Bureau, (202) 418–2180.

SUMMARY: We, the U.S. Fish and Wildlife Service, will reintroduce whooping cranes (Grus americano) into historic habitat in the eastern United States with the intent to establish a migratory flock that would summer and breed in Wisconsin, and winter in west-central Florida. We are designating this reintroduced population as a nonessential experimental population (NEP) according to section 10(j) of the Endangered Species Act of 1973 (Act), as amended. The geographic boundary of the NEP includes the States of Alabama, Arkansas, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Missouri, North Carolina, Ohio, South Carolina, Tennessee, Virginia, West Virginia, and Wisconsin.

The objectives of the reintroduction are: To advance recovery of the endangered whooping crane; to further assess the suitability of Wisconsin and west-central Florida as whooping crane habitat; and to evaluate the merit of releasing captive-reared whooping cranes, conditioned for wild release, as a technique for establishing a self-sustaining, migratory population. The only natural wild population of whooping cranes remains vulnerable to extirpation through a natural catastrophe or contaminant spill, due primarily to its limited wintering distribution along the Texas gulf coast. If successful, this action will result in the establishment of an additional self-sustaining population, and contribute towards the recovery of the species. No conflicts are envisioned between the whooping crane’s reintroduction and any existing or anticipated Federal, State, Tribal, local government, or private actions such as agricultural practices, pesticide application, water management, construction, recreation, trapping, or hunting.

DATES: The effective date of this rule is June 26, 2001.

ADDRESSES: The complete administrative file for this rule is available for inspection, by appointment, during normal business hours at the Green Bay Field Office, U.S. Fish and Wildlife Service, 1015 Challenger Court, Green Bay, Wisconsin 54311.

FOR FURTHER INFORMATION CONTACT: Janet M. Smith at the above address (telephone 920-465-7440).

SUPPLEMENTARY INFORMATION:

Background

1. Legislative

Congress made significant changes to the Endangered Species Act of 1973, as amended (Act), with the addition of section 10(j), which provides for the designation of specific reintroduced populations of listed species as “experimental populations.” Previously, we had authority to reintroduce populations into unoccupied portions of a listed species’ historical range when doing so would foster the recovery of the species. However, local citizens often opposed these reintroductions because they were concerned about the placement of restrictions and prohibitions on Federal and private activities. Under section 10(j), the Secretary of the Interior can designate reintroduced populations established outside the species’ current range, but within its historical range, as “experimental.”

Under the Act, species listed as endangered or threatened are afforded protection primarily through the prohibitions of section 9 and the requirements of section 7. Section 9 of the Act prohibits the take of a listed species. “Take” is defined by the Act as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct. Section 7 of the Act outlines the procedures for Federal interagency cooperation to conserve federally listed species and protect designated critical habitats. It mandates all Federal agencies to determine how to use their existing authorities to further the purposes of the Act to aid in recovering listed species. It also states that Federal agencies will, in consultation with the Service, insure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. Section 7 of the Act does not affect activities undertaken on private lands unless they are authorized, funded, or carried out by a Federal agency.

Section 10(j) is designed to increase our flexibility in managing an experimental population by allowing us to treat the population as threatened, regardless of the species’ designation elsewhere in its range. Threatened designation gives us more discretion in developing and implementing management programs and special regulations for a population, such as this rule, and allows us to develop any regulations we consider necessary to provide for the conservation of a threatened species. In situations where we have experimental populations, certain section 9 prohibitions that apply to threatened species may no longer apply, and the special rules contain the prohibitions and exceptions necessary
and appropriate to conserve that species.

Based on the best available information, we must determine whether experimental populations are “essential,” or “nonessential,” to the continued existence of the species. An experimental population that is essential to the survival of the species is treated as a threatened species. An experimental population that is nonessential to the survival of the species is also treated as a threatened species. However, for section 7 interagency cooperation purposes, if the NEP is located outside of a National Wildlife Refuge or National Park, it is treated as a species proposed for listing. Regulations for NEPs may be developed to be more compatible with routine human activities in the reintroduction area.

For the purposes of section 7 of the Act, in situations where there is an NEP located within a National Wildlife Refuge or National Park, the individuals of the NEP as threatened and section 7(a)(1) and the consultation requirements of section 7(a)(2) of the Act would apply. Section 7(a)(1) requires all Federal agencies to use their authorities to conserve listed species. Section 7(a)(2) requires that Federal agencies consult with the Service before authorizing, funding, or carrying out any activity that would likely jeopardize the continued existence of a listed species or adversely modify its critical habitat. When NEPs are located outside a National Wildlife Refuge or National Park, only two provisions of section 7 would apply: Section 7(a)(1) and section 7(a)(4). Federal agencies are not required to consult with us under section 7(a)(2). Section 7(a)(4) requires Federal agencies to informally confer with the Service on actions that are likely to jeopardize the continued existence of a species proposed for listing. However, since we determined that the NEP is not essential to the continued existence of the species, it is very unlikely that we would ever determine jeopardy for a project impacting a species within an NEP. Individuals used to establish an experimental population may come from a donor population, provided their removal is not likely to jeopardize the continued existence of the species, and appropriate permits are issued in accordance with our regulations (50 CFR 17.22) prior to their removal.

2. Biological

The whooping crane (Grus americana) was listed as an endangered species on March 11, 1967 (32 FR 4001). The whooping crane is classified in the family Gruidae, Order Gruidiformes. It is the tallest bird in North America; males approach 1.5 meters (5 feet) tall. In captivity, adult males average 7.3 kilograms (16 pounds) and females 6.4 kg (14 lbs). Adult plumage is snowy white except for black primary feathers, black or grayish alulae, sparse black bristy feathers on the earlobe (red) crown and malar region (side of the head), and a dark gray-black wedge-shaped patch on the nape. The bill is dark olive-gray, which becomes lighter during the breeding season. The iris of the eye is yellow; legs and feet are gray-black.

