system, is EPA's preferred method for receiving comments. Follow the on-line instructions for submitting comments.

• Mail: Water Docket, Environmental Protection Agency, Mailcode: 4101T, 1200 Pennsylvania Ave., NW., Washington, DC 20460.

• Hand Delivery: Water Docket, EPA/DC, EPA West, Room B102, 1301 Constitution Ave., NW., Washington, DC. Such deliveries are only accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information.

Instructions: Direct your comments to Docket ID No. OW–2004–11. EPA's policy is that all comments received will be included in the public docket without change and may be made available online at *http://www.epa.gov/edocket,* including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through EDOCKET, regulations.gov, or e-mail. The EPA EDOCKET and the federal regulations.gov Web sites are ''anonymous access'' systems, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail comment directly to EPA without going through EDOCKET or regulations.gov, your e-mail address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD–ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses.

Docket: All documents in the docket are listed in the EDOCKET index at *http://www.epa.gov/edocket.* Although listed in the index, some information is not publicly available, *i.e.*, CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically in EDOCKET or in hard copy at the Water Docket, EPA/DC, EPA West, Room B102, 1301 Constitution Ave., NW., Washington, DC. This Docket Facility is open from 8:30 to 4:30, Monday through Friday, excluding legal holidays. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566–1744, and the telephone number for the Water Docket is (202) 566–2426.

FOR FURTHER INFORMATION CONTACT: Mr. Jesse W. Pritts, Engineering and Analysis Division, Office of Water (4303T), Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460; telephone number: (202) 566–1038; fax number: (202) 566–1053; e-mail address: *pritts.jesse@epa.gov.*

SUPPLEMENTARY INFORMATION:

What Entities Are Potentially Affected by This Final Rule?

Entities potentially affected by this action include facilities that discharge wastewater from transportation equipment cleaning activities and include the following types:

Category	Examples of regulated entities	Examples of common North American Industry Classification System (NAICS) codes
Industry	Facilities that generate wastewater from cleaning the interior of tank trucks, rail tank cars, intermodal tank containers, tank barges, or ocean/sea tankers used to transport materials or cargos that come into direct contact with tank or container interior, except where such tank cleanings are performed in conjunction with other industrial, commercial, or POTW operations.	311613, 311711, 311712, 311222, 311223, 311225, 484121, 484122, 484210, 484230, 488390, 488490.

EPA does not intend the preceding table to be exhaustive, but rather it provides a guide for readers regarding entities likely to be affected by this action. This table lists the types of entities that EPA is now aware could potentially be affected by this action. Other types of entities not listed in the table could also be affected. To determine whether your facility is affected by this action, you should carefully examine the applicability criteria listed at 40 CFR 442.1. If you still have questions regarding the applicability of this action to a particular entity, consult the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

Statutory and Executive Order Reviews

For the various statutes and executive orders that require findings for rulemaking, EPA incorporates the findings from the direct final rulemaking into this companion notice for the purpose of providing public notice and opportunity for comment.

List of Subjects in 40 CFR Part 442

Environmental protection, Barge cleaning, Rail tank cleaning, Tank cleaning, Transportation equipment cleaning, Waste treatment and disposal, Water pollution control.

Dated: January 26, 2005.

Stephen L. Johnson,

Deputy Administrator.

[FR Doc. 05–1861 Filed 1–31–05; 8:45 am]

BILLING CODE 6560–50–P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018–AE59

Endangered and Threatened Wildlife and Plants; Proposed Endangered Status for the Salt Creek Tiger Beetle (*Cicindela nevadica lincolniana*)

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), propose to list the Salt Creek tiger beetle (*Cicindela nevadica lincolniana*) as endangered under the authority of the Endangered Species Act of 1973, as amended (Act). The Salt Creek tiger beetle, a member of

the family Cicindelidae, is endemic to the saline wetlands of eastern Nebraska and associated streams in the northern third of Lancaster County and southern margin of Saunders County in Nebraska, where it is found in barren salt flat and saline stream edge habitats. Of six known populations in 1991, three are now extirpated and the remaining three are small and highly threatened by further habitat destruction, degradation, and fragmentation. These three small populations of Salt Creek tiger beetles are vulnerable to local extirpations from random natural events and human-induced activities. This proposal, if made final, would extend Federal protection and recovery provisions of the Act to the Salt Creek tiger beetle.

DATES: We will consider all comments on this proposed rule received by the close of business on April 4, 2005. Requests for a public hearing must be received by March 18, 2005.

ADDRESSES: If you wish to comment, you may submit your comments and materials concerning this proposal by one of several methods:

1. You may submit written comments to Field Supervisor, U.S. Fish and Wildlife Service, Nebraska Ecological Services Field Office, 203 West Second Street, Federal Building, Second Floor, Grand Island, Nebraska 68801.

2. You may hand deliver comments to our office at the address given above or send via fax (facsimile: 308/384–8835).

3. You may send comments via electronic mail (e-mail) to: *fw6_sctbeetle@fws.gov*. See the Public Comments Solicited section below for file format and other information about electronic filing.

The complete file for this proposed rule is available for inspection, by appointment, during normal business hours at the U.S. Fish and Wildlife Service, Nebraska Ecological Services Field Office, 203 West Second Street, Federal Building, Second Floor, Grand Island, Nebraska 68801.

FOR FURTHER INFORMATION CONTACT: Mr. Steve Anschutz, Field Supervisor, at the address listed above (telephone: 308/382–6468, extension 12; facsimile: 308/384–8835).

SUPPLEMENTARY INFORMATION:

Background

The Salt Creek tiger beetle is an active, ground-dwelling, predatory insect that captures smaller or similar-sized arthropods in a ''tiger-like'' manner by grasping prey with its mandibles (mouthparts). Salt Creek tiger beetle larvae live in permanent burrows in the ground and are voracious predators, fastening themselves by means of abdominal hooks to the tops of their burrows and rapidly extending outward to seize passing prey. Eighty-five species and more than 200 subspecies of tiger beetles of the genus *Cicindela* are known from the United States (Boyd *et al.* 1982). The Salt Creek tiger beetle is 1 of 32 species and subspecies of tiger beetles that have been recorded in Nebraska.

Tiger beetle species occur in many different habitats, including riparian habitats, beaches, dunes, woodlands, grasslands, and other open areas (Pearson 1988; Knisley and Hill 1992). Individual tiger beetle species are generally highly habitat-specific because of oviposition and larval sensitivity to soil moisture, composition, and temperature (Pearson 1988; Pearson and Cassola 1992). A common component of tiger beetle habitat appears to be open sunny areas for hunting and thermoregulation (an adaptive behavior to use sunlight or shade to regulate body temperature) (Knisley *et al.* 1990; Knisley and Hill 1992). Although tiger beetles have been well studied as a taxonomic group, the Salt Creek tiger beetle, an inhabitant of an extremely limited habitat type (*i.e.*, barren salt flats and saline stream edges of the saline wetlands and associated streams of eastern Nebraska) has, until recently, received very little ecological study.

Originally, the Salt Creek tiger beetle was described by Casey (1916) as a separate species of *C. lincolniana.* Willis (1967) identified *C. n. lincolniana* as a subspecies of *C. nevadica* which evolved from *C. n. knausi*; this is the currently accepted taxonomic classification. The evolution of *C. n. lincolniana* is a result of its isolation from the gene pool sometime after the Kansan, but possibly during the Yarmouth glaciation. There also are spatial separations between *C. n. knausi* and *C. n. lincolniana. C. n. knausi* has been collected in Sheridan and Garden Counties in the Nebraska Sandhills, a distance of several hundred miles from the saline wetlands and associated streams of eastern Nebraska that provide habitat for the Salt Creek tiger beetle.

The Salt Creek tiger beetle is metallic brown to dark olive green above, with a metallic dark green underside, and measures 1.3 centimeters (cm) (0.5 inch (in)) in total length. It is distinguished from other tiger beetles by its distinctive form and the color pattern on its dorsal and ventral surfaces. The elytra (wing covers) are metallic brown or dark olive green, and the head and pronotum (body segment behind the head) are dark brown (Carter 1989).

Leon Higley (L. Higley, University of Nebraska-Lincoln (UNL), pers. comm. 2002) believes the Salt Creek tiger beetle has a 2-year life cycle, not uncommon for tiger beetles. Adults are first observed as early as the end of May or as late as mid-June, and disappear by mid to late July. Their numbers peak about 2 weeks after the first individuals appear and begin to feed and mate. After mating, the male rides atop the female, presumably preventing her from re-mating, a phenomenon known as mate-guarding. Females lay their eggs along sloping banks of creeks in areas where the salt layer is exposed in the soil horizon, in barren salt flats of saline wetlands, and along saline stream edges that are found in close association with water, near a seep or stream. Researchers from UNL speculate that, during the night, female Salt Creek tiger beetles lay about 50 eggs (Farrar 2003).

Spomer and Higley (2001) describe the life cycle of the Salt Creek tiger beetle in detail through egg, larval, and adult stages, as follows. After the egg hatches, the young larva digs a burrow and uses its head to scoop out soil. The larva takes these small mud clods to the burrow entrance and flips them outside the hole. Larval burrows occur within a few inches of the water's edge. The small larva waits at the top of its burrow and ambushes prey that passes too near the burrow entrance. Once it has captured its prey, the larva pulls it into the burrow with the aid of three hooks on the dorsum of the fifth abdominal segment. These hooks also function to prevent the larva from being pulled from its burrow by larger prey or predators. The larva will plug its burrow and retreat inside during periods of high water, very hot weather, or very dry conditions. As the larva grows, it molts to a larger instar (a life stage between molts), enlarging and lengthening its burrow. For the most part, a Salt Creek tiger beetle larva will remain active until cold weather, and then it plugs its burrow and hibernates. The Salt Creek tiger beetle has three instars. It probably overwinters as a third instar, pupates in May, and emerges as an adult. Before pupation, the larva seals its burrow entrance and digs a side chamber about 5 to 8 cm (2 to 3 in) below the soil surface. After the adult emerges from the pupa, it remains in the chamber until its cuticle hardens. Steve Spomer (S. Spomer, UNL, pers. comm. 2002) postulates that adult Salt Creek tiger beetles live for approximately 6 weeks.

Distribution and Status

The Salt Creek tiger beetle occurs in saline wetlands—on exposed saline mud flats and along mud banks of streams and seeps that contain salt deposits (Carter 1989; Spomer and

Higley 1993; LaGrange 1997; Nebraska Game and Parks Commission (NGPC) 1999). Adults are confined to moist, muddy areas within a few yards of wetland and stream edges. Salt Creek tiger beetles require these open barren areas for construction of larval burrows, thermoregulation, and foraging (S. Spomer, pers. comm. 2002; L. Higley, pers. comm. 2002). The density of larval burrows decreases as vegetative cover increases (S. Spomer, pers. comm. 2002; R. Harms, U.S. Fish and Wildlife Service, pers. obs. 2001). The Salt Creek tiger beetle is adapted to brief periods of high water inundation and highly saline conditions (Spomer and Higley 1993).

Saline wetlands in eastern Nebraska occur in swales and depressions within the floodplain of Salt Creek and its tributaries in northern Lancaster and southern Saunders Counties. LaGrange (1997) suggests that the saline wetlands of eastern Nebraska receive their salinity from groundwater passing through an underground rock formation containing salts deposited by an ancient sea that once covered Nebraska. Saline wetlands of eastern Nebraska are characterized by saline soils and halophytes (plants adapted to saline conditions). Saline wetlands usually have a central area that is devoid of vegetation, and when dry, exhibit salt encrusted mudflats (barren salt flats) (LaGrange 1997). This is the area used by the Salt Creek tiger beetle and numerous other saline-adapted insects. Although Murphy (1992) indicated that historically there were approximately 7,300 ha (18,000 ac) of saline wetlands in eastern Nebraska, the distribution of the Salt Creek tiger beetle was limited to specific habitats within those wetlands. These habitats included barren salt flats (devoid of vegetation) and moist, unvegetated saline streambanks of Salt Creek and its tributaries in the northern third of Lancaster County and southern margin of Saunders County.

