applied to, over, or near waters of the state within the range of river otter without further consultation with the NGPC Environmental Services Division.

Pesticide Applications within the Range of Scaleshell Mussel

This section includes standard procedures for applying pesticides to, over, or near waters of the state within the range of scaleshell mussel (*Leptodea leptodon*). The **range of scaleshell mussel** occurs in the Missouri River bordering Cedar and Dixon Counties.

- Algicides, antifouling agents, and molluscicides should not be applied to, over, or near waters of the state within the range (see above) of scaleshell mussel without further consultation with the NGPC Environmental Services Division.

Pesticide Applications within the Range of Small White Lady's Slipper

This section includes standard procedures for applying pesticides to, over, or near waters of the state within the range of small white lady's slipper (*Cypripedium candidum*). (See attached range map.)

- Habitat for small white lady's slipper includes wet meadows (including hay meadows), subirrigated meadows, side-hill seeps in grasslands, and roadsides or ditches adjacent to or across the road from any of the aforementioned habitats.
- If defoliants, desiccants, herbicides, or plant growth regulators need to be applied to, over, or near waters of the state within habitat for small white lady's slipper, then a survey for this species should be conducted prior to pesticide application. Surveys should be conducted during the blooming season (May 15 – June 10). If survey results are positive, further consultation with the NGPC Environmental Services Division will be necessary. If survey results are negative, the pesticide can be applied.

Pesticide Applications within the Range of Southern Flying Squirrel

This section includes standard procedures for applying pesticides to, over, or near waters of the state within the range of southern flying squirrel (*Glaucomys volans*). (See attached range map.)

- Attractants, intended to attract mammals, and rodenticides, should not be used/applied to, over, or near waters of the state within mature oak woodlands within the range of southern flying squirrel without further consultation with the NGPC Environmental Services Division.

Pesticide Applications within the Range of Swift Fox

This section includes standard procedures for applying pesticides to, over, or near waters of the state within the range of swift fox (*Vulpes velox*). (See attached range map.)

- Attractants, intended to attract mammals, should not be used/applied to, over, or near waters of the state within the range of swift fox without further consultation with the NGPC Environmental Services Division.

Pesticide Applications within the Range of Ute Ladies'-tresses

This section includes standard procedures for applying pesticides to, over, or near waters of the state within the range of Ute ladies'-tresses (*Spiranthes diluvialis*). The range of Ute ladies'-tresses is in Sioux County within ½ mile of the Niobrara River.

- If defoliant, desiccant, herbicide, or plant growth regulator need to be applied to, over, or near waters of the state within the range (see above) of Ute ladies'-tresses, then a survey for this species should be conducted prior to pesticide application. Surveys should be conducted during the blooming season (August 7 - 21). If survey results are positive, further consultation with the NGPC Environmental Services Division will be necessary. If survey results are negative, the pesticide can be applied.

Pesticide Applications within the Range of Western Prairie Fringed Orchid

This section includes standard procedures for applying pesticides to, over, or near waters of the state within the range of western prairie fringed orchid (*Platanthera praeclara*). (See attached range map.)

- Habitat for western prairie fringed orchid includes wet meadows (including hay meadows), sub-irrigated meadows, side-hill seeps in grasslands, and roadsides or ditches adjacent to or across the road from any of the aforementioned habitats.
- If defoliant, desiccant, herbicide, or plant growth regulator need to be applied to, over, or near waters of the state within habitat for western prairie fringed orchid, then a survey for this species should be conducted prior to pesticide application. Surveys should be conducted during the blooming season (June 15 – July 7). If survey results are positive, further consultation with the NGPC Environmental Services Division will be necessary. If survey results are negative, the pesticide can be applied.

Pesticide Applications within the Range of Whooping Crane

This section includes standard procedures for applying pesticides to, over, or near waters of the state within the range of Whooping Crane (*Grus americana*). (See attached range map.)