Adults are potentially long-lived. Current estimates suggest a maximum longevity in the wild of 22 to 24 years (Binkley and Miller 1980). Captive individuals are known to have survived 27 to 40 years (McNulty 1966, Moody 1931). Mating is characterized by monogamous lifelong pair bonds. Individuals re-mate following death of their mate. Fertile eggs are occasionally produced at age 3 years but more typically at age 4. Experienced pairs may not breed every year, especially when habitat conditions are poor. Whooping cranes ordinarily lay two eggs. They will renest if their first clutch is destroyed or lost before mid-incubation (Erickson and Derrickson 1981, Kuyt 1981). Although two eggs are laid, whooping crane pairs infrequently fledge two chicks. Only about one of every four hatched chicks survives to reach the wintering grounds (U.S. Fish and Wildlife Service 1986a). Whooping cranes are nonmigratory. They first appeared in fossil records from the early Pleistocene (Allen 1952) and probably was most abundant during that 2-million-year epoch. They once occurred from the Arctic Sea to the high plateau of central Mexico, and from Utah east to New Jersey, South Carolina, and Florida (Allen 1952, Nesbitt 1982). In the mid-19th century, the principal breeding range extended from central Illinois northwest through northern Iowa, western Minnesota, northern North Dakota, southern Manitoba, and Saskatchewan to the vicinity of Edmonton, Alberta. A nonmigratory breeding population existed in southwestern Louisiana until the early 1900s (Allen 1952, Gomez 1992).

Through the use of two independent techniques of population estimation, Banks (1978) derived estimates of 500 to 700 whooping cranes in 1870. By 1941, the migratory population contained only 16 individuals. The whooping crane population decline in the 19th and early 20th century was a consequence of hunting and specimen collection, human disturbance, and conversion of the primary nesting habitat to hay, pastureland, and grain production (Allen 1952, Erickson and Derrickson 1981).

Allen (1952) described several historical migration routes. One of the most important led from the principal nesting grounds in Iowa, Illinois, Minnesota, North Dakota, and Manitoba to coastal Louisiana. Another went from Texas and the Rio Grande Delta region of Mexico northward to nesting grounds in North Dakota and the Canadian Provinces. A route through west Texas into Mexico probably followed the route still used by sandhill cranes (Grus canadensis). These whooping cranes would have wintered in the interior tablelands of western Texas and the high plateau of central Mexico.

Another migration route crossed the Appalachians to the Atlantic Coast. These birds apparently nested in the Hudson Bay area of Canada. Coastal areas of New Jersey, South Carolina, and river deltas farther south were the wintering grounds. Surprisingly, specimen records or sighting reports for some eastern locations are Alabama, 1899; Arkansas, 1889; Florida, 1927 or 1928; Georgia, 1885; Illinois, 1891; Indiana, 1881; Kentucky, 1886; Manitoba, 1948; Michigan, 1882; Minnesota, 1917; Mississippi, 1902; Missouri, 1884; New Jersey, 1857; Ohio, 1902; Ontario, 1895; South Carolina, 1850; and Wisconsin, 1878 (Allen 1952, Burleigh 1944, Hallman 1965, Sprunt and Chamberlain 1949).

Atlantic coast locations used by whooping cranes included the Cape May area and Beesley’s Point at Great Egg Bay in New Jersey; the Waccamaw River in South Carolina; the deltas of the Savannah and Altamaha Rivers, and St. Simon’s Island in Georgia; and the St. Augustine area of Florida. Gulf coast locations include Mobile Bay, Alabama; Bay St. Louis in Mississippi; and numerous records from southwestern Louisiana, where the last bird was captured in 1949. Coastal Louisiana contained both a nonmigratory flock and wintering migrants (Allen 1952, Gomez 1992).

There is evidence to suggest that whooping cranes occurred in Florida, perhaps well into the 20th century (Nesbitt 1982). Nesbitt described various sighting reports including one by O. E. Baynard, a respected field naturalist, who stated that the last flock of whooping cranes (14 birds) he saw in Florida was in 1911 near Micanopy, southern Alachua County. Two whooping cranes were reported east of the Kissimmee River on January 19, 1936, and a whooping crane was shot (and photographed) north of St.
Augustine, St. Johns County, in 1927 or 1928 (Nesbitt 1982).

Records from more interior areas of the Southeast include the Montgomery, Alabama, area; Crocketts Bluff on the White River, and near Corning in Arkansas; in Missouri at sites in Jackson County near Kansas City, in Lawrence County near Corning, southwest of Springfield in Audrain County, and near St Louis; and in Kentucky near Louisville and Hickman. It is unknown whether these records represent wintering locations, remnants of a nonmigratory population, or wandering birds.

The historic breeding range of the whooping crane in the United States included Illinois, Iowa, North Dakota, and Minnesota, with the largest number of confirmed nesting records in Iowa (Allen 1952). There are at least five reliable reports from Wisconsin; although there are no confirmed records of nesting in Wisconsin, there is a nesting record from Dubuque County, Iowa (Allen 1952), which is adjacent to Grant County, Wisconsin.

Whooping cranes currently exist in three wild populations and at six captive locations. The only self-sustaining natural wild population nests in the Northwest Territories and adjacent areas of Alberta, Canada, primarily within the boundaries of Wood Buffalo National Park. These birds winter along the central Texas Gulf of Mexico coast at Aransas National Wildlife Refuge and adjacent areas. Fifty pairs from this population nested in 2000, and 176 adult whooping cranes were reported in spring 2001. The flock recovered from a population low of 15 or 16 birds in 1941. This population is hereafter referred to as the Aransas/Wood Buffalo National Park population (AWP).

The second largest wild population is found in the Kissimmee Prairie area of central Florida. We designated this population as an experimental nonessential population in January 1993 (58 FR 5647–5658). Since 1993, 228 isolation-reared whooping cranes have been released in this area, in an ongoing reintroduction effort to establish a nonmigratory flock. As of February 2001, there are 86 surviving individuals in the project area. Birds in this population have reached breeding age within the past several years. During the 2000 nesting season, a total of 15 pairs defended territories, 3 pairs laid eggs, and 2 of these pairs failed prior to hatching. The remaining pair hatched both eggs, but no chicks survived to fledging.

The third wild flock consists of two remaining individuals from an effort to establish a migratory population in the Rocky Mountains through cross-fostering with greater sandhill cranes (Grus canadensis tabida) (Drewien and Bizeau 1977, Bizeau et al. 1987), and an experiment in 1997 when four whooping cranes were led behind an ultralight aircraft between Idaho and New Mexico (Clegg et al. 1997). The cross-fostering project began in 1975 and has failed to produce any chicks or mated pairs (Ellis et al. 1992a). The term, “cross-fostering” refers to the foster rearing of the whooping crane chicks by another species, the sandhill crane. The cross-fostered whooping cranes have never bred with other whooping cranes. The females in that group may be improperly sexually imprinted on male sandhill cranes. As a consequence of the lack of breeding, and the inordinately high mortality experienced by this population, the project was phased out.