We examined the insect collection at the UNL State Museum to assess the historical distribution of the Salt Creek tiger beetle. From 1900 through 1918, 11 collectors collected 134 Salt Creek tiger beetles (B. Ratcliffe, State Museum, UNL, pers. comm. 2003). Of these 134 Salt Creek tiger beetles, 81 beetles (60 percent) were collected from an area identified as Salt Basin; the remaining 53 Salt Creek tiger beetles were collected in other unidentified areas in Lincoln, Nebraska. Salt Basin, also referred to as Salt Lake, is now called Capital Beach Lake (Cunningham 1985; Farrar and Gersib 1991). We also reviewed files from the NGPC's Natural Heritage Program and found records of Salt Creek tiger beetles in the Snow Entomological Collection of the Natural History Museum at the University of Kansas, and a private collection by Walter Johnson (M. Fritz, Nebraska Natural Heritage Program, NGPC, pers. comm. 2003). Significant collections of the Salt Creek tiger beetle from Salt Lake (Capital Beach) in 1964, 1965, 1970, and 1972 are housed at the Snow Entomological Collection. Additional queries of various museums around the country found Salt Creek tiger beetles in the Natural History Museum of Los Angeles, California (B. Harris, Natural History Museum of Los Angeles, pers. comm. 2003) and the Orma J. Smith Museum of Natural History, Caldwell, Idaho (J. Wood, Orma J. Smith Museum of Natural History, pers. comm. 2003). Based on our examination of collections and the review of records, all known Salt Creek tiger beetle specimens were collected in areas identified as either Salt Basin or Salt Lake (and now known as Capital Beach) or the City of Lincoln, Nebraska.

The insect collections provide some information about the historical distribution of the Salt Creek tiger beetle. More importantly, this information documents the presence of the Salt Creek tiger beetle at Capital Beach from the date of the first collection there in 1900 to the last in 1972. Thus, we have concluded that between 1900 and 1972, Salt Creek tiger beetles were present in numbers large enough to sustain a population at Capital Beach. The size of this population is not known. In 1984, Mark Carter, a graduate student in entomology at UNL and Steve Spomer, associate entomology professor at UNL, conducted visual searches for the Salt Creek tiger beetle at Capital Beach and other sites that appeared to provide suitable habitat (Spomer and Higley 2001). They found a low number of adults at Capital Beach, but provided no information on population numbers, and noted that the habitat had been degraded at Capital Beach (Spomer and Higley 1993). By 1998, surveyors did not observe any Salt Creek tiger beetles at Capital Beach, and the species has not been found there since, despite surveys being conducted annually through 2002 (Spomer *et al.* 2002).

The Salt Creek tiger beetle has one of the most restricted ranges of any insect in the United States (Spomer and Higley 1993) only occurring along limited segments of Little Salt Creek and adjacent remnant salt marshes in Lancaster County, Nebraska. Intensive visual surveys conducted by UNL entomologists from 1991 through 2004 found Salt Creek tiger beetles at a total of 13 sites in northern Lancaster and southern Saunders Counties, although beetles were not found, nor were surveys conducted, at all 13 sites in all 14 years (Spomer *et al.* 2002 and 2004). The 13 survey sites are identified by: (1) Locality (street or road name); (2) local name; or (3) land owner name. Visual counts of adults were made by researchers walking across the barren salt flats and along the edges of saline streams on sunny days during mid to late June when the population of emerged adults is and at its greatest abundance (S. Spomer, pers. comm. 2001; Allgeier *et al.* 2003). Evening counts also were conducted using a black light (ultraviolet), because the Salt Creek tiger beetle is highly attracted to this type of light source. Visual surveys during the day and night were conducted using the same techniques for all years and all sites surveyed (S. Spomer, pers. comm. 2002), and the surveys in all 14 years were conducted by the same researcher, which would reduce surveyor bias and ensure consistency among survey years.

Pearson and Cassola (1992) found that tiger beetle population size can be accurately estimated through visual counting due to the relative ease of observing and counting individuals, and because of their specialized habitat requirements. Visual counts, although having limitations (Horn 1976), can provide relative estimates and, if conducted in a similar manner every year, a good estimate of the health and stability of populations (Allgeier *et al.* 2003). Furthermore, harm to the insect is limited using visual survey techniques because experienced researchers are able to identify the insect without handling it.

In addition to the visual surveys, researchers undertook a mark/recapture study for the first time in 2002. Prior to 2002, researchers were unable to find a permanent marker that could be used to distinguish marked and unmarked beetles (a prerequisite for mark/recapture studies) (Spomer and Higley 1993; S. Spomer, pers. comm. 2001). In 2002, UNL entomologists discovered a paint marker that would adhere to the beetles' elytra (Allgeier *et al.* 2003). This allowed researchers to conduct a mark/recapture study using Salt Creek tiger beetle adults captured at Little Salt Creek across from Arbor Lake, north of the Interstate 80 and North 27th Street Interchange in Lincoln, Nebraska. The Little Salt Creek site was used because visual surveys revealed that this site harbored the highest number of adult beetles.

Although its use for estimating the true population size for the Salt Creek tiger beetle is somewhat limited by a

small sample size, the mark/recapture study did establish that Salt Creek tiger beetles marked at the Little Salt Creek site traveled to other nearby survey sites. Allgeier *et al.* (2003) found two marked adult Salt Creek tiger beetles at Arbor Lake, a saline wetland separated from Little Salt Creek by a 2-lane gravel road. They had moved a distance of 460 and 365 meters (m) (1,509 and 1,198 feet (ft)), respectively, from where they were originally marked. Based on results of the 2002 mark/recapture study, we have concluded that Salt Creek tiger beetle adults are mobile and can move to nearby suitable habitats.

We examined data from the 1991 to 2004 survey sites and determined that some of these sites could be combined to identify different populations of Salt Creek tiger beetles based on the following criteria: (1) Close proximity of sites (*i.e.,* nearby, contiguous, or neighboring) to each other; (2) distances of less than 805 m (2,640 ft) separating sites; and (3) the combination of survey sites satisfying criteria 1 and 2, and providing both suitable saline wetland (*i.e.,* barren salt flats) and stream (saline edges) habitats forming a saline wetland/stream complex. The distance used in criterion 2 above (805 m (2,640 ft)) are based on the 2002 mark/recapture study by Allgeier *et al.* (2003), which established that Salt Creek tiger beetles can move among nearby suitable habitats, as well as the distance at which Salt Creek tiger beetles may be attracted to artificial sources of light.

On the basis of the above criteria, our evaluation of the 13 survey sites resulted in the delineation of six different populations of Salt Creek tiger beetles, half of which have been extirpated since annual surveys began in 1991 (a population is considered extirpated after 2 consecutive years of negative survey results). The six Salt Creek tiger beetle populations, including the three that have been extirpated, are described below in order of abundance based on visual surveys conducted from 1991 to 2004: (1) Little Salt Creek-Arbor Lake; (2) Little Salt Creek-Roper; (3) Upper Little Salt Creek-North; (4) Upper Little Salt Creek-South; (5) Jack Sinn Wildlife Management Area (WMA); and (6) Capital Beach.

Little Salt Creek-Arbor Lake Population

The Little Salt Creek-Arbor Lake population contains the largest number of Salt Creek tiger beetles. The abundance of Salt Creek tiger beetles there is expected, given the large, relatively intact saline wetland complex within which the population occurs. The Little Salt Creek-Arbor Lake population is located approximately 1.6 km (1 mi) north of the Interstate 80 and North 27th Street Interchange on the northern city limits of Lincoln, Nebraska. It exists along the saline stream edge of Little Salt Creek and on the barren salt flats of an adjacent saline wetland. This population was monitored at up to three survey sites from 1991 to 2004. The population averaged 329 individuals per year over that 14-year period. Visual surveys for the entire Little Salt Creek-Arbor Lake Population in 1991–2004 found 171, 94, 62, 376, 459, 437, 406, 254, 208, 225, 434, 511, 583, and 392 adult individuals, respectively (Spomer and Higley 1993; Spomer *et al.* 1997, 1999, 2001, 2002, and 2004; and Allgeier *et al.* 2003). In addition, a mark/recapture study conducted in 2002 estimated that the population size was approximately 970 adult Salt Creek tiger beetles, with 95 percent confidence (an estimate of precision) that the true population is between 704 and 1,606 adults (Allgeier *et al.* 2003). Both visual surveys and the mark/recapture study show that this population is very small when compared to known populations of other tiger beetle species, even including the federally listed threatened Northeastern beach tiger beetle (*C. dorsalis dorsalis*) and Puritan tiger beetle (*C. puritana*). A comparison of population sizes of Salt Creek tiger beetles, Northeastern beach tiger beetles, and Puritan tiger beetles is discussed below.

Little Salt Creek-Roper Population

The Little Salt Creek-Roper population is the second largest remaining population of Salt Creek tiger beetles, based on visual surveys conducted from 1994 to 2004. This population is located immediately south of the Interstate 80 and North 27th Street Interchange, and approximately 1.6 km (1 mi) downstream of the Little Salt Creek-Arbor Lake population. Similar to the Little Salt Creek-Arbor Lake population, this population is associated with a saline wetland and stream complex located along Little Salt Creek. Visual surveys were conducted on up to three survey sites from 1994 to 2004, but only one site was surveyed from 1994 to 1997. A second site was added in 1998, after the Lower Platte South Natural Resource District was deeded a restored saline wetland as part of a mitigation requirement for a Department of the Army permit issued by the U.S. Army Corps of Engineers (Corps) under section 404 of the Clean Water Act (CWA). However, researchers from UNL found only one Salt Creek tiger beetle at the restored wetland in 1998 and none since then (Spomer *et al.* 1999, 2001, 2002, and 2004; Allgeier *et al.* 2003). In 2001, UNL researchers found 28 Salt Creek tiger beetles on a privately owned saline wetland adjacent to Little Salt Creek and across the stream from the restored mitigation wetland, after the landowner granted permission to conduct visual surveys (Spomer *et al.* 2001, 2002, and 2004; Allgeier *et al.* 2003). We consider this private saline wetland as the third site of the Little Salt Creek-Roper population because of its location and close proximity to the two other sites. A fourth site was also surveyed in 2004, resulting in the observation of three Salt Creek tiger beetles. The number of adult individuals of the Little Salt Creek-Roper Population found at all 4 sites in 1994–2004 was 54, 161, 151, 144, 45, 55, 80, 85, 258, 162, and 154, respectively (Spomer *et al.* 1997, 1999, 2001, 2002, and 2004; Allgeier *et al.* 2003). A mark/recapture study was not conducted on this population of Salt Creek tiger beetles due to the small population size and a limited window of opportunity.

Upper Little Salt Creek-North Population

The Upper Little Salt Creek-North population is the third and last extant population of Salt Creek tiger beetles. This population is located approximately 7.2 km (4.5 mi) upstream from the Little Salt Creek-Arbor Lake population, and exists only on the saline stream edges of Little Salt Creek. Although former saline wetlands (*i.e.,* barren salt flats) exist adjacent to this population, these wetlands are degraded (drained because of the incisement of Little Salt Creek) and no longer provide suitable habitat for the Salt Creek tiger beetle. This population is comprised of four sites along Little Salt Creek that were surveyed from 1991 to 2004. Over the course of the 14-year survey period, 2 of the survey sites that comprise this population were surveyed at least 10 times. A third site was surveyed in 1994, 1998, 2002, and 2003. The survey of a new and fourth site in 2002 by UNL researchers resulted in the observation of one Salt Creek tiger beetle (Spomer *et al.* 2002; Allgeier *et al.* 2003). From 1991 to 1996, the number of adult beetles found in the Upper Little Salt Creek-North Population averaged 32 individuals per year (Spomer and Higley 1993; Spomer *et al.* 1997). Since then, the number of adult beetles surveyed in the population has averaged five individuals per year. The number of adult individuals found during visual surveys in 1991–2004 was 24, 32, 48, 35, 14, 41, 0, 4, 8, 4, 0, 8, 0, and 12, respectively (Spomer and Higley 1993;

Spomer *et al.* 1997, 1999, 2001, 2002, and 2004; Allgeier *et al.* 2003). L. Higley and S. Spomer (pers. comm. 2002) presumed that this population would be extirpated because of the low and decreasing number of adults found during surveys. A mark/recapture study was not done for this population due to the small population and a limited window of opportunity.

Upper Little Salt Creek-South Population

The Upper Little Salt Creek-South population was located approximately 5 km (3 mi) upstream from the Little Salt Creek-Arbor Lake Population. Degraded and non-functioning saline wetlands exist adjacent to Little Salt Creek, and although once devoid of vegetation, saline stream edge habitats are now vegetated at this site. This population's only known site was surveyed in 1991–2004 revealing 7, 5, 4, 8, 3, 0, 0, 0, 0, 0, 0, 0, 0, and 0 adult individuals, respectively (Spomer and Higley 1993; Spomer *et al.* 1997, 1999, 2001, 2002, and 2004; Allgeier *et al.* 2003). The Upper Little Salt Creek-South Population is considered to be extirpated because no Salt Creek tiger beetles have been found there since 1995.