- If the pesticide application needs to occur during the spring (March 23 – May 10) or fall (September 16 – November 16) whooping crane migration seasons, a whooping crane survey should be conducted according to the standard protocol (see attached) prior to application that day. If whooping cranes are sighted, the pesticide application should be postponed until whooping cranes are no longer present within ½ mile of the application area. Pesticides will not likely have direct, adverse impacts on whooping cranes, but human presence and disturbance while applying the herbicides may flush whooping cranes from feeding or roosting areas.
- Bird repellents should not be applied to, over, or near waters of the state within the range of whooping crane during the spring (March 23 – May 10) or fall (September 16 – November 16) whooping crane migration seasons without further consultation with the NGPC Environmental Services Division.

How to Submit a Project for Individual Review and Informal Consultation

If pesticides cannot be applied according to the procedures outlined above, then the pesticide application project should be submitted to the NGPC Environmental Services Division for an individual endangered and threatened species review and consultation. **Please allow 30 days for review.** An individual review/consultation is valid for one year. Please submit the following project information:

- Contact information (name, business mailing address, phone number, email address)
- Project location (county/counties or township, section, range or latitude/longitude coordinates)
- Type of pesticide(s) being applied
- Type of surfactant(s) being used
- Purpose of pesticide application
- Projected date(s)/month(s) for pesticide application
- Application Method (e.g. hand held sprayer, helicopter, ATV, etc.)
- Map with a delineation of the application area (unless it is the entire county)
- Other pertinent project information

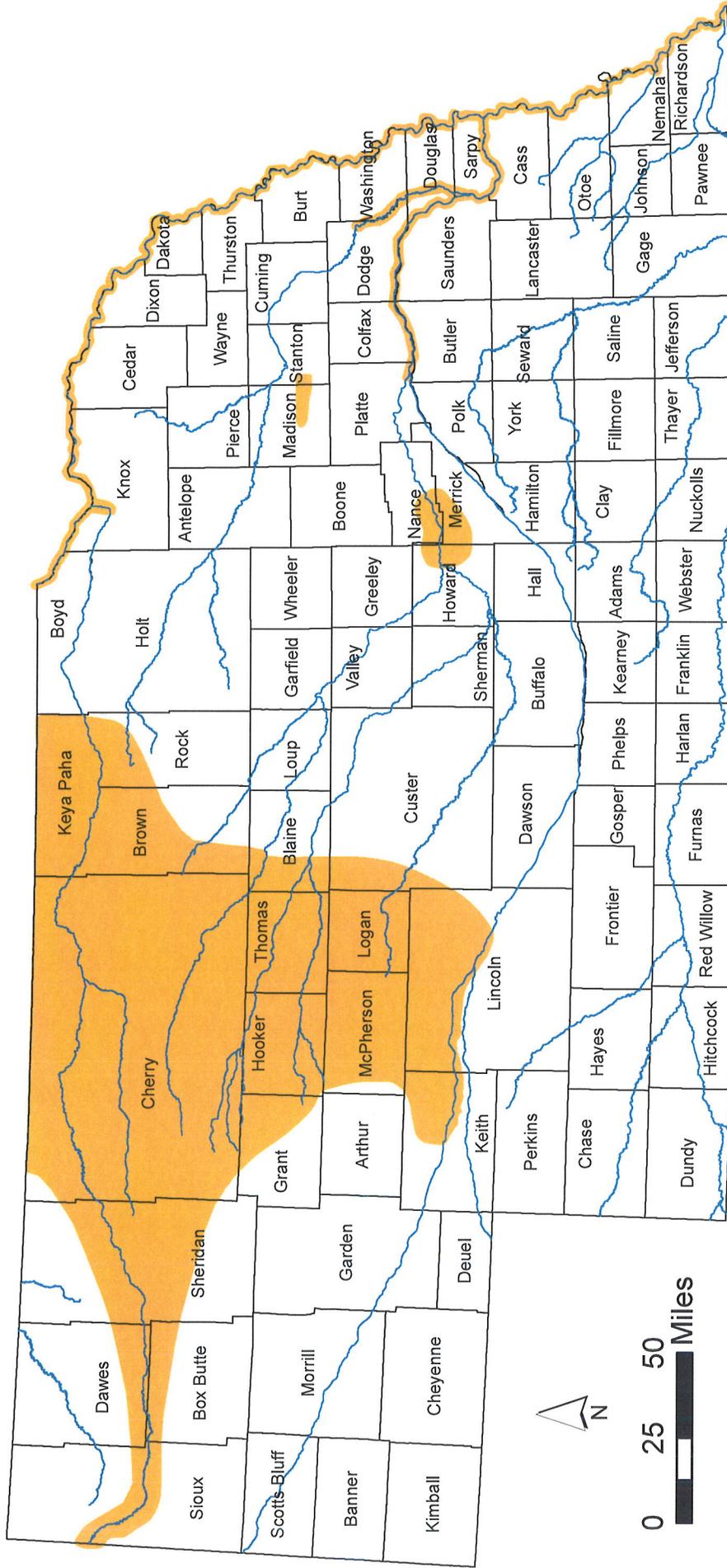
The range maps do not need to be printed off or included in the submittal.