The whooping crane captive breeding program, initiated in 1967, has been very successful. The Service and the Canadian Wildlife Service (CWS) began taking eggs from the nests of the wild population in 1967, and raising the resulting young in captivity. Between 1967 and 1993, 181 eggs were taken from the wild to captive sites. Birds raised from those eggs form the nucleus of the captive flock (USFWS 1994). The captive population is now located at three primary locations: Patuxent Wildlife Research Center in Laurel, Maryland; the International Crane Foundation (ICF) in Baraboo, Wisconsin; and the Calgary Zoo in Alberta, Canada. An additional captive population was started in 1998 at the Audubon Species Survival Center in New Orleans, Louisiana.

The total captive population as of February 2001 stood at 120 birds, with 109 birds present in the 3 primary captive breeding centers, and an additional 11 birds present at 3 other locations. Six whooping cranes are located at the San Antonio Zoological Gardens, Texas; four at the Audubon Institute, New Orleans, Louisiana, and one at the Lowery Park Zoo in Tampa, Florida.

Whooping cranes adhere to ancestral breeding areas, migratory routes, and wintering grounds, leaving little possibility of pioneering into new regions. The only wild, self-sustaining breeding population can be expected to continue utilizing its current nesting location with little likelihood of expansion, except on a local geographic scale. This population remains vulnerable to destruction through a natural catastrophe (hurricane), a red tide outbreak, or a contaminant spill, due primarily to its limited wintering distribution along the intracoastal waterway of the Texas coast. The Gulf Intracoastal Water Way (GIWW) experiences some of the heaviest barge traffic of any waterway in the world. Much of the shipping tonnage is petrochemical products. An accidental spill could destroy whooping cranes and/or their food resources. With the only wild breeding population so vulnerable, it is urgent that additional wild self-sustaining populations be established as soon as practical.

3. Recovery Efforts

The first recovery plan developed by the Whooping Crane Recovery Team (Team) was approved January 23, 1980. The first revision was approved on December 23, 1986, and the second revision on February 11, 1994. The short-term goal is to downlist the whooping crane from endangered to threatened. The criteria for attaining this downlisting goal is achieving a population level of 40 nesting pairs in the AWP and establishing 2 additional, separate, and self-sustaining populations consisting of 25 nesting pairs each. The recovery plan recommends these goals should be attained for 10 consecutive years before the species is reclassified to threatened. These new populations may be migratory or nonmigratory.

In 1985, the Director-General of the Canadian Wildlife Service and the Director of the U.S. Fish and Wildlife Service signed a memorandum of understanding (MOU) entitled “Conservation of the Whooping Crane Related to Coordinated Management Activities.” The MOU was revised and signed again in 1990 and 1995. It discusses disposition of birds and eggs, postmortem analysis, population restoration and objectives, new population sites, international management, recovery plans, consultation and coordination. All captive whooping cranes and their future progeny are jointly owned by the U.S. Fish and Wildlife Service and the Canadian Wildlife Service. Consequently, both nations are involved in recovery decisions.

4. Reintroduction Sites

In early 1984, pursuant to the recovery plan goals and the recommendation of the Team, potential whooping crane release areas were selected in the eastern United States. At that time the prognosis was favorable for successfully establishing a western population by use of cross-fostering technique. Consequently, key considerations in selecting areas to
evaluate for the eastern release were (1) large areas of potentially suitable wetland habitat; (2) a healthy sandhill crane population sufficient to support recovery using the cross-fostering technique; (3) public and State agency support for such a recovery effort in the release locale; (4) low-to-moderate levels of avian disease pathogens, environmental contaminants, and powerlines; (5) the potential of the habitats to simultaneously support whooping cranes and sandhill cranes; and (6) a reasonable certainty that the new population would not have contact with the AWP.

The areas identified were the Upper Peninsula of Michigan and adjacent areas of Ontario, the Okefenokee Swamp in southern Georgia, and three sites in Florida. The Michigan site was projected to eventually support a migratory population. The Georgia and three Florida sites would each support a nonmigratory population. The Michigan/Ontario wetlands are occupied by greater sandhill cranes that winter in Florida and the Okefenokee Swamp of Georgia. The wetlands in Georgia and Florida are occupied by the nonmigratory Florida sandhill crane (Grus canadensis pratensis) and in winter by greater sandhill cranes, which nest primarily in southern Ontario, Michigan, eastern Minnesota, and Wisconsin. Three-year studies were initiated at each site in October 1984 to evaluate their respective suitabilities.

Results of the studies were presented in written final reports to the Whooping Crane Recovery Team in fall 1987 (Bennett and Bennett 1987, Bishop 1988, McMillen 1987, Nesbitt 1988) and in verbal reports in February 1988. By 1988, the Team recognized that cross-fostering was not working to establish a migratory population in the West. The possibility of inappropriate sexual imprinting associated with cross-fostering, and the lack of a proven technique for establishing a migratory flock influenced the Team to favor establishing a nonmigratory flock. A nonmigratory population has features that make it easier to achieve success: (1) Released birds do not face the hazards of migration (over one half of the losses of fledged, cross-fostered birds occurred during migration); and (2) released birds inhabit a more geographically limited area year-round than do migratory cranes, which increases the opportunity for the cranes to find a compatible mate.

Studies of whooping cranes (Drewien and Bizeau 1977) and greater sandhill cranes (Bennett and Bennett 1987) have shown that, for these species, knowing when and where to migrate is learned rather than innate behavior. Captive-reared whooping cranes released in Florida were expected to develop a sedentary population.

In summer 1988, the Team selected Kissimmee Prairie in central Florida as the area most suitable for the next experiment to establish a self-sustaining population. Since 1993, captive-reared birds have been released annually in an attempt to establish a resident, nonmigratory flock. We expect releases to continue for the foreseeable future. In 1996, the Team decided to investigate the potential for another reintroduction site in the eastern United States, with the intent of establishing an additional migratory population.

Following a study of potential wintering sites by Dr. John Cannon (Cannon 1998), the Team selected the Chassahowitzka NWR /St. Martin’s Marsh Aquatic Preserve as the top wintering site for a new migratory flock of whooping cranes. Based on concerns that a reintroduced population in Saskatchewan and Florida might mix with the wild AWP, the Team requested that Dr. Cannon see if suitable wintering sites were present in Wisconsin, an area well east of the AWP migration corridor. The location of the release area was chosen to fulfill the criteria set forth by the Whooping Crane Recovery Team, that is, to establish a new migratory flock in a location where there would be a minimal chance of contact with the existing natural wild flock. This criterion was established out of concern for adverse impacts to the wild flock due to exchange of disease or undesirable behavior between any newly established migratory flock and the existing wild flock.