Jack Sinn Wildlife Management Area Population

Salt Creek tiger beetles from sites comprising the Jack Sinn WMA population have not been found since 1998 (Spomer *et al.* 1999, 2001, 2002, and 2004; Allgeier *et al.* 2003). This population was made up of one survey site located on Rock Creek in southern Saunders and northern Lancaster Counties, approximately 20 km (10 mi) northeast of the Little Salt Creek-Arbor Lake population. This population of Salt Creek tiger beetles was on property owned by NGPC. Surveys for the Salt Creek tiger beetle in 1991, 1992, 1993, 1994, 1995, 1996, 1998, 1999, 2001, 2002, 2003, and 2004, found 15, 11, 1, 0, 0, 1, 1, 0, 0, 0, 0, and 0 adult individuals, respectively (Spomer and Higley 1993; Spomer *et al.* 1997, 1999, 2001, 2002, and 2004; Allgeier *et al.* 2003). The Jack Sinn WMA Population is considered to be extirpated because no Salt Creek tiger beetles have been found there since 1998. Loss and fragmentation of barren salt flat and stream habitats likely resulted in the loss of this population.

Capital Beach Population

Capital Beach was once one of the largest saline wetland tracts in eastern Nebraska, with a size of approximately 162 ha (400 ac) (Cunningham 1985). Although we do not have any information on the number of Salt Creek tiger beetles that existed historically at Capital Beach, we have concluded, based on the number of museum and private collection specimens collected at Capital Beach (*i.e.,* Salt Basin) since the early 1900s, that a sustainable population of Salt Creek tiger beetles once was present there. All that remains of suitable habitat at Capital Beach now is a 10- to 20-m (40- to 50-ft) wide ditch that parallels Interstate 80 for approximately 0.8 km (0.5 mi), located west of the Interstate 80 and North 27th Street Interchange. Visual surveys for Salt Creek tiger beetles from this population were conducted in 1991, 1992, 1995, 1998, 1999, 2001, 2002, 2003, and 2004 with 12, 8, 0, 4, 0, 0, 0, 0, and 0 adult individuals found, respectively (Spomer and Higley 1993; Spomer *et al.* 1997, 1999, 2001, 2002, and 2004; Allgeier *et al.* 2003). No individuals have been found at Capital Beach since 1998 (Spomer *et al.* 2002 and 2004; Allgeier *et al.* 2003), leading us to conclude that this population is now extirpated.

Conclusion of Salt Creek Tiger Beetle Population Review

The Salt Creek tiger beetle, highly specialized in habitat use, has probably always been rather localized in distribution. Information from surveys conducted from 1991 through 2004 and from museum collections show that the number of known populations has declined from six to three. Salt Creek tiger beetles were last found in the Upper Little Salt Creek-South population in 1995, and no individuals have been found in either the Jack Sinn WMA or the Capital Beach populations since 1998. Thus, we have determined that three known populations of Salt Creek tiger beetles have been extirpated in the last 9 years.

Surveys conducted over a 14-year period establish that the Salt Creek tiger beetle is an extremely rare insect, numbering only in the hundreds and confined to an extremely small range. Visual surveys conducted in 1991–2004 show substantial annual fluctuations with 229, 150, 115, 473, 637, 631, 550, 308, 271, 309, 519, 777, 745, and 558 adult tiger beetles found each year, respectively, although not all sites were surveyed in all years (Spomer and Higley 1993; Spomer *et al.* 1997, 1999, 2001, 2002, and 2004; Allgeier *et al.* 2003). In addition, in 2002, a mark/recapture study undertaken to calculate a total population estimate for the largest Salt Creek tiger beetle population, the Little Salt Creek-Arbor Lake population, resulted in an estimate of 970 adult beetles with a 95 percent confidence interval of 704 to 1,606 beetles (Allgeier *et al.* 2003).

Survey and mark-recapture results indicate that the number of Salt Creek tiger beetles, as well as the number of populations, is extremely small, even when compared to other federally-listed tiger beetle taxa. From 1989 to 1992, the number of Northeastern beach tiger beetles found during annual surveys at 65 sites in Maryland and Virginia ranged from 9,846 to more than 17,480 beetles (U.S. Fish and Wildlife Service 1994). Surveys of Puritan tiger beetles in Maryland in 1989, 1991, 1992, and 1993 found an average of 6,389 beetles at 15 sites annually (U.S. Fish and Wildlife Service 1993). Both the Northeastern beach tiger beetle and Puritan tiger beetle are well-studied insects and were listed as threatened under the Act in 1989 (55 FR 32088).

Based on our analysis of private and public insect collections, NGPC's Heritage database records, surveys conducted over the past 14 years, and professional opinions of UNL entomologists who have studied or are studying the Salt Creek tiger beetle, we conclude that the number of Salt Creek tiger beetle populations is declining and that the three remaining populations are immediately threatened with extinction.

Previous Federal Action

On November 15, 1994, we published in the **Federal Register** (59 FR 58982), an Animal Notice of Review which included the Salt Creek tiger beetle as a Category 2 candidate species for possible future listing as either a threatened or endangered species. Category 2 candidates were those taxa for which information contained in the Service's files indicated that listing may be appropriate, but for which additional data were needed to support a listing proposal. In the subsequent February 28, 1996, Candidate Notice of Review published in the **Federal Register** (61 FR 7596), we indicated that the Category 2 candidate species list was being discontinued, and that henceforth the term ''candidate species'' would be applied only to those taxa that would have earlier fit the definition of the former Category 1 candidate taxa, that is, those species for which we had on hand sufficient information to support a listing proposal. In 2000, based on an assessment of imminent threats, the Salt Creek tiger beetle became a candidate species for listing and was assigned a listing priority number of 6. On October 30, 2001, the Salt Creek tiger beetle was upgraded to a priority 3 candidate for Federal listing, based on a review of the status, distribution, threats, and

imminence of such threats (66 FR 54808). A priority 3 is the highest priority ranking in the Candidate Notice of Review that can be assigned to a subspecies. A priority 3 candidate faces an imminent, high-magnitude threat.

In 1995, we entered into a cooperative agreement with the UNL to conduct 2 years of Salt Creek tiger beetle surveys in saline wetlands of eastern Nebraska and associated saline streams to assess and quantify changes in the species' populations that were apparent from earlier surveys. Results of the 1995 and 1996 surveys were discussed above in the Distribution and Status section of this rule. Further, the UNL researchers agreed to determine oviposition sites and larval habitats of the Salt Creek tiger beetle, initiate studies of genetic diversity within the *C. nevadica* complex, and increase public awareness of the Salt Creek tiger beetle through education and outreach. In 2001, we entered into a new and expanded cooperative agreement with the UNL to: (1) Conduct surveys to determine Salt Creek tiger beetle abundance and distribution in the Salt Creek watershed; (2) initiate procedures for rearing Salt Creek tiger beetles in captivity for possible reintroduction into previously occupied and unoccupied suitable habitats; (3) determine the physiological basis for habitat preferences of female Salt Creek tiger beetles for ovipositing, both in field and laboratory settings; (4) determine egg and larval survivorship of the Salt Creek tiger beetle; and (5) determine whether Salt Creek tiger beetles are attracted to specific artificial light sources and the distance at which such light sources would attract beetles. In addition, the Service also provided the NGPC with funding in both 2001 through 2004 through section 6 of the Act for research on the Salt Creek tiger beetle.

On October 7, 2002, as part of an agreement regarding other species, the U.S. Department of the Interior reached an out-of-court settlement with several conservation organizations and agreed to make a final determination for listing the Salt Creek tiger beetle by no later than September 30, 2005.

Summary of Factors Affecting the Species

After thorough review and consideration of all available information, we have determined that the Salt Creek tiger beetle warrants listing as an endangered species. Section 4 of the Act (16 U.S.C. 1533) and regulations (50 CFR part 424) promulgated to implement the listing provisions of the Act set forth procedures for determining a species or subspecies to be endangered or threatened due to one or more of the five factors described in section 4(a)(1) of the Act. These factors and their application to the Salt Creek tiger beetle are as follows:

A. Present or Threatened Destruction, Modification, or Curtailment of Habitat or Range

Background

The greatest threat to the Salt Creek tiger beetle is habitat destruction (Ratcliffe and Spomer 2002). Like many insects, the Salt Creek tiger beetle's close association with specific habitats—salt barrens and stream edges—leaves it particularly vulnerable to habitat destruction and alteration through direct and indirect means (*see* Pyle *et al.* 1981). The effects of habitat destruction and modification on tiger beetle species have been documented by Knisley and Hill (1992) and Nagano (1982). The saline wetlands of eastern Nebraska and associated saline streams used by the Salt Creek tiger beetle have undergone extensive degradation and alteration for commercial, residential, transportation, and agricultural development since the late 1800s, and are the most restricted and imperiled natural habitat type in the State (Gersib and Steinauer 1991).

In order to comprehend the complexity and immediacy of threats to the Salt Creek tiger beetle, it is necessary to understand when and how the destruction and degradation of the beetle's saline wetland and associated stream habitats took place. Cunningham (1985) reported that Salt Lake or Salt Basin (now known as Capital Beach) was once approximately 162 ha (400 ac) in size, and one of the largest saline wetlands in the area. The growing City of Lincoln (Lincoln) ditched, drained, and filled the saline wetlands and associated streams (Murphy 1992). In 1895, Salt Lake was diked and Oak Creek was diverted to create a permanent lake for recreational purposes. In 1906, the lake was renamed Capital Beach. From the 1930s to the 1950s, saline wetlands continued to be destroyed for the development of Lincoln (Farrar and Gersib 1991). In the 1960s, the construction of Interstate 80, through the heart of the remaining Salt Creek tiger beetle habitat, resulted in additional filling, dredging, diking, draining, and diversion (Farrar and Gersib 1991). All of these commercial and residential developments and road construction activities resulted in the loss or degradation of barren salt flat and saline stream edge habitat for the Salt Creek tiger beetle. The best available information indicates that these activities may have caused the extirpation of the Capital Beach population, possibly the largest historical population of Salt Creek tiger beetles.

The three remaining Salt Creek tiger beetle populations are being surrounded by commercial and residential development (Ratcliffe and Spomer 2002). During the 1990s, new housing, industrial, and commercial developments and infrastructure work degraded or destroyed many more acres of saline wetlands (Farrar 2003). Although the construction of buildings, homes, roads, schools, and parking lots is not occurring directly on salt flats and saline stream edges, these projects are occurring adjacent to these important habitats. Such projects have resulted in the creation of impervious surfaces (rooftops, access roads, storm sewers, and parking lots) that do not allow precipitation to seep into the ground. Instead, frequent high-volume freshwater runoff flows into saline wetlands, and associated streams, diluting salinity and altering their hydrology. In addition, runoff originating from other nearby, but not necessarily adjacent, residential and commercial developments and associated roads, flows through constructed drainages and storm sewers, and tributaries and contributes to an increase of freshwater inflow into downslope saline wetlands and their associated streams.

Reduced salinity concentrations on barren salt flats and along saline stream edges have allowed the invasion of vegetation such as *Typha angustifolia* (cattail) and *Phalaris arundinacea* (reed canary grass) into habitats used by the Salt Creek tiger beetle. These plants, ordinarily unable to tolerate high salinity, are aggressive invaders that convert sunny, barren salt flats into habitat that is dominated by a herbaceous overstory, rendering it unsuitable for use by the Salt Creek tiger beetle. This overstory shades out open sunny areas required by the Salt Creek tiger beetle to thermoregulate, forage, and oviposit (M. Fritz, NGPC, pers. comm. 2001). Increased vegetative encroachment is the primary factor attributed to the extirpation of several populations of other *Cicindela* species (*e.g., C. abdominals* and *C. debilis*) (Knisley and Hill 1992), and is one of the main threats to *C. ohlone* (66 FR 50340).

Reduced salinity concentrations on barren salt flats and along saline stream edges have also resulted in other direct impacts. Based on field and laboratory studies using *C. circumpicta* and *C.*

togata, two tiger beetle species that are co-inhabitants of salt flats with the Salt Creek tiger beetle, Hoback *et al.* (2000) found that salt is required for ovipositing. Neither species oviposited in greenhouse soil without it. Allgeier *et al.* (2004) concluded that species-specific preferences for salt and soil moisture regimes is important to habitat partitioning and reduction in competition between the Salt Creek tiger beetle and other tiger beetles. Hoback *et al.* (2000) discovered that changes in salinity and hydrology may alter the abundance of prey and cause the loss of suitable larval habitat for saline wetland-dependent species of tiger beetles, including the Salt Creek tiger beetle. After urban development occurs near and around saline wetlands and associated streams and alters the hydrologic regimes of these habitats, restoration and recovery of these habitat types will be difficult. This is especially true for the specialized barren salt flats and saline stream edges that are needed by the Salt Creek tiger beetle (J. Cochnar, U.S. Fish and Wildlife Service, pers. obs. 2002).