Submit the project information to: Michelle Koch, Environmental Analyst Supervisor
Environmental Services Division
Nebraska Game and Parks Commission
2200 North 33rd Street
Lincoln, NE 68503

Questions regarding the **General NPDES Permit for Pesticides** should be directed to Travis Porter, Nebraska Department of Environmental Quality, at (402) 471-4209.

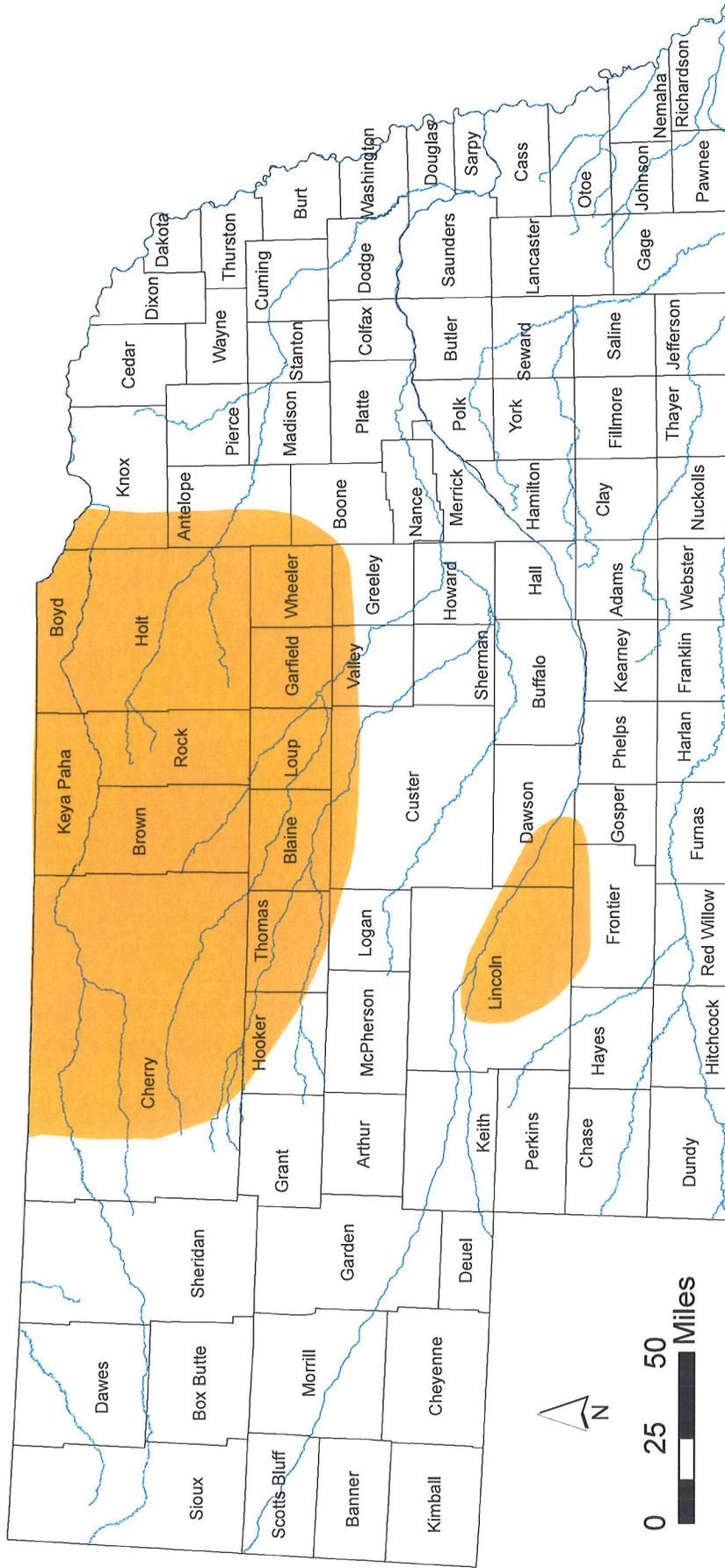
Questions regarding the **Endangered and Threatened Species Standard Procedures** or any other questions regarding whether or not a pesticide application will affect state listed endangered or threatened species should be directed to Michelle Koch, Environmental Analyst Supervisor, Nebraska Game and Parks Commission, at (402) 471-5438.