After preliminary data were gathered, a decision was made in 1998 to focus on three potential release sites in Wisconsin: Crex Meadows State Wildlife Management Area (WMA), central Wisconsin including Necedah NWR and several Wisconsin WMAs, and Horicon NWR.

Detailed analysis was presented at the Team’s meeting in September 1999 (Cannon 1999), and the Team then recommended that releases be started in central Wisconsin. This recommendation was based on the presence of suitable habitat and food resources, favorable local attitudes, and geographic separation from the AWP population. The recommendation also was contingent upon the results of studies to further clarify the level of risk to cranes at this location from two separate sources. These were risks from local consumption of agricultural chemicals, and the disturbance caused by aircraft overflights associated with operations at the nearby Hardwood Air-to-Surface Bombing Range. The two issues were investigated to the satisfaction of the Team with results indicating a minimal likelihood of occurrence for both concerns, although the Patuxent Wildlife Research Center may conduct noise impact studies on whooping crane chicks. The wintering site is the Chassahowitzka NWR in Florida.

The objectives of the reintroduction are: (1) To implement a primary recovery action for a federally listed endangered species; (2) to further assess the suitability of Wisconsin and the Gulf coast of Florida as whooping crane habitat; and (3) to evaluate the suitability of releasing captive-reared whooping cranes, conditioned for wild release, as a technique for establishing a self-sustaining, migratory population. Information on survival of released birds, movements, behavior, causes of losses, reproductive success, and other data will be gathered throughout the project. Project progress will be evaluated annually.

The likelihood of the releases resulting in a self-sustaining population is believed to be good. Whooping cranes historically occurred in the Upper Midwest, and the release area is similar to that which supported nesting whooping cranes in adjacent Illinois and Iowa. The minimum goal for numbers of cranes to be released annually is based on the research of Griffith et al. (1989). As captive production increases, annual release numbers will be increased dependent upon availability. For a long-lived species like the whooping crane, continuing releases for a number of years increases the likelihood of reaching a population level that can sustain fluctuating environmental conditions. The rearing and release techniques have proven successful in building the wild population of the endangered Mississippi sandhill cranes.

It is expected that whooping cranes released in Wisconsin and wintering in Florida will eventually interact with the existing flock present in the Kissimmee Prairie area. Whooping cranes led to Chassahowitzka NWR behind the ultralight aircraft may choose not to stay in the coastal saltmarsh when released, or may return to the Kissimmee Prairie the following winter and interact with the nonmigratory flock. The nonmigratory population is prone to wander considerable distances, and has been observed outside of the area where introduction efforts are under way (Marty Folk, pers. comm.). Some introgression may have occurred during winter between migratory and nonmigratory cranes is
expected to occur. This raises the possibility that individual birds of each of the two flocks may acquire either migratory or nonmigratory behavior through association, especially if pairs form between members of the different populations. However, research with sandhill cranes in Florida has shown that migratory and nonmigratory populations mix during winter and yet maintain their own migratory and nonmigratory behaviors. The same would be expected with whooping cranes. In light of this knowledge, we expect that any shift in individual migratory behavior would be limited. Therefore, we expect that, even though individuals of the two populations may associate, the two flocks will remain distinct and each will represent a separate population as specified in the Whooping Crane Recovery Plan (USFWS 1994). As such, while the levels of protection will be the same, the two populations may be managed differently.

We may select additional release sites later during the project life to increase potential breeding range. Multiple release areas may increase the opportunity for successful pairing because females tend to disperse from their natal site when searching for a mate. Males, however, have a stronger homing tendency towards establishing their nesting territory near the natal area (Drewien et al. 1989). When captive-reared cranes are released at a wild location, the birds may view the release site as a natal area. If they do, females would disperse away from the release area in their search for a mate. In such a circumstance it may be advantageous to have several release sites to provide a broader distribution of territorial males. It is impossible, however, to predict which areas will be chosen by the birds. To allow for adapting release techniques that will maximize the chances for success, some flexibility will likely be necessary in the future. Therefore, it is possible that we will pursue future releases at other sites, which we may select based upon dispersal patterns observed in the cranes from initial releases. Several areas previously examined for suitability that may be candidates for future releases (Cannon 1999) include Horicon NWR and Crex Meadows State WMA in Wisconsin, and Seney NWR in the Upper Peninsula of Michigan.

This project has been coordinated with potentially affected State and Federal agencies, private landowners, and the general public. The Wisconsin Department of Natural Resources (DNR) manages several wildlife management areas in the primary release area; the Wisconsin DNR will be actively involved as a cooperative in releases, and has actively endorsed the project. The Canadian Wildlife Service, a partner with the U.S. Fish and Wildlife Service as noted in the Memorandum of Understanding, has approved the project. The project also was coordinated with both of the State of Florida’s natural resource management agencies, particularly regarding migration and wintering aspects of the project. The Florida Fish and Wildlife Conservation Commission (FWCC), the State agency with responsibility for management of fish and wildlife resources, has expressed its support of the project. The Florida Department of Environmental Protection (DEP) is charged with environmental protection and administration of Florida’s public conservation and recreation lands. We coordinated with the Florida DEP and received approval for use of the St. Martin’s Marsh Aquatic Preserve during the overwintering phase of the sandhill crane migration experiment conducted in 2000–2001. We do not anticipate further involvement by the Florida DEP for the whooping crane reintroduction. If use of State lands becomes necessary in the future, we will coordinate further to obtain additional approvals.

We also have coordinated with the Department of Defense (Hardwood Air-to-Surface Bombing Range), which conducts training flights in the vicinity of Necedah NWR, and other landowners near the release site to advise them of the proposed whooping crane reintroduction and to obtain their input. All have been cooperative and generally supportive of the project.

5. Reintroduction Protocol

We will conduct an initial release of 10 to 25 juvenile, captive-reared whooping cranes in the central Wisconsin area. These birds will be captive-reared to 20–40 days of age at Patuxent Wildlife Research Center in Laurel, Maryland, the International Crane Foundation in Baraboo, Wisconsin, and at other captive-rearing facilities. They will then be transferred to facilities at the Wisconsin release site, and conditioned for wild release to increase post-release survival (Ellis et al. 1992b, Zwank and Wilson 1987) and adaptability to wild foods. The cranes will be radio-tagged at release and monitored to discern movements, habitat use, other behavior, and survival. Whooping cranes would be released in the fall. The primary technique associated with migration will be the use of ultralight aircraft to the wintering site in Florida. If results of this initial release are favorable, releases will be continued with the goal of releasing up to 30 whooping cranes annually for about 10 years. Total numbers available for release will be dependent upon production at captive propagation facilities and the future need for additional releases into the Kissimmee flock.