Past and Present Habitat Quality and Quantity

A number of studies have attempted to quantify the amount and rate of habitat loss for the saline wetlands of eastern Nebraska. All of these studies confirm the extensive loss of saline wetlands, but vary in terms of their estimates for the total acres lost due to differences in data and methods of analysis. In 1991, Farrar and Gersib found that only about 490 ha (1,200 ac) of saline wetlands of eastern Nebraska remained, compared to 7,300 ha (18,000 ac) in the late 1800s (Murphy 1992). In 1993 and 1994, a team of biologists from various Federal and State agencies completed an intensive assessment, inventory, and categorization of the saline wetlands of eastern Nebraska (Gilbert and Stutheit 1994). This assessment identified 98 sites that could be categorized as Category 1 saline wetlands comprising approximately 1,346 ha (3,327 ac) (Gilbert and Stutheit 1994). Category 1 saline wetlands provide saline wetland functions of high value or have the potential to provide high value following restoration or enhancement (Gilbert and Stutheit 1994). Category 2 saline wetlands are contaminated and degraded with limited potential for restoration. Category 3 and 4 wetlands are defined as freshwater wetlands and freshwater vegetation on saline and nonsaline hydric soils, respectively (Gilbert and Stutheit 1994). LaGrange (2003) further examined the analysis completed by Gilbert and Stutheit (1994) and divided Category 1 saline wetlands into three sub-classes: (1) Not highly degraded and still functioning—totaling 85 ha (210 ac) (6 percent); (2) degraded, but still functioning as a saline wetland and restorable to full function—totaling 1,249 ha (3,087 ac) (93 percent); and (3) degraded, not functioning as a saline wetland, but restorable to full function—totaling 12 ha (30 ac) (1 percent).

Although it is important to discuss the overall loss of saline wetlands, the impact of that loss on the Salt Creek tiger beetle can only be fully assessed by considering the loss of barren salt flat and saline stream edge habitats that occur within the confines of Category 1 saline wetlands. We expanded on the analyses completed by LaGrange (2003) and Gilbert and Stutheit (1994) to complete such an assessment. Using a Geographic Information System (GIS), we did a habitat assessment of the remaining barren salt flat and saline stream edge habitats existing within the remaining Category 1 saline wetlands. Using National Hydrography Dataset information (*http://nhd.usgs.gov*) and all known locations of Salt Creek tiger beetles, we delineated saline stream edge habitat (J. Runge, U.S. Fish and Wildlife Service, pers. comm. 2003). Next, we delineated barren salt flat habitat through the use of a feature-extraction process that would select areas containing similar spectral signatures of known barren salt flats. Finally, we did a qualitative evaluation of our GIS analysis by ground-truthing select polygons within the barren salt flat GIS layer.

Results from our assessment indicate that the total remaining areas of barren salt flat and saline stream edge habitat that exist within the saline wetlands of the Little Salt Creek, Rock Creek watersheds, and the remnant Salt Basin (i.e., Capital Beach) are approximately 15, 33, and 1 ha (38, 81, and 3 ac) respectively, totaling 49 ha (122 ac). These 49 ha (122 ac) represent all the barren salt flat and saline stream edge habitats that currently remain. In consideration of the analysis completed by LaGrange (2003), we then conducted a spatial analysis to determine the amount of habitat currently available for the Salt Creek tiger beetle that is not highly degraded. The analysis separated coded barren salt flats into Category 1 subclasses identified by LaGrange (2003). Our analysis reveals that only approximately 6 ha (15 ac) out of the total 49 ha (122 ac) of coded salt barrens are not highly degraded. It is these remaining 6 ha (15 ac) of not highly degraded barren salt flats and saline stream edges that provide habitat for the Salt Creek tiger beetle.

As the quality of saline habitat continues to decline through reduction in size, encroachment of herbaceous species, and modification to hydrology, so too does the likelihood that the Salt Creek tiger beetle can survive and avoid extinction. Most of the habitat delineated in our analysis was composed of extremely small habitat complexes (*i.e.,* less than 0.04 ha (0.09 ac)), that are unlikely to provide all of the necessary life history requirements that the Salt Creek tiger beetle needs to survive. Further, these small habitats are in clusters resembling mosaics, separated by herbaceous overstory. This spatial dispersion of herbaceous overstory precludes the use of these small areas by the Salt Creek tiger beetle, a species confined to specific habitats, and not known to travel distances greater than 805 m (2,640 ft) (Allgeier *et al.* 2003) in search of other suitable habitat. S. Spomer (pers. comm. 2002) confirmed that no Salt Creek tiger beetles were found in these small habitats in the 13 years that surveys were conducted. Carter (1989), the Nebraska Game and Parks Commission (1999), Ratcliffe and Spomer (2002), Spomer and Higley (1993 and 2001), Spomer *et al.* (1997), and Allgeier *et al.* (2003) all concluded that the declining number of populations of Salt Creek tiger beetles is due to the loss of suitable saline wetland and stream habitat.

Urban Development and Road Construction

Commercial and residential urban development and road construction are the greatest threats to the saline wetlands of eastern Nebraska and the plant and animal species that depend upon these habitats (Gilbert and Stutheit 1994; Ratcliffe and Spomer 2002). Urban expansion of Lincoln and Lancaster County has contributed to the decline of the saline wetlands of eastern Nebraska and associated streams, and potential extinction of the endemic species that use these areas, such as the Salt Creek tiger beetle. From 1970 to 2000, the Lincoln's human population grew by 50 percent, with a corresponding 50 percent increase in the area of the City (U.S. Department of Transportation 2002a). For the period of 1990 to 2000, Lincoln and Lancaster County experienced a 17.2 percent growth in population and a 20.2 percent growth in housing (U.S. Census Bureau 1990 and 2000). The anticipated future population growth rate of Lincoln and Lancaster County is 1.5 percent annually (City of Lincoln and Lancaster County 2002). The population of

Lincoln is expected to grow by approximately 47 percent by 2025 (U.S. Department of Transportation 2002a). This accelerated population growth rate has become evident in the last year, as illustrated by urban and infrastructure developments (discussed below) that threaten the continued existence of the Salt Creek tiger beetle and its limited remaining habitat.

All three extant populations of Salt Creek tiger beetles may be threatened with extirpation caused by the expansion of urban development and road construction in Lincoln and Lancaster County. A review of 1989 and 2002 aerial photographs reveals that over 50 percent of the area surrounding the Little Salt Creek-Roper population (a 1,300-ha (3,200-ac) area bounded by Interstate 80 to the North, Salt Creek to the South, North 27th Street to the West, and Highway 77 to the East) has been developed within the last 5 years. We reviewed the 2002 City of Lincoln and Lancaster County Comprehensive Plan and found that an additional 30 to 40 percent of the area surrounding the Little Salt Creek-Roper population is planned for residential and commercial development over the next 25 years. However, given the current rate of growth and development surrounding this population, this additional area is likely to be developed in less time than that. In some cases, the local municipal development permits for this expansion have already been acquired (including some floodplain permits from Lincoln) (R. Harms, pers. obs. 2002 and 2003).

Development with the potential to adversely impact all three populations is underway in areas adjacent to the remaining segments of habitat. Recent developments have already changed the drainage patterns in some areas, resulting in the introduction of excess freshwater, sediment, and contaminated urban runoff to saline habitats occupied by the Salt Creek tiger beetle. There are also planned highway projects which could also adversely impact the species due to freshwater runoff increase, vegetative encroachment, risks of toxic spills and alteration of drainage patterns.

Increased vehicle traffic due to road improvements can increase the amount of chemically-contaminated runoff from vehicles and roadway surfaces flowing into Little Salt Creek. Highway runoff contains a variety of chemical constituents, many of which can be harmful to the environment when washed from roads by rain and snowmelt into adjacent surface waters, groundwater, and ecosystems (Bricker 1999). Contaminated runoff could impact the Salt Creek tiger beetle, as it can have toxic effects on the beetle and its prey base. For the expansion of Interstate 80, the Federal Highway Administration (FHWA) and Nebraska Department of Roads (NDOR) have identified measures that reduce concentrations of hazardous and toxic contaminants in highway runoff, and a contingency plan for accidental spills that would threaten two populations of Salt Creek tiger beetles (FHWA 2003). However, other non-Federal road and street projects that will be constructed after the Interstate 80 expansion do not currently address impacts to the Salt Creek tiger beetle from exposure to runoff.

Agriculture

Agricultural practices in the area may also threaten the limited Salt Creek tiger beetle habitat and the Upper Little Salt Creek-North and Little Salt Creek-Arbor Lake populations. Livestock grazing can destroy or substantially degrade habitats for adult and larval forms of the Salt Creek tiger beetle, through trampling, and thus, destroy Salt Creek tiger beetle larvae burrows and the larvae that inhabit them. Cattle grazing also can compact soil and modify soil hydrology, gradually drying out a site and making it unsuitable for adults and larvae (which prefer moist, muddy sites with encrusted salt on soil surfaces). The Upper Little Salt Creek-North population occurs along a segment of Little Salt Creek that flows through a pasture, and one of these population survey sites may have been negatively impacted by cattle grazing (S. Spomer, pers. comm. 2002).

Cultivation also poses a threat to the largest remaining population of Salt Creek tiger beetles, the Little Salt Creek-Arbor Lake population. Cultivation can increase erosion of sediment and result in introduction of pesticides into adjacent saline wetlands. This population currently is at risk because there is no vegetative buffer between occupied Salt Creek tiger beetle habitat and row cropped areas. Adverse impacts to the beetles in this population are likely to occur as precipitation events and periodic winter and spring thaws wash sediment from the cultivated land and either cover over larval burrows with a thick layer of sediment or encourage vegetative encroachment of saline stream edges through its accumulation. Future use of the impacted area by the Salt Creek tiger beetle may not occur because it may be unsuitable as ovipositing, larval, and foraging habitat. When an area of larval habitat becomes degraded then disappears, so does the species it supports (Dunn 1998). Historic and anticipated impacts related to flooding are discussed later in Factor E of the Summary of Factors Affecting the Species section of this rule.

Stream Channelization, Bank Stabilization, and Incisement

In Nebraska, many river and stream systems, including Salt Creek and its tributaries, have undergone extensive channelization for flood control to protect both agricultural and urban developments. Channelization of Salt Creek from Lincoln to Ashland, Nebraska, was done a section at a time from 1917 to 1942 by the Corps (Farrar and Gersib 1991; Murphy 1992). In the 1950s, the Corps and U.S. Department of Agriculture further modified the area when they developed and implemented a flood control plan that involved the construction of levees, reservoirs, and additional channelization of Salt Creek (Murphy 1992). Farrar and Gersib (1991) found that the greatest alteration of saline wetlands in the Little Salt Creek and Rock Creek drainages resulted from the channelization of Salt Creek. Channelization of Salt Creek encouraged tributary streams (Little Salt Creek, Oak Creek, Rock Creek, and Middle Creek) to head-cut, carving deeper into their beds to adjust to a change in stream bed gradients. Straightening stream channels leads to a state of disequilibrium or instability, often causing stream entrenchment and corresponding changes in morphology and stability (Rosgen 1996). The lowering of tributary streambeds resulted in the degradation and loss of saline wetlands by draining and lowering the water table and diluting the salt concentrations with freshwater leading to vegetative encroachment (Wingfield *et al.* 1992).

In 1992, the largest population of the Salt Creek tiger beetle, the Little Salt Creek-Arbor Lake population, was significantly impacted by a stream channelization and bank stabilization project along Little Salt Creek (Spomer and Higley 1993; Farrar 2003). In an attempt to control erosion and bank sloughing and to prepare for the widening of North 27th Street, a portion of Little Salt Creek was straightened, and its banks were armored with rock riprap. These actions destroyed about one-half of the remaining prime habitat for the Salt Creek tiger beetle along Little Salt Creek (Spomer and Higley 1993; Farrar 2003). Based on surveys conducted in 1991 and 1992, the Little Salt Creek-Arbor Lake population showed a corresponding 55 percent decline (from 171 to 94) after the project was completed (Spomer and Higley 1993). In this circumstance, stabilization of about half of the bank resulted in the

loss of over half of the population of Salt Creek tiger beetles. Had the entire bank been stabilized, instead of just half, the population of Salt Creek tiger beetles there likely would have been extirpated, or nearly so. It is unclear why the population at the site was able to recover following such a devastating event. It is possible that favorable weather conditions, suitable habitat within travel distance (distances of less than 805 m (2,640 ft)), or other unknown factors could have contributed to their survival.