Stream and River Reaches of Concern for Nebraska Fish Species



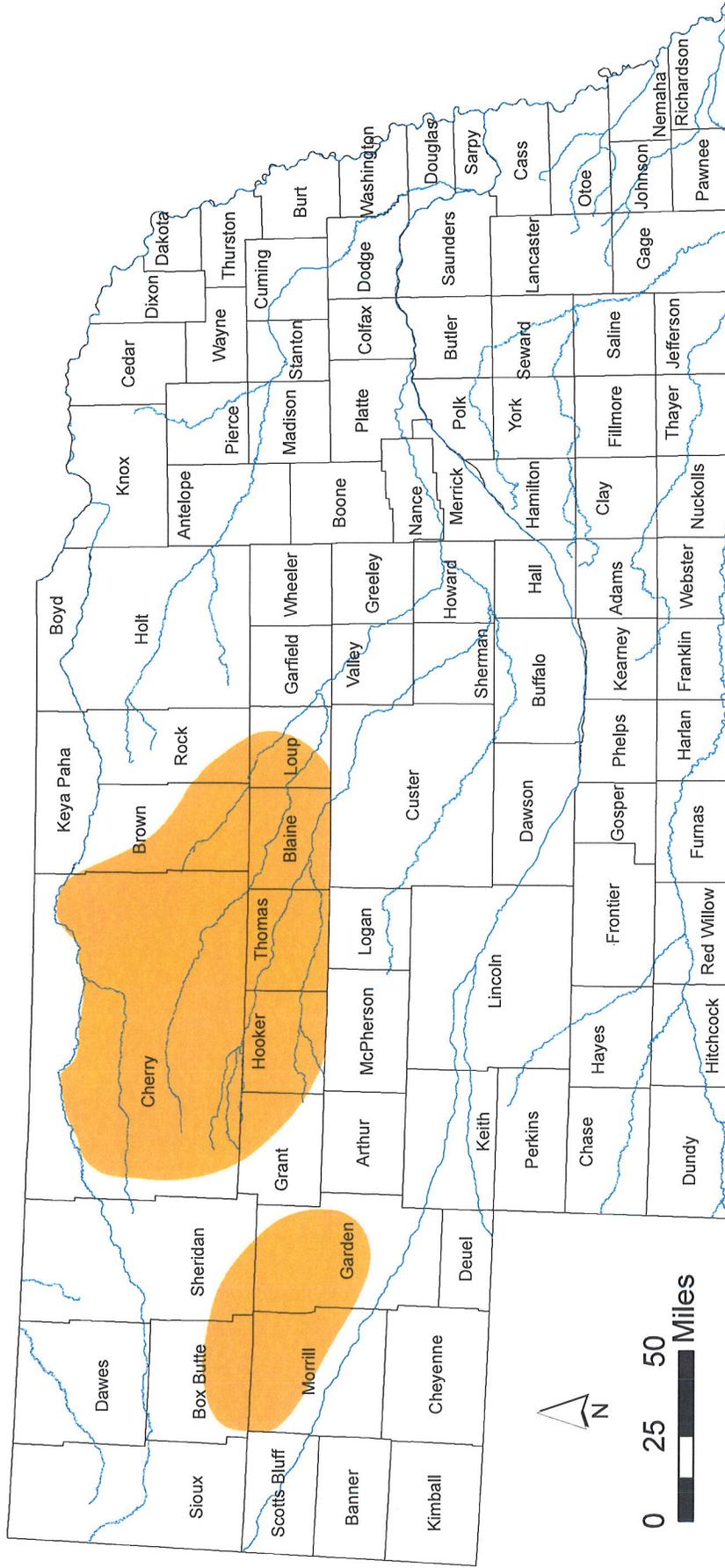
Nebraska Natural Heritage Program,
Nebraska Game and Parks Commission
September 2011