Since the migration route is a learned rather than an innate behavior, captive-reared whooping cranes released in Wisconsin, or other northern areas of suitable habitat, will need to be taught where to migrate in order to develop the habit of migrating to a suitable wintering area. Captive-reared cranes are conditioned for wild release by being reared in isolation from humans; by use of conspecific role models (puppets), and by exercising with animal care personnel in crane costumes to avoid imprinting on humans (Ellis et al. 1992a, Horwich 1989, Urbanek and Bookhout 1992). This technique has been successful in supplementing the population of endangered nonmigratory Mississippi sandhill cranes (Grus canadensis pulla) (Zwank and Wilson 1987, Ellis et al. 1992b). Aircraft motor sounds are played to young crane chicks to get them acclimatized to engine noise. The “following” instinct of crane chicks is utilized to get them conditioned to walk behind motorized vehicles and/or aircraft. Once acclimatized, the cranes will follow the taxiing ultralight aircraft and soon learn to fly behind the ultralight. Using this technique (Clegg et al. 1997, Lishman et al. 1997), sandhill cranes were led in migration between Ontario and Virginia in 1997; four whooping cranes and eight sandhill cranes were taught a migration between Idaho and New Mexico in 1997. In a further migration experiment, eleven sandhill cranes were led from Wisconsin to Florida by ultralight aircraft in the fall of 2000. At least nine of the eleven cranes returned on their own to the release site in Wisconsin in the spring of 2001. The status of the other two cranes is unknown; they have not been sighted, nor have radio-transmitted signals recorded as of May 2001. They may have returned as well, but were not detected because their radio transmitters may have malfunctioned, or because they returned to a remote area unmonitored.

Several different strategies for accomplishing migration to the Florida wintering site may be utilized: (1) Leading the cranes using an ultralight aircraft that the birds have been conditioned to follow; (2) allowing the released whooping cranes to migrate guided by wild sandhill cranes.
(Urbanek and Bookhout 1994), or after the first year, guided by previously released whooping cranes; or (3) some combination of these two techniques. The rationale is to use the technique that is thought to have the highest probability of success, but to retain the option of using another potentially promising technique if conditions warrant. The project proceeds, the intent is to use techniques that seem reasonable in light of present understanding of whooping crane biology. However, for the first fall migration season, the primary technique is expected to be use of the ultralight aircraft to lead the cranes to the chosen wintering site in Florida; birds not trainable to follow aircraft may be released with wild sandhills and then relocated to the appropriate wintering area or returned to captivity.

**Status of Reintroduced Population**

We determine this reintroduction to be nonessential to the continued existence of the species according to the provisions of section 10(j) of the Act. This designation is justified because no adverse effects to extant wild or captive whooping crane populations will result from release of progeny from the captive flock. We also have a reasonable expectation that the experiment will result in the successful establishment of a self-sustaining, migratory flock, which will contribute to the recovery of the species. The special rule is expected to ensure that this reintroduction is compatible with current or planned human activities in the release area.

We have concluded that this experimental population is nonessential to the continued existence of the whooping crane for the following reasons:

(a) For the time being, the AWP and the captive populations will be the primary species populations. With approximately 120 birds in captivity at 6 discrete sites, and approximately 176 birds in the AWP, the experimental population is not essential to the continued existence of the species. The species has been protected against the threat of extinction from a single catastrophic event by gradual recovery of the AWP and by increase and management of the cranes at the captive sites. Loss of the experimental population will not jeopardize the species’ survival.

(b) For the time being, the primary repository of genetic diversity for the species will be the approximately 296 wild and captive whooping cranes maintained in (a) above. The birds selected for reintroduction purposes will be as genetically redundant as possible with the captive population, hence any loss of reintroduced animals in this experiment will not significantly impact the goal of preserving maximum genetic diversity in the species.

(c) Any birds lost during the reintroduction attempt can be replaced through captive breeding. Production from the extant captive flock is already large enough to support the release of birds for this project, in addition to continued releases into the Kissimmee Prairie flock, with over 30 juveniles available annually. We expect this number to increase to over 40 as young pairs already in captivity reach breeding age. This illustrates the potential of the captive flock to replace individual birds proposed for release in reintroduction efforts.

The hazards and uncertainties of the reintroduction experiment are substantial, but a decision not to attempt to utilize the existing captive breeding potential to establish a second, wild, self-sustaining population could be equally hazardous to survival of the species in the wild. The AWP could be annihilated by catastrophic events such as a Gulf coast hurricane or a contaminant spill on the wintering grounds that would necessitate management efforts to establish an additional wild population. The recovery goal of 3 self-sustaining wild populations—consisting of 40 nesting pairs in the AWP and 2 additional, separate and self-sustaining, populations consisting of 25 nesting pairs each—should be in existence before the wild whooping crane can be downlisted to threatened status. Dependent upon future events, the nonmigratory Florida population would potentially be the second such population. An eastern U.S. migratory flock could be the third population. If this reintroduction effort is successful, conservation of the species will have been furthered considerably by establishing another self-sustaining population in currently unoccupied habitat. It would also confirm that captive-reared cranes can be used to establish a migratory, wild population.

**Location of Reintroduced Population**

Section 10(j) of the Act requires that an experimental population be geographically separate from other populations of the same species. The designated NEP area covers most of the eastern United States, with the expectation that most whooping cranes would be concentrated within the States of Wisconsin and Florida, as well as adjacent States, and therefore be within the migration corridor. States within the NEP area include Alabama, Arkansas, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Missouri, North Carolina, Ohio, South Carolina, Tennessee, Virginia, West Virginia, and Wisconsin. All of these States are considered to be within the probable historic range of the species. Any whooping crane found within this area will be considered part of the experimental population. Initial releases are planned for central Wisconsin, with plans for a wintering location on the Florida Gulf coast. It is difficult to predict where individual whooping cranes may disperse following release within the project area. Designation of this NEP allows for the possible occurrence of cranes anywhere within most of the eastern United States.

**a. Potential Release Areas**

The potential release areas in Wisconsin include Necedah NWR, Horicon NWR, and Crex Meadows State Wildlife Management Area. Initial releases will be at the Necedah NWR in Juneau County, Wisconsin. The location of future releases will depend upon habitat use and dispersal patterns of released cranes.