The lower portion of Little Salt Creek, where the two largest remaining populations of Salt Creek tiger beetles exist, has been deeply incised by human activities, resulting in the creation of vertical stream banks measuring approximately 6 to 9 m (20 to 30 ft) in height (J. Cochnar, U.S. Fish and Wildlife Service, pers. obs. 2002; R. Harms, pers. obs. 2002). We observed that bank sloughing is covering saline stream edges and reducing the amount of suitable habitat for the two largest populations of Salt Creek tiger beetles. We presume that the Little Salt Creek-Arbor Lake and Little Salt Creek-Roper populations of the Salt Creek tiger beetle have been able to survive because these two populations exist in areas where there is still a functioning saline wetland and saline stream complex. However, if these two areas evolve into stable, vegetated, incised stream systems and the wetland habitats continue to receive freshwater runoff from surrounding urban development, the existing suitable habitats for the Salt Creek tiger beetle would no longer support these two populations and the Salt Creek tiger beetle might become extinct.

B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

Tiger beetles (genus *Cicindela*) are one of the most sought-after genera of beetles by amateur collectors because of their unique metallic colors and patterns and fascinating habits (Nebraska Game and Parks Commission 1999; 66 FR 50340). Interest in the genus Cicindela is reflected in a journal entitled Cicindela, which has been published quarterly since 1969 and is exclusively devoted to this genus. Even limited collection pressure on small populations of species, such as the Salt Creek tiger beetle, can have adverse impacts on viability because of the loss of genetic variability it causes (Spomer and Higley 1993). At present, we do not know if the collection of adult Salt Creek tiger beetles is a factor contributing to its decline.

The Service and NGPC are funding studies of the Salt Creek tiger beetle to improve the understanding of its biology and habitat requirements. This research will ultimately contribute to the conservation of the species. Transplanting larvae of other species of rare tiger beetles has been conducted elsewhere by removing larvae from one site and introducing them to another unoccupied site. For example, the federally threatened C. dorsalis dorsalis has been successfully reintroduced on the sandy beaches of the Sandy Hook National Seashore in New Jersey using this technique (B. Knisley, Randolph-Macon College, pers. comm. 2003; A. Scherer, U.S. Fish and Wildlife Service, pers. comm. 2003). Leon Higley (pers. comm. 2001) states that Salt Creek tiger beetles will need to be introduced into unoccupied suitable habitats through the rearing and translocation of captive larvae. Captive rearing of Salt Creek tiger beetle larvae for introduction into suitable saline habitats is under way through Service- and NGPC-funded UNL studies (Allgeier *et al.* 2003). Development of these procedures requires the capture and removal of a small number of adult Salt Creek tiger beetles from their habitat and placement in a laboratory setting. The removal of a small number of adults will slightly reduce a population, but if successful, such a program will preserve and enhance the genetic variability of the species.

C. Disease or Predation

Insufficient information is available to determine if the Salt Creek tiger beetle is susceptible to diseases that could threaten its survival. However, the Salt Creek tiger beetle is affected by several predacious and parasitic species that are commonly observed in its habitat. Spiders (*Salticidae* and *Lycosidae*), predatory bugs (*Reduviidae*), beetles (*Histeridae* and *Cantharidae*), birds, shrews (*Soricidae*), raccoons (*Procyon lotor*), lizards (*Lacertilia* sp.), toads (*Bufonidae*), robber flies (*Asilidae*), ants (*Formicidae*), and dragonflies (*Anisoptera* sp.) all prey on the Salt Creek tiger beetle (Lavigne 1972; Nagano 1982; Pearson 1988). A robber fly was observed preying on a Salt Creek tiger beetle it had caught in flight and pulled to the ground (Spomer and Higley 2001). Ants can overwhelm, kill, and devour larvae confined to their burrows (Spomer and Higley 2001). Larger species of tiger beetles (*C. circumpicta*) have been known to prey on smaller-sized tiger beetles (*C. togata*), especially those species that occupy similar habitats (Hoback *et al.* 2001). Both *C. togata* and *C. circumpicta* are found in the same habitats as the Salt Creek tiger beetle and both may prey upon it (S. Spomer, pers. comm. 2002). Parasitic wasps (*Chalcididae* and *Tiphiidae*) can sting the larvae, resulting in paralysis, then lay eggs which hatch and feed on the larvae (Spomer and Higley 2001). Bee flies (*Bombylidae*) hover over larval burrows and flip eggs into the entrances (S. Spomer, pers. comm. 2002). After the eggs hatch, the bee fly maggots attach themselves to the Salt Creek tiger beetle larvae and feed on them.

Predators and parasites play important roles in the natural dynamics of populations and ecosystems. Predators and parasitoids of the Salt Creek tiger beetle evolved in conjunction with the beetle and would not normally pose a severe threat to its survival. However, predation and parasitism of adults and larvae may account for significant mortality of the Salt Creek tiger beetle because of the small size of the remaining populations, limited distribution, reduced habitat, and close proximity of the two largest populations (L. Higley, pers. comm. 2002). Hoback *et al.* (2001) indicated that reduced saline habitats, coupled with a limited prey source, may result in predation by *C. circumpicta* and *C. togata* on the Salt Creek tiger beetle. Such predation by other tiger beetles may be a threat to the Salt Creek tiger beetle. However, at this time it is unknown whether the magnitude of predation and parasitism on the Salt Creek tiger beetle is a threat to its survival.

D. Inadequacy of Existing Regulatory Mechanisms

Overview

Federal, State, and local laws, regulations, and policies have not been sufficient to prevent past and ongoing losses of Salt Creek tiger beetle habitat. Existing regulatory mechanisms that provide some, but not adequate, protection for the Salt Creek tiger beetle include—Federally implemented regulatory mechanisms such as the National Environmental Policy Act (NEPA) and section 404 of the CWA; State implemented regulatory mechanisms such as the Nebraska State Water Quality Standards (as required by section 401 of the CWA) and the Nebraska Nongame and Endangered Species Conservation Act (NESCA); and local conservation planning efforts such as the City of Lincoln and Lancaster County Comprehensive Plan, the Little Salt Creek Valley Planning Cooperative Agreement cosponsored by the Nature Conservancy (TNC) and NGPC, and a local conservation plan for the

protection of the Salt Creek tiger beetle proposed by Lincoln (but not yet developed).

Federally Implemented Regulatory Mechanisms

While NEPA and CWA are important environmental protection statutes, neither provides specific protection to candidate species. NEPA is a procedural statute that requires full consideration and disclosure of the environmental impacts of a project. It does not require protection of particular species or its habitat, nor does it require the selection of a particular course of action.

Under section 404 of the CWA, the Corps does not regulate wetland drainages that do not result in a discharge of dredged or fill material into waters of the United States or sediment inputs originating from upland sources. The effects of such activities could have substantial adverse impacts on saline wetlands and associated streams used by larval and adult forms of the Salt Creek tiger beetle. Additionally, the Corps' Regulatory Program in Nebraska has limited regulatory authority over road and urban development projects that have destroyed or further degraded habitats for the Salt Creek tiger beetle. Since the late 1800s, over 90 percent of the historical saline wetlands of eastern Nebraska have been lost or highly degraded due to such projects (Murphy 1992), which have led to corresponding losses of Salt Creek tiger beetle habitat, including barren salt flats, saline stream edges, and seeps.

Below is a discussion of permitted activities and prescribed mitigation authorized by the Corps under section 404 of the CWA. In 1990, Lincoln purchased 23 ha (58 ac) of a portion of the saline wetland known as Arbor Lake and turned over its management to NGPC. This acquisition and protection in perpetuity served as mitigation for a Department of the Army permit that authorized the destruction of 7 ha (17 ac) of saline wetlands for the expansion of two streets. This mitigation resulted in the acquisition of a portion of the habitat that harbors the Little Salt Creek-Arbor Lake Population of Salt Creek tiger beetles. Since 1995, permits have been authorized for projects that impacted approximately 11 ha (27 ac) of eastern Nebraska Category 1 saline wetlands (U.S. Department of Transportation 2002a and b). As required by these permits, project proponents offered to mitigate (restore and preserve) approximately 108 ha (266 ac) of Category 1 saline wetlands (U.S. Department of Transportation 2002a and b). Although mitigation did not specifically target the 49 ha (122 ac) of Salt Creek tiger beetle habitat (*i.e.*, barren salt flats and saline stream edges), one such mitigation project had the potential to benefit the beetle in this area. However, the project, known as the Whitehead Mitigation Site, has provided minimal benefit to Salt Creek tiger beetle. Since its completion over 8 years ago, this site has been surveyed annually for Salt Creek tiger beetles. One individual Salt Creek tiger beetle was found during the first year of monitoring, but none have been found in the last 7 years (Spomer *et al.* 1999, 2001, 2002, and 2004; and Allgeier *et al.* 2003). The area is unlikely to provide habitat for the Salt Creek tiger beetle in the near future as site observations show signs of vegetative encroachment, and the site appears too wet for beetle use. However, benefits may be realized through associated functions of the area (*i.e.*, water purification and retention of excess stormwater). Thus, aside from the Arbor Lake area acquisition, preservation and restoration of Category 1 saline wetlands have provided minimal habitat benefits to the Salt Creek tiger beetle.

A Supreme Court ruling in 2001 limited Federal authority under the CWA to regulate certain isolated wetlands (*Solid Waste Agency of Northern Cook County* vs. *U.S. Army Corps of Engineers*, 531 U.S. 159) (SWANCC). In particular, SWANCC eliminated CWA jurisdiction over ''isolated waters that are intrastate and non-navigable, where the sole basis for asserting CWA jurisdiction is the actual or potential use of the waters as habitat for migratory birds that cross state lines in their migrations'' (68 FR 1996). As described in a Joint Memorandum issued on January 15, 2003 (68 FR 1995), the Corps and Environmental Protection Agency (EPA) will not assert jurisdiction over such isolated waters, if the sole basis for jurisdiction is any of the factors listed in the ''Migratory Bird Rule'' (51 FR 41217). Additionally, the Joint Memorandum stated that Corps and EPA field staff should seek formal project-specific Headquarters approval prior to asserting jurisdiction over these waters on other grounds. Some of the wetland habitats occupied by the Salt Creek tiger beetle are now considered to be isolated and not subject to protection under the CWA. In a February 9, 2001, letter addressed to a potential applicant for a Department of the Army permit, the Corps explained that their property was determined to be an isolated wetland and, thus, the Corps could not assert jurisdiction over it due to the Supreme Court ruling. In Nebraska, the Corps will not regulate any wetland that is determined to be isolated unless it can be proven that there is some kind of commerce use (*e.g.*, a public boat ramp on the wetland) aside from migratory bird use or a surface connection. The property of interest to the potential applicant contained a Category 1 saline wetland with a barren salt flat, and historically, the area was part of the Salt Basin wetland. The property owner constructed an apartment complex, which destroyed the saline wetland and barren salt flats. Although a survey of this saline wetland revealed that no Salt Creek tiger beetles were present prior to construction, this saline wetland once had the potential as a possible recolonization site for the Salt Creek tiger beetle.

Stream channelization and certain bank stabilization projects are regulated by the Corps under section 404 of the CWA, but this regulatory mechanism has proven ineffective in preventing impacts to stream habitats used by the Salt Creek tiger beetle. As described above in Factor A, in 1992, along Little Salt Creek, about half of the remaining habitat for the largest population of the Salt Creek tiger beetle was lost after the completion of a Corps-permitted stream bank stabilization and channelization project. This authorization resulted in activities that destroyed about one-half of the remaining prime habitat for the Salt Creek tiger beetle along Little Salt Creek (Spomer and Higley 1993; Farrar 2003).

Many of the saline wetlands that provide habitat for the Salt Creek tiger beetle are associated with the floodplain of adjacent streams. Stream channelization and bank stabilization projects conducted for flood control have caused channel incision and have necessitated additional bank stabilization projects further downstream or in feeder tributaries. Since the Salt Creek tiger beetle was listed as endangered by the State in 2000, the Corps has considered it in its public interest evaluation for permits (M. Rabbe, U.S. Army Corps of Engineers, pers. comm. 2001). However, the Corps' evaluation has resulted in only limited benefits to the Salt Creek tiger beetle because construction activities in upland areas surrounding aquatic habitats are not within the Corps' jurisdiction. Many projects qualify for a general permit (*i.e.*, Nationwide Permit 13 (bank stabilization)) that does not need to be individually reviewed by the Corps. Further, some landowners, in an attempt to avoid obtaining an Army permit and the Federal oversight that goes with it, windrow piles of concrete riprap along the high bank of the stream

in anticipation that once the streambank erodes far enough landward, the riprap will fall in on its own and stabilize the bank. In such cases, the Corps cannot exercise regulatory jurisdiction over windrowed riprap until there is a discharge below the ordinary high water mark, and even then, only if that discharge threatens the navigability of a stream or is prohibited for use as a fill material (U.S. Army Corps of Engineers Regulatory Guidance Letter MRO 96–11, June 17, 1997). Both regulated and unregulated bank stabilization activities occur on Little Salt Creek and have adversely affected Salt Creek tiger beetle habitat.