Estimated Current Range of American Burying Beetle (*Nicrophorus americanus*)



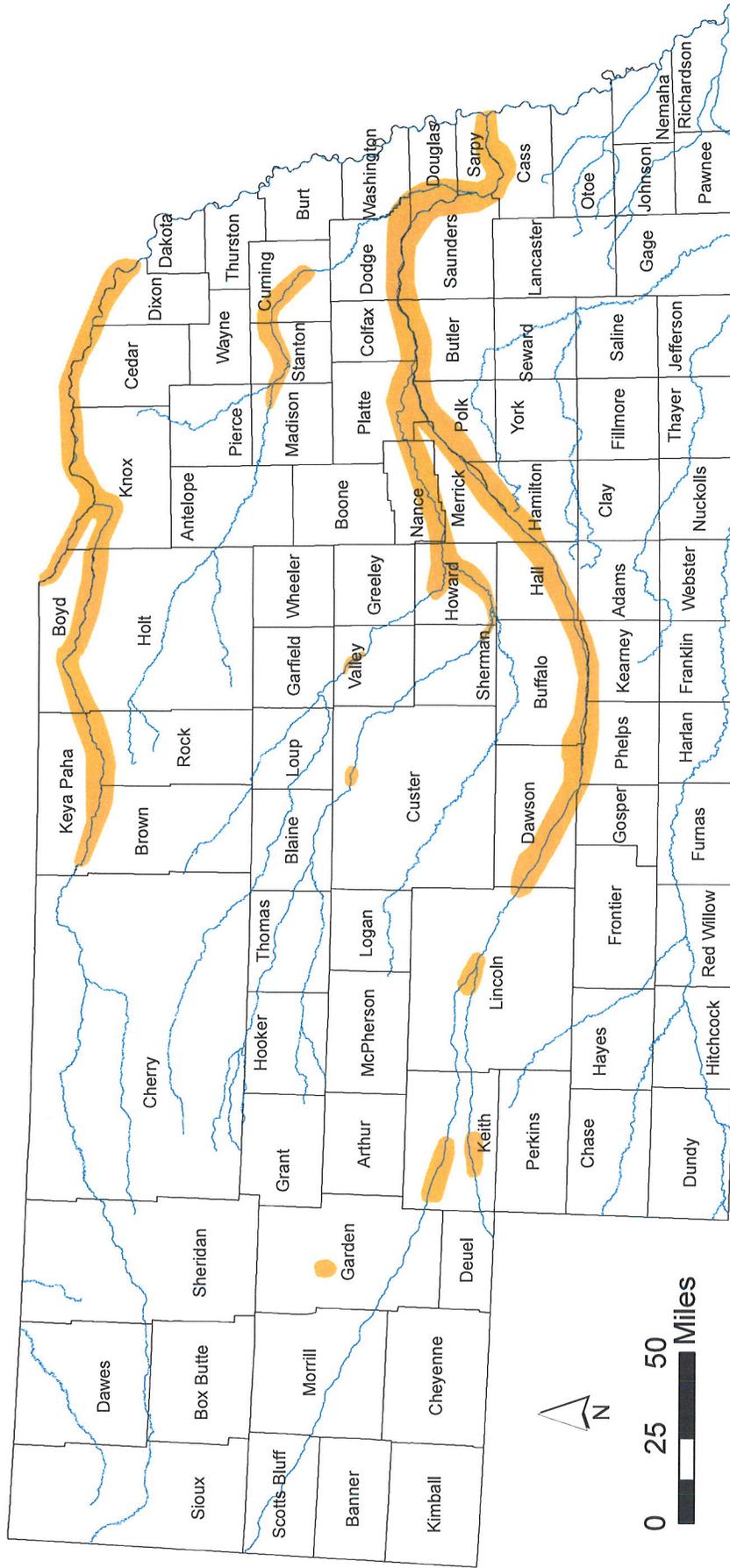
Nebraska Natural Heritage Program,
 Nebraska Game and Parks Commission
 September 2011