A majority of the movements of the released cranes are expected to occur within the central Wisconsin area, which comprises approximately 2,000 square kilometers characterized by a mosaic of forest and open wetlands. Numerous small streams cut across the landscape, many of which have been ditched for purposes of agricultural drainage. Much of the landscape is forested, consisting of mixed forests interspersed with open expanses of sedge and shrub wetlands, small streams and ponds.

On surrounding private lands, a significant amount of historic wetland habitat has been converted to cranberry culture. Land ownership includes a number of larger private holdings devoted to cranberry production and six large public ownerships totaling 83,222 hectares (ha) [203,651 acres]. County-owned lands within the four-county area surrounding Necedah NWR include significant acreage, primarily devoted to forestry, totaling 65,810 ha (162,624 ac).

The principal private land uses are forestry, cranberry culture and other agriculture, and recreational hunting. Upland forests are managed for sawtimber and firewood production, on either a clear-cut rotational basis or selective harvest, dependent upon forest type and management objectives. Wetland habitat utilized for cranberry culture is managed through the manipulation of water regime, in the form of seasonal flooding. The public
lands are managed for wildlife values, recreation, water conservation, and to maintain natural habitat conditions. Compared to other areas in Wisconsin, the central Wisconsin area has experienced limited human population growth over the past 30 years due to its distance from major population centers and low suitability for agriculture. The presence of large public land holdings is at least in part a result of unsuccessful agricultural development. Cannon (1999) has estimated that approximately 37,000 ha (92,000 ac) of suitable whooping crane habitat exists in the central Wisconsin area.

b. Primary Wintering Area

The primary wintering site is on the Chassahowitzka NWR, of which 55 percent (6,908 ha or 17,070 ac) is suitable crane habitat. The refuge comprises over 12,500 ha (31,000 ac) of saltwater bays, estuaries, and brackish marshes with a fringe of hardwood swamps along the eastern boundary. Dispersed throughout the salt marsh in a jigsaw puzzle fashion is 4,048 ha (10,000 ac) of estuarine habitat in the form of shallow bays and tidal streams; the largest of the streams being the Chassahowitzka and Homosassa Rivers. Because of three transitional salinity stages (ranging from fresh spring water, to brackish, and then to the saline waters of the Gulf of Mexico), a wide range of aquatic plant and animal life flourishes within all parts of the system. A wintering site study (Cannon 1998) rated Chassahowitzka NWR as an excellent site for wintering whooping cranes based on available habitat, adjacent expansion possibilities, adequate isolation, and abundant food resources.

Adjacent to the Chassahowitzka NWR, are two State of Florida-owned properties that support suitable crane habitat the wintering cranes may occasionally use. These areas are the 36,000-acre (14,568 ha) St. Martin’s Marsh Aquatic Preserve and the 9,308 ha (23,000 ac) Crystal River State Buffer Preserve. Both sites contain habitats similar to those in Chassahowitzka NWR.

Management

a. Monitoring

Whooping cranes will be intensively monitored by project personnel prior to and after release. The birds will be observed daily while they are in the conditioning pen. Facilities for captive maintenance of the birds will include the same facilities used for sandhill cranes during an experimental migration project in 2000; these facilities were modeled after facilities at the U.S. Geological Survey’s Patuxent Wildlife Research Center (PWRC) and the International Crane Foundation. They conform to standards set forth in the Animal Welfare Act and Florida Wildlife Code (Title 39.6 F.A.C.). To further ensure the well-being of birds in captivity and their suitability for release to the wild, facilities incorporate features of their natural environment (e.g., feeding, loafing, and roosting habitat) to the extent possible. Pre-release conditioning will occur at facilities near the release site.

To ensure contact with the released birds, each crane will be equipped with legband-mounted radio telemetry transmitters. Subsequent to gentle-release, the birds will be monitored regularly to assess movements and dispersal from the area of the release pen. Whooping cranes will be checked regularly for mortality or indications of disease (e.g., listlessness, social exclusion, flightlessness, or obvious weakness). Social behavior (e.g., pair formation, dominance, cohort loyalty) also will be evaluated.

A voucher blood serum sample will be taken for each crane prior to its arrival in Wisconsin. A second sample will be taken just prior to release. Any time a bird is handled after release, a blood sample may be taken to monitor disease exposure and physiological condition. One year after release, when possible, all surviving whooping cranes may be captured and an evaluation made of their exposure to disease/parasites through blood, fecal, and other sampling regimens. Monitoring will continue, opportunistically, for multiple years whenever cranes are recaptured to replace radio transmitters. If preliminary results are favorable, the releases will be continued annually, with the goal of releasing up to 30 birds per year for about 10 years and then evaluating the success of the recovery effort.

b. Disease/Parasite Considerations

Both sandhill and whooping cranes are known to be vulnerable, in part or all of their natural range, to avian herpes (inclusion body disease), avian cholera, acute and chronic mycotoxicosis, eastern equine encephalitis (EEE), and avian tuberculosis. Additionally, *Eimeria* spp., *Haemogroteus* spp., *Leucocytozoon* spp., avian pox, lead poisoning, and *Hexamita* sp. have been identified as debilitating or lethal factors in wild or pre-release, captive populations.

A group of crane veterinarians and disease specialists have developed protocols for pre-release and pre-transfer health screening for birds selected for release to prevent introduction of diseases and parasites into the eastern flyway. Exposure to disease and parasites will be evaluated through blood, serum, and fecal analysis of any individual crane handled post-release or at the regular monitoring interval. Remedial action will be taken to return to good health any sick individuals taken into captivity. Sick birds will be held in special facilities and their health and treatment monitored by veterinarians. Special attention will be given to EEE because an outbreak at the PWRC in 1984 killed 7 of 39 whooping cranes present there. After the outbreak, a vaccine was developed for use on captive cranes. In 1989, EEE was documented in sentinel bobwhite quail and sandhill cranes at the PWRC. No whooping cranes became ill, and it appears the vaccine may provide protection. EEE is present in Wisconsin, so the released birds may be vaccinated. Other strains of encephalitis (St. Louis, Everglades) also occur in Wisconsin. The vaccine for EEE may also provide protection against these arboviruses.