State Implemented Regulatory Mechanisms

Under section 401 of the CWA, NDEQ issues a Water Quality Certification (WQC) whenever a Department of the Army permit is authorized by the Corps. Issuance of a Nebraska WQC for a Department of the Army permit also is necessary to meet Nebraska State Water Quality Standards. Such standards are not aligned with quantitative biological criteria, and thus projects may still have negative impacts on saline wetlands of eastern Nebraska and associated streams that provide habitats needed to meet life requirements of both larval and adult Salt Creek tiger beetles. Nebraska Water Quality Standards do recognize all wetlands in the State as ''waters of the State,'' including isolated wetlands that are no longer under Federal jurisdiction as a result of *SWANCC* vs. *U.S. Army Corps of Engineers*. As the State does not have a permit program for authorizing activities in wetlands, only after an impact to a non-Federal isolated wetland has occurred can the NDEQ take action (*i.e.*, an enforcement action). After-the-fact enforcement actions under the State's Water Quality Standards are unlikely to offset adverse impacts that have already occurred to the Salt Creek tiger beetle in isolated saline wetlands, given their highly specific habitat requirements and low numbers.

On March 17, 2000, the Salt Creek tiger beetle was listed as endangered under the NESCA by NGPC. The NESCA prohibits the ''take'' of listed species. ''Take'' is defined as a means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct. The NESCA also protects the Salt Creek tiger beetle by authorizing State agencies to carry out programs for the conservation of endangered and threatened species and by taking such actions necessary to ensure that actions authorized, funded, or carried out by the State do not jeopardize the continued existence of such endangered or threatened species or result in the destruction or modification of habitat for such species (NESCA section 37–807 (3)). The NESCA requires all State agencies to consult with NGPC to ensure that jeopardy is avoided. However, the NESCA does not authorize NGPC to review Federal actions or to consult with Federal agencies for impacts that may affect State-listed species such as the Salt Creek tiger beetle. In addition, although NESCA allows NGPC to identify critical habitat for State-listed species, implementing regulations that would allow such designations were never developed.

Local Conservation Planning

In a joint effort to plan long term for the development of the Lincoln and Lancaster County, officials have approved the Lincoln and Lancaster County Comprehensive Plan. The approved Comprehensive Plan proposes that development not occur along Little Salt Creek and north of Lincoln's city limits. As part of the Comprehensive Plan, Lincoln also has placed a 150-m (500-ft) wide buffer around Little Salt Creek and its adjacent saline wetlands until a determination can be made through research whether the buffer is needed to protect the Salt Creek tiger beetle. However, for development projects within the City limits, the buffer does not apply, including areas around the Little Salt Creek-Arbor Lake and Little Salt Creek-Roper populations.

In addition, comments by representatives of Lincoln during an April 30, 2002, meeting with the Service indicated that the Comprehensive Plan is a guide for the growth and development of Lincoln and Lancaster County and can provide no assurances beyond the elected terms of those officials instrumental in its development. The Comprehensive Plan is the first step in developing city and county ordinances, but it is not a regulatory mechanism that can be relied upon to provide regulatory assurances.

In 2000, the TNC and NGPC organized the Little Salt Creek Valley Planning Cooperative. In acknowledgment of the importance of private interests in the Cooperative, the purpose of this effort was to organize stakeholders, mainly private landowners, in the Little Salt Creek watershed into a coalition to preserve and protect eastern Nebraska saline wetlands and associated watershed streams in the northern third of Lancaster County. After 18 months of unsuccessful negotiations, this conservation effort was dissolved.

In 2003, Lincoln, Lancaster County, Lower Platte South Natural Resources District, TNC, and NGPC formed the Saline Wetland Conservation Partnership (SWCP). The SWCP has developed a plan that focuses on the conservation of saline wetlands in Lancaster and Saunders Counties. Although not specifically focused on the protection and management of the Salt Creek tiger beetle, the SWCP's efforts will benefit the species. One of the strategies of the SWCP's plan is to protect saline wetlands using existing Federal, State, and local laws. Another strategy is to use existing grant programs to acquire saline wetlands either through simple fee title or conservation easements. To date, the SWCP has acquired 5 parcels of land containing saline wetlands. Due to the high value of land, and shortage of Federal, State, and local government agency funds, protection of Salt Creek tiger beetle habitat through acquisition is expected to be limited.

E. Other Natural or Manmade Factors Affecting Its Continued Existence

Overview

Because the Salt Creek tiger beetle occurs at only three known locations and in such small numbers, the remaining populations of Salt Creek tiger beetles are highly susceptible to extinction as a result of naturally occurring stochastic environmental or demographic events. Such events may include heavy rain storms and severe flooding which flood out and scour larvae away, dilute salinity, and result in sediment deposition; accidental spillage of hazardous materials due to a nearby, up-slope traffic accident; or runoff containing a recently applied insecticide flowing into habitats occupied by the Salt Creek tiger beetle along Little Salt Creek. Gilpin (1987) recognized a direct association between increased extinction rates of a species and reduced habitat areas, distances between populations, and small population size. Further, random demographic effects and loss of genetic variability may result in individuals and populations being less able to cope with environmental change, which could result in the loss of one or both of the two largest populations of Salt Creek tiger beetles.

In addition, populations of wetland-dependent species that are isolated and small in size are vulnerable to extinction by chance demographic events, disease, inbreeding, or natural events such as changing water levels, succession of wetland vegetation, and habitat destruction (Gibbs 1993). Based on 2004 population surveys and a review of USGS topographic maps

showing population distributions, 99 percent of the remaining Salt Creek tiger beetles are located within a 1.6-km (1-mi) radius of the Interstate 80 and North 27th Street Interchange and ongoing residential and commercial development. Based on the information we have reviewed, we surmise that further degradation or loss of suitable habitats and the increased distance between areas of suitable habitat will further reduce the likelihood that Salt Creek tiger beetles will be able to move and recolonize other sites and establish additional populations. If so, as existing occupied habitats become degraded, and these areas become smaller and smaller, existing populations of Salt Creek tiger beetles may become extirpated.

Floods and Droughts

The extirpation of a local population of Salt Creek tiger beetles has occurred due to a naturally occurring flood event. Although Salt Creek tiger beetle larvae are able to withstand submersion for prolonged periods (possibly up to 2 weeks) (Hoback *et al.* 1998; L. Higley, pers. comm. 2001), flooding results in soil erosion of larval burrow sites and washes larvae downstream. Flooding also results in the deposition of sediments from adjacent agricultural lands into larval and adult habitats. In the mid-1980s, floodwaters carried large loads of sediment from adjacent cropfields and deposited it into the saline wetlands associated with Rock Creek in northern Lancaster and southern Saunders Counties (M. Fritz, pers. comm. 2003). This flood event covered barren salt flats used by Salt Creek tiger beetles in the Jack Sinn WMA population. The mid-1980s flood resulted in the loss of Salt Creek tiger beetle larvae because of the depth of sediment deposited. The larvae were unable to remove the 8 to 10 cm (3 to 4 in) of sediment deposited because they extract excess soil material out and away from a burrow and not inward (M. Fritz, pers. comm. 2003). The mid-1980s flood also changed the vegetation of the area. After the flood event, a thick herbaceous overstory composed of reed canarygrass and cattail infested the area, making it unsuitable for the Salt Creek tiger beetle. In 1993, back-to-back 50-year rain events inundated the entire area, including saline wetlands and Salt Creek tiger beetle habitats of the Jack Sinn WMA population (U.S. Department of Agriculture 1996). Surveys of the Jack Sinn WMA population have only found two individuals since 1993 and, as already mentioned, the Jack Sinn WMA population is considered to be extirpated.

Extirpation of either the Little Salt Creek-Arbor Lake population or Little Salt Creek-Roper population of Salt Creek tiger beetle, or both, is highly likely to occur if the Little Salt Creek drainage experiences an event similar to the 1993 Rock Creek drainage flood. Flooding, even after a normal rainfall, is likely to occur at a higher frequency and volume due to the increased storm water runoff from developments and channelization of tributaries.

Drought also may have impacted prey populations, leading to higher mortality rates of the Salt Creek tiger beetle (Spomer and Higley 2001). Dry conditions result in the loss of moist saline seep habitat used as larval, ovipositing, and foraging habitat by the Salt Creek tiger beetle. Drought also can change the abundance and diversity of prey items used by adult and larval Salt Creek tiger beetles. In Nebraska, 2002 was the third driest year on record (*i.e.,* 115 years) (Nebraska's Climate Assessment and Response Committee 2003) and June 2002 was the driest month on record (University of Nebraska 2003). June is the month when the Salt Creek tiger beetle is most active. L. Higley (pers. comm. 2003) predicts that if the drought that Nebraska has experienced over the past couple of years continues, the remaining Salt Creek tiger beetle populations will decline in number of individuals due to the lack of prey available to the beetle and its larvae.

Pesticides

Corn, soybean, and sorghum fields dominate the Little Salt Creek watershed, and insecticides are applied annually to these fields. Insecticides that enter occupied habitats of the Salt Creek tiger beetle through runoff have the potential for direct impact or indirect impact through modification of prey availability. There have been no studies to evaluate pesticide exposure and adverse effects to Salt Creek tiger beetles; however, research on ground beetles (family Carabidae) suggests pesticide exposure may place the Salt Creek tiger beetle at risk from decreased survival and reproduction.

Dietary and topical exposure of ground beetles (*Harpalus pennsylvanicus*) in Kentucky turfgrass plots to a carbamate insecticide (bediocarb) and a chloro-nicotinyl insecticide (imidacloprid) resulted in lethal and sublethal effects (Kunkel *et al.* 2001). The carbamate insecticide resulted in a high incidence of mortality, whereas exposure to the chloro-nicotinyl insecticide resulted in neurotoxic effects, including paralysis, impaired walking, and excessive grooming. Beetles recovered from the sublethal effects in the laboratory; however, field observations indicated that intoxicated beetles were highly vulnerable to predation (Kunkel *et al.* 2001). Bendiocarb and imidacloprid have been used for insect control in corn (Extoxnet 1996). Other carbamate pesticides recommended for use in corn, soybean, and sorghum production in Nebraska include carbofuran, methomyl, thiodicarb, trimethacarb, and carbaryl (Wright *et al.* 1994; Hunt 2003).

Organophosphate and pyrethroid insecticide effects to ground beetles also have been evaluated. Thacker *et al.* (1995) found that microapplicators in laboratory-based topical bioassays greatly underestimated the toxicity of the chlorpyrifos (an organophosphate) and deltamethrin (a pyrethroid) pesticides. Whole field experiments in England designed to study the effects of pesticides on nontarget invertebrates reported that chlorpyrifos and fonofos, both organophosphate pesticides, affect the activity of ground beetles and seemed to result from direct toxicity rather than a depleted prey base (Luff *et al.* 1990). Organophosphate and pyrethroid pesticides recommended for use on corn, soybean, and sorghum crops in Nebraska include chlorpyrifos, malathion, methyl parathion, dimethoate, ethoprop, fonofos, phorate, terbufos, tefluthrin, tralomethrin, permethrin, esfenvalerate, cyfluthrin, zeta-cypermethrin, and lambda-cyhalothrin (Wright *et al.* 1994; Hunt 2003).

Salt Creek tiger beetles also may be exposed to pesticides applied to control mosquitoes, grasshoppers, and pests in residential yards and gardens. Nagano (1982) referred to a report of an entire population of tiger beetles (*C. haemorrhagica* and *C. pusilla*) in the State of Washington being eradicated by pesticides. The disappearance of the tiger beetle *C. marginata* in New Hampshire also was believed to be the result of insecticide spraying to control salt marsh mosquitoes (Dunn 1978, as cited by Nagano 1982). Insecticides applied annually to lawns and landscaping plants at residential and commercial developments near Little Salt Creek have the potential to enter the creek and impact the Salt Creek tiger beetle and its prey base. A local government has proposed for the last two years to apply pesticide for the control of mosquitos along Little Salt Creek where the Little Salt Creek-Roper population exists.