Estimated Current Range of Blowout Penstemon (*Penstemon haydenii*)



Nebraska Natural Heritage Program,
Nebraska Game and Parks Commission
May 2011

Estimated Current Nesting Range of Piping Plover (*Charadrius melodus*) and Interior Least Tern (*Sternula antillarum athalassos*)

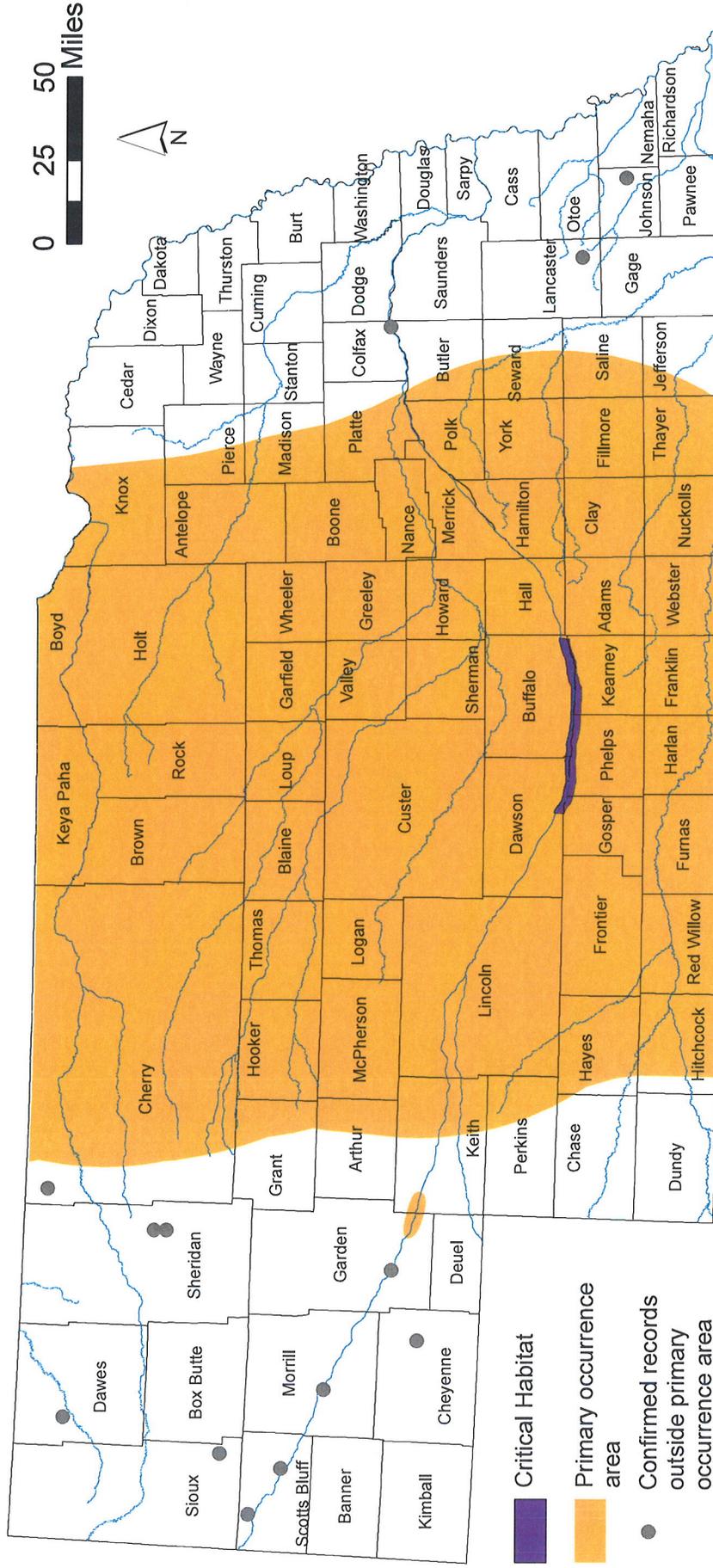


Garden County portion of map pertains to Piping Plover only.

Nebraska Natural Heritage Program,
Nebraska Game and Parks Commission
January 2011



Whooping Crane (*Grus americana*): Migration Use Area and USFWS-designated Critical Habitat



-  Critical Habitat
-  Primary occurrence area
-  Confirmed records outside primary occurrence area

The primary occurrence area is a modification of the area identified by the U.S. Fish and Wildlife Service (USFWS) as encompassing 95% of documented Whooping Crane migratory stopovers between 1975 and 2007. The modification consisted of incorporating additional locations known to have repeated use. Data source: USFWS. State-specific Nebraska flyway for Whooping Crane. Vector digital data Unpublished shapefile received October 27, 2008 from USFWS, Region 6, Grand Island, NE.

Critical Habitat areas are considered essential for the conservation of a listed species. Data source: U.S. Fish and Wildlife Service, Region 2. 2003. Whooping Crane critical habitat. Vector digital data. Downloaded October 29, 2008 from <http://crithab.fws.gov>.

Confirmed records are current through Fall 2010 (Source: USFWS, Region 6).

Map produced by the Nebraska Natural Heritage Program, Nebraska Game and Parks Commission, July 6, 2011.



Whooping Crane Fact Sheet



Whooping Cranes in Flight



Foraging Whooping Cranes



Adult with juvenile

The Whooping Crane (*Grus americana*) is a federal and state listed endangered migratory species. The Whooping Crane was federally listed as endangered in 1967. Major river systems used by whooping cranes in Nebraska include the Platte, Loup, Republican, and Niobrara rivers. Additionally, a 3-mile-wide, 56-mile-long reach of the Platte River between Lexington and Denman, Nebraska, has been federally designated as critical habitat for whooping cranes. (Information from U.S. Fish and Wildlife Service)

Whooping Crane (*Grus americana*)