When appropriate, other avian species may be used to assess the prevalence of certain disease factors. This could mean using sentinel turkeys for ascertaining exposure probability to encephalitis or evaluating a species with similar food habits for susceptibility to chronic mycotoxicosis.

c. Genetic Considerations

The ultimate genetic goal of the reintroduction program is to establish wild reintroduced populations that possess the maximum level of genetic diversity available from the captive population. Early reintroductions will likely consist of a biased sample of the genetic diversity of the captive gene pool, with certain genetic lineages over-represented. This bias will be corrected at a later date by selecting and re-establishing breeding whooping cranes that, theoretically, compensate for any genetic biases in earlier releases.

d. Mortality

Although efforts will be made to minimize mortality, some will inevitably occur as captive-reared birds adapt to the wild. Collision with power lines and fences are known hazards to wild whooping cranes. No major power lines cross the release or wintering sites. Tall woven-wire and barbed-wire fencing is commonly used in the central Wisconsin area and presents some collision hazard. If whooping cranes begin regular use of areas traversed by power lines or fences, the Service and...
Wisconsin DNR will consider placing markers on the obstacles to reduce the probability of collisions.

Wolves are known predators of adult sandhill cranes and would be potential predators of adult whooping cranes, as would coyotes and bald eagles. Red fox, bobcats, owls, and raccoons are potential predators of young cranes. Natural mortality from predators, fluctuating food availability, disease, and wild feeding inexperience will be reduced through predator management, vaccination, gentle release, supplemental feeding for a post-release period, and pre-release conditioning. This conditioning will include teaching the habit of roosting in standing water. Predation by bobcats has been a significant source of mortality in the Kissimmee Prairie, Florida flock, and teaching this roosting behavior to young birds should help to reduce losses to wolves, coyotes, and bobcats. Human-caused mortality will be reduced by information and education efforts directed at landowners and land users, and review and management of human activities in the area.

Recently released whooping cranes will need protection from natural sources of mortality (predators, disease, and inadequate foods) and from human-caused sources of mortality. We will minimize human-caused mortality through a number of measures such as: (a) Placing whooping cranes in an area with low human population density and relatively low development; (b) working with and educating landowners, land managers, developers, and recreationists to develop means for conducting their existing and planned activities in a manner that is compatible with whooping crane recovery; and (c) conferring with developers on proposed actions and providing recommendations that will reduce any likely adverse impacts to the cranes.

f. Potential Conflicts

Conflicts have resulted in the central and western United States from the hunting of migratory birds in areas utilized by whooping cranes, particularly the hunting of sandhill cranes and snow geese (Chen caerulescens), which to novice hunters may appear similar to whooping cranes.

In recent years, only two to three crane mortalities have been documented incidental to hunting activities. Sandhill cranes are not hunted in Wisconsin although a future hunting season is being considered, and snow geese are an uncommon migrant and have not been present in large numbers. Sandhill cranes and snow geese are not hunted in the area of the wintering site in Florida. Accidental shooting of a whooping crane to this experimental population occurring in the course of otherwise lawful hunting activity is exempt from take restrictions under the Act in this special regulation.

Applicable Federal penalties under the Migratory Bird Treaty Act and/or State penalties, however, may still apply. We will minimize mortality due to accidental shootings by providing educational opportunities and information to hunters to assist them in distinguishing whooping cranes from legal game species. There will be no federally mandated hunting area or season closures or season modifications, including conservation order seasons, resulting from the establishment of the eastern U.S. whooping crane NEP.

We established a conservation order in a final rule published in the December 20, 1999, Federal Register (Volume 64, Number 243). The conservation order is aimed at reducing the populations of lesser snow geese (Anser caerulescens caerulescens) and Ross’ geese (Anser rossii) that breed, migrate, and winter in the mid-continent portion of North America, primarily in the Central and Mississippi Flyways. These geese are referred to as mid-continent light geese (MCLG). We established the order allowing take of the geese to prevent further habitat degradation by the MCLG population, which had reached such a high level that the geese were seriously injuring their arctic and subarctic breeding grounds through their feeding actions. We set a management goal to reduce the MCLG by 50 percent by the year 2005. The conservation order can be implemented in the States, or portions of States, contained within the boundaries of the Central and Mississippi Flyways, including Alabama, Arkansas, Colorado, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, New Mexico, North Dakota, Ohio, Oklahoma, South Dakota, Tennessee, Texas, Wisconsin, and Wyoming.

The bulk of traditional hunting in the primary release area has been for deer (Odocoileus virginianus), turkey (Meleagris gallopavo), and small game. Conflict with traditional hunting in the release area is not anticipated. Access to some limited areas at release or wintering sites and at ultralight migration stopover points could be temporarily restricted at times when whooping cranes might be particularly vulnerable to human disturbance (i.e., around rearing and training facilities in the spring/summer and conditioning and holding pens in the fall/winter). Any temporary restricted access to areas for these purposes will be of the minimum size and duration necessary for protection of the NEP cranes, and will be closely coordinated with and at the discretion of the respective States.

Any such access restrictions will not require Federal closure of hunting areas or seasons.

States within the NEP area maintain their management prerogatives regarding the whooping crane. They are not directed by this rule to take any specific actions to provide any special protective measures, nor are they prevented from imposing restrictions under State law, such as protective designations, and area closures. None of the States within the NEP area have indicated that they would propose hunting restrictions or closures related to game species because of the whooping crane reintroduction. Overall, the presence of whooping cranes is not expected to result in placement of constraints on hunting of wildlife or to affect economic gain landowners might receive from hunting leases. The potential exists for future hunting seasons to be established for other migratory birds that are not currently hunted in some of the States within the NEP area. The action will not prevent the establishment of future hunting or conservation order seasons approved for other migratory bird species by the Mississippi or Atlantic Flyway Councils.

The principal activities on private property adjacent to the release area are agriculture and recreation. Use of these private properties by whooping cranes will not preclude such uses. The special regulation accompanying this rule authorizes incidental take of the whooping crane in the NEP area when the take is accidental and incidental to an otherwise lawful activity.
An additional issue identified as a possible conflict is the potential for crop depredation. There is evidence that some sandhill cranes have caused locally significant losses of emerging corn in some areas in Wisconsin. It is possible that whooping cranes could engage in this type of behavior as well. Whooping cranes are socially less gregarious than sandhill cranes, and tend to restrict the bulk of their foraging activities to wetland areas. Therefore, they are believed to be less likely to cause significant crop depredations. If such depredations occur, they can be eliminated through use of bird scararing devices and other techniques. Ongoing research on seed treatments as a deterrent to corn depredation is promising (Blackwell, Helon and Dolbeer, in press).