Artificial Lights

Artificial lights along streets and highways in Lincoln, particularly

mercury vapor lamps, also may contribute to population losses of the Salt Creek tiger beetle, as such lights have been implicated in population losses of nocturnal insects elsewhere (Pyle *et al.* 1981). Adult tiger beetles of many species are regularly attracted to lights at night, which may be associated with nocturnal dispersal (Pearson 1988). Larochelle (1977) documented 122 species and subspecies of Cicindelidae found at night light sources. Tiger beetle species that were attracted to light sources at night include *C. togata, C. fulgida,* and *C. circumpicta* (Willis 1970). The subspecies, *C. n. knausi,* the closest insect relative to the Salt Creek tiger beetle, also is attracted to artificial light sources at night (Willis 1970). Allgeier *et al.* (2003) found that Salt Creek tiger beetles are attracted to artificial light in the following order of preference—black light; mercury vapor; incandescent; fluorescent; and sodium vapor (Allgeier *et al.* 2003). The 2003 mark/recapture study of the Little Salt Creek-Arbor Lake population shows that Salt Creek tiger beetles move a distance of at least of 460 m (1,509 ft) (Allgeier *et al.* 2003). Allgeier *et al.* (2003) also found that female Salt Creek tiger beetles oviposition at night and that outdoor light sources may reduce reproduction. It is thought that fewer eggs are deposited if artificial light sources draw females away from their breeding habitat. Allgeier *et al.* (2003) recommended an 805-m (2,640-ft) (0.8-km (0.5-mi)) buffer zone to protect all existing Salt Creek tiger beetle populations from possible outdoor light sources.

Movement away from habitat to lighted areas, such as areas surrounding major transportation routes (*e.g.*, Interstate 80) and associated residential, commercial, and industrial developments may increase energy expenditure, reduce reproductive success, and ultimately impact the survival of the two largest populations of Salt Creek tiger beetles (L. Higley, pers. comm. 2002). Distances between outdoor light sources within commercial and residential developments and the Little Salt Creek-Roper and Little Salt Creek-Arbor Lake populations are less than the 805-m (2,640-ft) (0.8-km (0.5-mi)) buffer recommended by Allgeier *et al.* (2003) (J. Cochnar, pers. obs. 2002).

Electric insect light traps are possibly a greater threat to the Salt Creek tiger beetle than lights illuminating urban streets, houses, parking lots, and commercial buildings. Electric insect light traps use ultraviolet light to attract flying insects toward an electrified metal grid where they are destroyed (Frick and Tallamy 1996). Another type of trap that uses black light, a form of ultraviolet light, has a sticky paper backing where the insects are caught and die. Electrical insect light traps have been used extensively since the middle 1900s for research and surveillance in disease prevention, and control of indoor and outdoor insects in homes and agricultural and industrial operations (Urban and Broce 1999). Mosquitoes (Culicidae), horse and deer flies (Tabanidae), house flies (Muscidae), and biting midges (Ceratopogonidae) are the most commonly targeted species of biting insects. However, during the summer of 1994 at 6 sample sites, Frick and Tallamy (1996) found 13,789 insects that were electrocuted by electric insect light traps. Of these, 6,670 insects (48.4 percent) were nontarget and nonharmful aquatic insects from nearby rivers and streams. Additionally, Frick and Tallamy (1996) identified that 1,868 of these insects (13.5 percent) were predators and parasites of the targeted, harmful insects.

Black-light or ultraviolet based insect traps could become an ever increasing threat as residential and commercial development continues to encroach upon the two largest populations of Salt Creek tiger beetles.

Conclusion of Status Evaluation

In making this proposed rule determination, we carefully assessed the best scientific and commercial information available regarding past, present, and future threats faced by the Salt Creek tiger beetle. The immediate concerns for the Salt Creek tiger beetle are associated with the extremely small, fluctuating populations, the number of which has declined by 50 percent since surveys began in 1991, and habitat degradation, destruction, and fragmentation. The Salt Creek tiger beetle is currently restricted to three populations on approximately 6 ha (15 ac) of not highly degraded barren salt flat and saline stream edge habitats contained within the eastern Nebraska saline wetlands and associated saline streams (*i.e.*, Little Salt Creek). Ninety-nine percent of all remaining Salt Creek tiger beetles are located approximately 1.6 km (1 mi) apart, making them especially susceptible to extirpation from a single catastrophic event. They also are located within a 1.2-km (0.7-mi) radius of the Interstate 80 and North 27th Street Interchange and the associated growth and development that is underway.

As discussed in Factor A of the Summary of Factors Affecting the Species section of this rule, there are a number of immediate threats that can be attributed to urban and agricultural development projects that threaten the Salt Creek tiger beetle with extinction. Ongoing residential and commercial developments may threaten all remaining populations of the Salt Creek tiger beetle with extirpation. These developments can cause changes to hydrologic regimes, resulting in freshwater inflows and sediment runoff, which in turn reduces salinity concentrations and encourages vegetation invasion into previously unvegetated saline habitats. Proposed projects, such as road expansion projects, also pose threats to the two largest remaining populations of the Salt Creek tiger beetle.

Other immediate threats to the habitat of the Salt Creek tiger beetle are sediment erosion from adjacent agricultural fields and urban development construction sites; livestock grazing (trampling of larvae burrows); changes in saline stream morphology; and drainage of saline wetlands due to the incisement of associated streams.

The Salt Creek tiger beetle also is vulnerable to chance environmental or demographic events (*e.g.*, flood, drought, disease, and pesticides). As discussed in Factor E, extirpation of the Jack Sinn WMA population of Salt Creek tiger beetles occurred because of such an event. The combination of the two largest populations, their close proximity to each other, and restricted, specialized, and diminishing aquatic habitats, makes the Salt Creek tiger beetle highly susceptible to extirpation or extinction from its entire range. Since the two largest populations are located so close together, any chance environmental catastrophe or demographic event that causes a population to be extirpated would significantly increase the likelihood of the extinction of the Salt Creek tiger beetle.

In addition to the protections that would be afforded to the species by listing, the low population numbers and close proximity of the populations indicate that survival of the Salt Creek tiger beetle will likely depend upon establishing additional populations in suitable habitats at other locations through a captive rearing program, to the extent that random demographic events or environmental catastrophes no longer pose an immediate threat to the beetle. Since the number of Salt Creek tiger beetle populations has declined to just three, and these are subject to numerous immediate, ongoing, and future threats as described above, we have determined that the Salt Creek

tiger beetle is in danger of extinction throughout all of its range (section 3(6) of the Act) and, therefore, meets the Act's definition of endangered.

Critical Habitat

Critical habitat is defined in section 3 of the Act as: (i) The specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species, and (II) that may require special management considerations or protection, and (ii) specific areas outside the geographical area occupied by the species at the time it is listed in accordance with the provisions of section 4 of the Act, upon a determination by the Secretary of the Interior (Secretary) that such areas are essential for the conservation of the species. ''Conservation'' means the use of all methods and procedures needed to bring the species to the point at which listing under the Act is no longer necessary.

Section 4(a)(3) of the Act and implementing regulations (50 CFR 424.12) require that, to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time the species is determined to be endangered or threatened. In the near future we will publish a proposed rule to designate critical habitat for the Salt Creek tiger beetle. We expect to have a final decision on critical habitat when we make our final decision on listing in 2005.

Available Conservation Measures

Listing will require consultation with the Service under section 7 of the Act for any actions that may affect the Salt Creek tiger beetle on lands and for activities under Federal jurisdiction, State plans developed pursuant to section 6 of the Act, scientific investigations and efforts to enhance the propagation or survival of the Salt Creek tiger beetle pursuant to section 10(a)(1)(A) of the Act, and habitat conservation plans developed for non-Federal lands and activities pursuant to section 10(a)(1)(B) of the Act. In anticipation of the Service listing the Salt Creek tiger beetle, in a letter dated February 28, 2003, the NGPC notified the Service that it was planning to develop a Regional Habitat Conservation Plan (HCP) for the Salt Creek tiger beetle. As part of the HCP proposal, Lincoln, Lancaster County Board of Commissioners, Lower Platte South Natural Resources District, NDOR, UNL, and TNC all provided letters of support to NGPC. The NGPC identified the need for the Regional HCP to provide long-term protection of the Salt Creek tiger beetle and its habitats in the eastern Nebraska saline wetlands and associated streams and provide regulatory certainty for the citizens of Lancaster and Saunders Counties.

Section 7(a) of the Act requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(4) requires Federal agencies to confer informally with us on any action that is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat. If a species is subsequently listed, section 7(a)(2) of the Act requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with us.

Federal agency actions that may affect the Salt Creek tiger beetle and may require consultation with the Service include, but are not limited to, those within the jurisdiction of the Service, Corps, EPA, FHWA, Department of Housing and Urban Development (HUD), Federal Housing Administration (FHA), Federal Aviation Administration (FAA), Natural Resources Conservation Service (NRCS), and Farm Service Agency (FSA).

Federal agencies expected to be involved with the Salt Creek tiger beetle or its habitat include the Corps and EPA, due to their permit and enforcement authority under section 404 of the CWA. In addition, EPA will be involved through provisions of section 402 of the CWA. The FHWA has authority and funding responsibilities for highway construction projects that could have impacts on habitat both formerly and presently occupied by the Salt Creek tiger beetle. The HUD and FHA may provide grants for urban development, in particular, installation of utilities. Planned locations of such utility installation and associated development will likely be affected by listing of the Salt Creek tiger beetle. The FAA has jurisdiction over the Lincoln Municipal Airport, an area formerly occupied by the Salt Creek tiger beetle that may still provide suitable habitat near Capital Beach in northern Lincoln. The NRCS and FSA administer numerous new and reauthorized programs under The Farm Security and Rural Investment Act of 2004 (2004 Farm Bill). Although the majority of 2004 Farm Bill programs should have beneficial effects for the Salt Creek tiger beetle, certain conservation practices implemented under the various programs, which would alter the hydrological regime of eastern Nebraska saline wetlands and associated stream habitats, requires a determination of potential effects on the Salt Creek tiger beetle.

The Act sets forth a series of general prohibitions and exceptions that apply to all endangered wildlife species. The prohibitions make it illegal for any person subject to the jurisdiction of the United States to take, import or export, transport in interstate or foreign commerce in the course of commercial activity, or sell or offer for sale in interstate or foreign commerce any endangered species. Under section 3(19) of the Act, the term ''take'' includes harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or to attempt to engage in any such conduct. Pursuant to 50 CFR 17.3, the Service further defines ''harass'' as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to breeding, feeding, or sheltering. In addition, under this regulation, the Service defines ''harm'' to include significant habitat modification or destruction that results in the death or injury to listed species by significantly impairing behavior patterns such as breeding, feeding, or sheltering. It also is illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken illegally. Certain exceptions apply to agents of the Service and State conservation agencies. Permits may be issued to carry out otherwise prohibited activities involving listed species. Such permits are available for scientific purposes, to enhance the propagation or survival of the Salt Creek tiger beetle, or for incidental take in connection with otherwise lawful activities.

As published in the **Federal Register** on July 1, 1994, (59 FR 34272), it is the Service's policy, to identify, to the maximum extent practical at the time a species is listed, those activities that would or would not constitute a violation of section 9 of the Act. The intent of this policy is to increase public awareness of the effect of listing on proposed and ongoing activities within a species' range, and to assist the public

in identifying measures needed to protect the species. For the Salt Creek tiger beetle, activities that we believe are unlikely to result in a violation of section 9, provided these activities are carried out in accordance with any existing regulations and permit requirements, include:

(1) Possession, delivery, or movement, including interstate transport and import into or export from the United States, of dead Salt Creek tiger beetles that were collected prior to the date of publication of this proposed rule in the **Federal Register**;

(2) Any action authorized, funded, or carried out by a Federal agency that may affect the Salt Creek tiger beetle, when the action is conducted in accordance with the consultation requirements for listed species pursuant to section 7 of the Act;

(3) Any action carried out for scientific research or to enhance the propagation or survival of the Salt Creek tiger beetle that is conducted in accordance with the conditions of a section 10(a)(1)(A) permit; and,

(4) Any incidental take of the Salt Creek tiger beetle resulting from an otherwise lawful activity conducted in accordance with the conditions of an incidental take permit issued under section 10(a)(1)(B) of the Act.