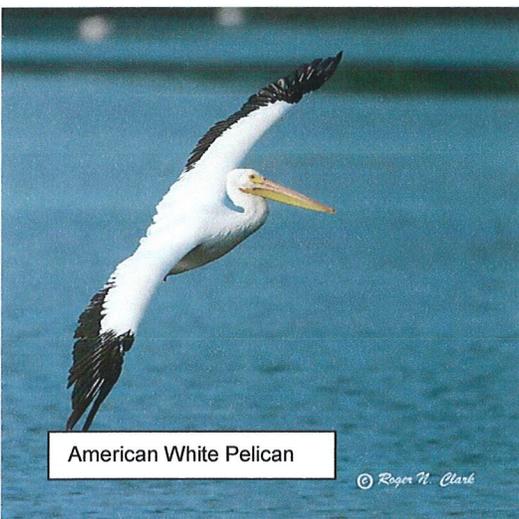
Order: *Gruiformes*

Family: *Gruidae*

Status: State and Federally Endangered. **Description:** L 52"(132 cm) W 87"(221 cm). Sexes similar but males are larger. White body with red and black facial markings. Yellow bill and long dark legs. Immature is white with tawny head and neck, and reddish-brown mottling on rest of body. **Habitat:** In Nebraska is found along the Platte Valley, with its wide slow moving river and associated sandbars and islands. Nearby wet meadows, croplands, and marshlands are important for foraging. **Status/Range:** Occasional spring and fall migrant along Platte Valley. 90% of sightings within 30 miles of Platte River, and 80% occurred between Lexington and Grand Island. **Call:** Shrill "ker-loo-ker-lee-loo" trumpet. **Comments:** Endangered. Management and protection programs slowly succeeding.

Similar: Sandhill Crane, Snow Geese, and especially American White Pelicans in flight:

(Information from Nebraska Game and Parks Commission website)



The Whooping Crane is one of the rarest birds in North America and also one of the largest. Whooping cranes are vulnerable to accidents during migration. Each spring they travel north from their wintering grounds around Aransas National Wildlife Refuge in Texas to their breeding grounds in Wood Buffalo National Park in central Canada (2,400 miles). Each fall this route is reversed. Their journey traverses eastern Montana, North Dakota, South Dakota, Nebraska, Kansas, Oklahoma and Texas. In Nebraska, they stop to rest and feed on the Platte, North and Middle Loup and Niobrara Rivers. (Information taken from the USFWS Draft Revised International Whooping Crane Recovery Plan Jan 2005)

Whooping Crane Survey Protocol

Whooping Cranes can be disturbed by sight (human figures, equipment within sight) and sound (loud equipment, banging, etc.) that are abnormal (roadway traffic is normal), therefore surveys are needed to ensure disturbance is minimized.

Dates of Survey:

- Spring Migration – March 23 – May 10
- Fall Migration – September 16 – November 16
- Surveys should be conducted daily during these two time frames.

Time of Survey:

- Survey project each day within one hour of start of workday, with at least one survey done no later than 10 am. Record start and stop time.
- Survey area within 0.5 miles of project using binoculars or spotting scope.

If Whooping Cranes are not seen during the morning survey, work may begin after completion of the survey.

If Whooping Cranes are spotted within 0.5 miles of the active construction:

- Do not start work. Contact the Commission¹ or the U.S. Fish and Wildlife Service² for further instruction.
- Stop work if seen at times other than the morning survey.
- Work can begin or resume if birds move off and are greater than 0.5 miles from the construction/activity area; record sighting, bird departure time, and work start time on survey form.

¹ Nebraska Game and Parks Commission Point of Contact:

Michelle Koch, Environmental Analyst Supervisor, (402) 471-5438

OR

Joel Jorgensen, Nongame Bird Program Manager, (402) 471-5440

² U.S. Fish and Wildlife Service, Nebraska Field Office Point of Contact:

Martha Tacha, Fish & Wildlife Biologist, (308) 382-6468 ext. 19

OR

John Cochnar, Deputy Field Supervisor, (308) 382-6468 ext. 20