Activities involving the Salt Creek tiger beetle (including all of its metamorphic or life stages) that the Service believes likely would be considered a violation of section 9, include, but are not limited to:

(1) Harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting, or attempting any of these activities, of the Salt Creek tiger beetle without a permit, except in accordance with applicable Federal and State fish and wildlife conservation laws and regulations;

(2) Possessing, selling, delivering, carrying, transporting, or shipping illegally taken Salt Creek tiger beetles or any body part thereof;

(3) Interstate and foreign commerce (commerce across State and international boundaries) and import/export (as discussed earlier in this section) without appropriate permits;

(4) Use of pesticides/herbicides that results in take of the Salt Creek tiger beetle;

(5) Release of biological control agents that attack any life stage of this taxon;

(6) Discharges or dumping of toxic chemicals, silts, or other pollutants into, or other alteration of the quality of waters supporting Salt Creek tiger beetles that results in take of the species; and,

(7) Activities (*e.g.,* land leveling/clearing, grading, discing, soil compaction, soil removal, dredging, excavation, deposition of dredged or fill material, erosion and deposition of sediment/soil, stream alteration or channelization, stream bank stabilization, alteration of stream or wetland hydrology and chemistry, grazing or trampling by livestock, minerals extraction or processing, residential, commercial, or industrial developments, utilities development, off-road vehicle use, road construction, or water development and impoundment) that result in the death or injury of eggs, larvae, sub-adult, or adult Salt Creek tiger beetles, or modify Salt Creek tiger beetle habitat in such a way that it kills or injures Salt Creek tiger beetles by adversely affecting their essential behavioral patterns including breeding, foraging, sheltering, or other life functions. Otherwise lawful activities that incidentally take Salt Creek tiger beetles, but have no Federal nexus, will require a permit under section 10(a)(1)(B) of the Act.

Questions regarding whether specific activities will constitute a violation of section 9 should be directed to the Field Supervisor of the Ecological Services Field Office, Grand Island, Nebraska (*see* **ADDRESSES**).

We may issue permits to carry out otherwise prohibited activities involving endangered wildlife species under certain circumstances. Regulations governing permits are at 50 CFR 17.22. For endangered species, you may obtain permits for scientific purposes, to enhance the propagation or survival of the species, and for incidental take in connection with otherwise lawful activities. You may request copies of the regulations regarding listed wildlife from, and address questions about prohibitions and permits to, the U.S. Fish and Wildlife Service, Ecological Services, Endangered Species Permits, P.O. Box 25486, Denver Federal Center, Denver, Colorado 80225–0486 (telephone: 303/236–7400; facsimile: 303/236–0027).

Public Comments Solicited

We intend that any final action resulting from this proposal will be as accurate and as effective as possible. Therefore, we request comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested party concerning this proposed rule.

If you wish to comment, you may submit your comments and materials concerning this proposal by any one of several methods, as listed above in **ADDRESSES.** If you submit comments by e-mail, please submit them as an ASCII file format and avoid the use of special characters and encryption. Please include Attn: [RIN 1018–AE59]'' and your name and return address in your e-mail message. If you do not receive a confirmation from the system that we have received your e-mail message, contact us directly by calling our Nebraska Field Office (telephone: 308/382–6468). Please note that this e-mail address will be closed out at the termination of the public comment period.

Our practice is to make comments, including names and home addresses of respondents, available for public review during regular business hours. Individual respondents may request that we withhold their home address from the rulemaking record, which we will honor to the extent allowable by law. There also may be circumstances in which we would withhold from the rulemaking– record a respondent's identity, as allowable by law. If you wish us to withhold your name and/or address, you must state this prominently at the beginning of your comment. Anonymous comments will not be considered. We will make all submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public inspection in their entirety.

We will take into consideration your comments and any additional information received on this taxon when making a final determination regarding this proposal. The final determination may differ from this proposal based upon the information we receive.

Peer Review

In accordance with our policy published on July 1, 1994 (59 FR 34270), we will solicit the expert opinions of at least three appropriate and independent specialists for peer review of this proposed rule. The purpose of such review is to ensure that listing decisions are based on scientifically sound data, assumptions, and analyses. We will send these peer reviewers copies of this proposed rule immediately following publication in the **Federal Register**. We will invite these peer reviewers to comment, during the public comment period, on the specific assumptions and conclusions regarding the proposed listing of this species. We will summarize the opinions of these reviewers in the final decision document, and we will consider their

input as part of our process of making a final decision on the proposal.

Public Hearings

The Act provides for one or more public hearings on this proposal, if requested. You may request a public hearing on this proposed rule. Your request for a hearing must be made in writing and filed at least 15 days prior to the close of the public comment period. Address your request to the Supervisor (*see* **ADDRESSES** section). We will schedule at least one public hearing on this proposal, if requested, and announce the date, time, and place of any hearings in the **Federal Register** and local newspapers at least 15 days prior to the first hearing.

Clarity of the Rule

Executive Order 12866 requires agencies to write regulations that are easy to understand. We invite your comments on how to make this proposal easier to understand including answers to questions such as the following: (1) Is the discussion in the **SUPPLEMENTARY INFORMATION** section of the preamble helpful in understanding the proposal? (2) Does the proposal contain technical language or jargon that interferes with its clarity? (3) Does the format of the proposal (groupings and order of sections, use of headings, paragraphing, etc.) aid or reduce its clarity? What else could we do to make the proposal easier to understand? Send a copy of any comments that concern how we could make this rule easier to understand to: Office of Regulatory Affairs, Department of the Interior, Room 7229, 1849 C Street, NW., Washington, DC 20240. You may also e-mail the comments to this address: *Exsec@ios.doi.gov.*

Executive Order 13211

On May 18, 2001, the President issued Executive Order 13211 on regulations that significantly affect energy supply, distribution, and use. Executive Order 13211 requires agencies to prepare Statements of Energy Effects when undertaking certain actions. This rule is not expected to significantly affect energy supplies, distribution, or use. Therefore, this action is not a significant energy action and no Statement of Energy Effects is required.

National Environmental Policy Act

We have determined that an environmental assessment and environmental impact statement, as defined under the authority of NEPA, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Act, as amended. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244).

Paperwork Reduction Act

This rule does not contain any new collections of information other than those already approved under the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*) and assigned Office of Management and Budget clearance number 1018–0094, which expires on July 31, 2004. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid control number. For additional information concerning permit and associated requirements for endangered species, see 50 CFR 17.21 and 17.22.

References Cited

A complete list of references cited in this rule is available upon request from the Field Supervisor, U.S. Fish and Wildlife Service, Grand Island, Nebraska (*see* **ADDRESSES**).

Author

The primary authors of this proposed rule are John F. Cochnar and Robert R. Harms, U.S. Fish and Wildlife Service, Grand Island, Nebraska (*see* **ADDRESSES**).

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and record keeping requirements, Transportation.

Regulation Promulgation

Accordingly, we propose to amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as follows:

PART 17—[AMENDED]

1. The authority citation for part 17 continues to read as follows:

Authority: 16 U.S.C. 1361–1407; 16 U.S.C. 1531–1544; 16 U.S.C. 4201–4245; Pub. L. 99–625, 100 Stat. 3500; unless otherwise noted.

2. In § 17.11(h), add the following, in alphabetical order under INSECTS, to the List of Endangered and Threatened Wildlife:

§ 17.11 Endangered and threatened wildlife.

* * * * *

(h) * * *

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
*	*	*	*	*	*		*
INSECTS							
*	*	*	*	*	*		*
Beetle, Salt Creek tiger.	*Cicindela nevadica lincolniana.*	U.S.A. (NE)	NA	E	NA	NA	
*	*	*	*	*	*		*

Dated: January 10, 2005.

Marshall P. Jones,

Acting Director, U. S. Fish and Wildlife Service.

[FR Doc. 05–1669 Filed 1–31–05; 8:45 am]

BILLING CODE 4310–55–P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018–AT95

Endangered and Threatened Wildlife and Plants; Exclusion of U.S. Captive-Bred Scimitar-Horned Oryx, Addax, and Dama Gazelle From Certain Prohibitions

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule; notice of availability of a draft environmental assessment.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), propose to amend the regulations promulgated under the Endangered Species Act (ESA or Act) (16 U.S.C. 1531 *et seq.*) to add a new subsection to govern certain activities with U.S. captive-bred populations of three antelope species that have been proposed for listing as endangered, should they become listed. These specimens are the scimitar-horned oryx (*Oryx dammah*), addax (*Addax nasomaculatus*), and dama gazelle (*Gazella dama*). For U.S. captive-bred live specimens, embryos, gametes, and sport-hunted trophies of these three species, this proposed rule would authorize certain otherwise prohibited activities that enhance the propagation or survival of the species. International trade in specimens of these species will continue to require permits under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). We have prepared a draft Environmental Assessment of the impact of this proposed rule under regulations implementing the National Environmental Policy Act of 1969 (NEPA). The Service seeks data and comments from the public on this proposed rule and the draft Environmental Assessment.

DATES: Written comments on the proposed rule and the draft Environmental Assessment must be submitted by April 4, 2005.

ADDRESSES: Submit any comments and information by mail to the Chief, Division of Scientific Authority, U.S. Fish and Wildlife Service, 4401 N. Fairfax Drive, Room 750, Arlington, VA 22203; or by fax to 703–358–2276; or by e-mail to *ScientificAuthority@fws.gov.* Comments and supporting information will be available for public inspection, by appointment, from 8 a.m. to 4 p.m. at the above address. You may also obtain copies of the November 5, 1991, proposed rule; July 24, 2003, proposed rule and notice to re-open the comment period; November 26, 2003, proposed rule and notice to re-open the comment period (68 FR 66395); and a copy of the draft Environmental Assessment from the above address.

SUPPLEMENTARY INFORMATION:

Background

Historically, the scimitar-horned oryx (*Oryx dammah*), addax (*Addax nasomaculatus*), and dama gazelle (*Gazella dama*) occupied the same general region of North Africa. The primary reason for the decline of all three antelope species in their native range is desertification, coupled with severe droughts, which has dramatically reduced available habitat. The growth of permanent farming in their native range has brought additional pressures, such as human habitat disturbance and competition from domestic livestock, which have restricted these antelopes to marginal habitat. Additional pressures from the civil wars in Chad and the Sudan have resulted in increased military activity, construction, and uncontrolled hunting.

Of the three antelope species, the scimitar-horned oryx is the most threatened with extinction. By the mid-1980s, it was estimated that only a few hundred were left in the wild, with the only viable populations known to be in Chad. However, no sightings of this species in the wild have been reported since the late 1980s, and the *2003 Red List of Threatened Species* shows that the status of the scimitar-horned oryx is ''extinct in the wild'' (World Conservation Union [IUCN] 2003). Captive-bred specimens of this antelope have been placed into large fenced areas for breeding in Tunisia. Once animals are reintroduced, continuous natural breeding is anticipated so that wild populations will be re-established.

It is believed that the addax was extirpated from Tunisia during the 1930s, and the last animals were killed in Libya and Algeria in 1966 and 1970, respectively. Remnant populations may still exist in the remote desert areas of Chad, Niger, and Mali, with occasional movements into Libya and Algeria during times of good rainfall. In the IUCN/SSC Antelope Specialist Group's *Global Survey of Antelopes,* the addax is considered to be ''regionally extinct'' (Mallon and Kingswood 2001). The addax is listed as critically endangered in the *2003 Red List of Threatened Species* and probably numbers fewer than 250 in the wild (IUCN 2003).

The dama gazelle is able to utilize both semi-desert and desert habitats, and is smaller than the scimitar-horned oryx or addax. Of the three antelope species, the dama gazelle is the least susceptible to pressures from humans and livestock. The original source of its decline was uncontrolled hunting; however, habitat loss through human settlement and livestock grazing, in addition to civil unrest, has more recently contributed to the decline. It is estimated that only small numbers survive in most of the eight countries within its historical range. The dama gazelle has declined rapidly over the last 20 years, with recent estimates of fewer than 700 in the wild. Noble (2003) estimates that the wild population of addra gazelle (*G. dama ruficollis*) is less than 200 specimens, the wild population of dama gazelle (*G. dama dama*) is about 500 specimens, and the mhorr gazelle (*G. dama mhorr*) is extinct in the wild. It was previously extinct in Senegal, but has since been reintroduced, and in 1997, at least 25 animals existed there as part of a semi-captive breeding program (IUCN 2003). The IUCN lists all subspecies of dama gazelles as endangered.

For further information regarding background biological information, factors affecting the species, and conservation measures available to scimitar-horned oryx, addax, and dama gazelle, please refer to the November 5, 1991, and July 24, 2003, **Federal Register** documents discussed below.

Previous Federal Action

A proposed rule to list all three species as endangered under 50 CFR 17.11(h) was published on November 5, 1991 (56 FR 56491). We re-opened the comment period to request current information and comments from the public regarding the proposed rule on July 24, 2003 (68 FR 43706), and November 26, 2003 (68 FR 66395). Stakeholders and interested parties, including the public, governmental agencies, the scientific community, industry, and the range countries of the species, were requested to submit comments or information. We received 32 responses by the end of the comment period, including multiple comments from some stakeholders. In accordance with the Interagency Cooperative Policy for Peer Review in Endangered Species Act Activities published on July 1, 1994 (59 FR 34270), we selected three appropriate independent specialists to