Other agricultural crops found in the release area include cranberries. Some concern has been expressed that whooping cranes may consume cranberries. Although potential habitat is present near cranberry operations, cranberries are not likely to be an attractive food item as compared to animal matter, during most of the time period that whooping cranes would be present in Wisconsin. Cranberry beds are flooded at harvest time, and when large numbers of berries are gathered they could be more vulnerable to depredation. However, this event occurs in late fall, after whooping cranes would have departed for their wintering grounds. In addition, the numerous sandhill cranes in Wisconsin have not caused cranberry crop depredation. Therefore, we do not expect that whooping cranes will pose a significant threat to crop depredation on cranberries.

Released whooping cranes might wander into other States or other locations in the eastern United States outside of the expected migration corridor, or even outside the NEP area. We believe the frequency of such movements is likely to be low. Any whooping cranes that leave this experimental population area will be considered endangered. However, for any whooping cranes known to be from the eastern United States NEP, that move outside the NEP area, including those that move into the migration corridor of the AWP, attempts will be made to capture and return them to the appropriate area if a reasonable possibility exists for contact with the AWP population or if removal is requested by the State which they enter. Birds from the AWP flock have rarely been observed in any of the States within the NEP area except as a result of an extreme weather event; they are expected to be in the NEP area very infrequently and only temporarily. Any whooping cranes that occur within the NEP area will be considered to be part of the NEP and will be subject to the protective measures in place for the NEP. Because of the extremely limited number of incidents anticipated, the decreased level of protections afforded AWP cranes that cross into the NEP is not expected to have any significant adverse impacts to the AWP.

For at least the first year of project life, whooping cranes will be led to the Florida wintering site utilizing ultralight aircraft and stopping at a series of previously chosen stopover locations en route. During subsequent migration periods, it will be difficult to predict which specific sites will be utilized by the birds, and some cranes may use stopover sites with which they have no previous experience. Whooping cranes that appear in undesirable locations while in migration will be considered for relocation by capture and/or hazing while in migration will be considered.

Access to whooping cranes may be temporarily restricted in limited areas near rearing and acclimatization facilities and at ultralight migration stopover locations to minimize disturbance at times of greatest vulnerability and sensitivity. Any temporarily restricted access to areas for these purposes will be (1) of the minimum size and duration necessary for protection of the NEP cranes, (2) will not require Federal closure of hunting or conservation order areas or seasons, and (3) will be closely coordinated with and at the discretion of the respective States.

**Previous Federal Action**

We held public meetings in Florida in December of 1997 and in Wisconsin in May of 1999, to determine public interest and concerns regarding the potential reintroduction of a migratory flock of whooping cranes to the eastern United States. In 1999, the Service, the Wisconsin DNR, and International Crane Foundation representatives met to identify issues and concerns related to whooping crane reintroduction.

The Wisconsin and Florida informational meetings offered the general public an opportunity to review and offer informal comments on the proposed action. The public has appeared extremely supportive of the proposed action, provided it does not interfere with land use and lifestyle and current and potential income. We attempted to notify all known or determinable affected parties and other interested agencies, groups, and individuals of the opportunity to comment on this rule. We held four public hearings during the public comment period as a further measure to encourage public input on the proposed action. We have incorporated those comments into this final rule.

We have made presentations to numerous organizations and potentially affected interest groups, government representatives of States along the potential migration route, the Atlantic and Mississippi Flyway Councils and their Technical Sections, the Wisconsin Natural Resources Board, the Florida Fish and Wildlife Conservation Commission (FLFWCC), and other interested agencies to obtain input on the potential for reintroduction of a migratory whooping crane population in the eastern United States. We have conducted extensive coordination, both formal and informal, with all States within the NEP area. We asked all States to give their formal endorsement to the project to State and Federal agencies, and we have received the concurrence and support of all States within or adjacent to the expected migration corridor.

An extensive sharing of information about the program and the species, via educational efforts targeted toward the public throughout the NEP area and nationally, will enhance public awareness of this species and its reintroduction. We will encourage the public to cooperate with the Service, Wisconsin DNR, and the Florida FWCC in attempts to monitor and protect whooping cranes in the release areas and wintering area.

**Summary of Comments and Recommendations**

In the March 9, 2001, proposed rule (66 FR 14107), we requested comments or recommendations concerning any aspect of the proposal that might contribute to development of the final decision on the proposed rule. A 45-day comment period was provided. We sent copies of the rule and other informational materials about the project to State and Federal agencies, Congressional representatives, Tribes, Flyway Councils, conservation and hunting groups, and numerous private citizens who had expressed an interest in receiving further information on the project.

**Changes in the final rule as a result of public comments:** Minor changes have been made to the special rule as a result of comments received. These additions or changes do not alter the predicted impact or effect of the final rule.
consideration for a future reintroduction when conditions are more favorable for the effort.

**Issue 2:** No closures of hunting areas should occur due to the presence of NEP whooping cranes. In addition, the Service should include conservation order seasons when discussing hunting seasons.

**Our Response:** We will not mandate any closure of areas, including National Wildlife Refuges, during hunting seasons or closure or modification of hunting seasons for the purpose of avoiding take of the NEP. While this will preclude federally mandated closures within the NEP area, States still retain the power to impose closures at their discretion. However, no States have indicated any desire to institute such closures. We agree that adding conservation seasons is more in line with our intent of this section of the rule. We have modified the final rule to include conservation order seasons.

**Issue 3:** The Act should be modified to provide protections against “citizen lawsuits” to prevent groups or individuals from filing suit at some future date forcing the Service to institute protective measures for this NEP that adversely affect private property rights.

**Our Response:** We have made every effort to ensure that the reintroduction proposal covered by the rule does not interfere with private property rights. This rule provides that take of whooping crane that is accidental and incidental to an otherwise lawful activity is not prohibited. Activities such as agricultural practices, pesticide application, water management, construction, recreation, trapping, or hunting, if performed in the above described manner, should continue as before. We are the Federal agency given responsibility for administration of the Act; however, we do not have independent authority to revise the Act to provide protection from citizen lawsuits; that would require an act of Congress.

**Issue 4:** Eastern U.S. NEP cranes or their offspring could stray into the Central Flyway States at some future date resulting in adverse effects to the AWP, or to ongoing human activities. All released cranes, and all their future progeny, should be permanently marked so they could be monitored, and removed from any undesirable areas (i.e., Central Flyway States).

**Our Response:** We will mark all released cranes with color bands and/or radio or satellite transmitters, and implant coded electronic microchips under the skin which will allow identification of these birds even if the transmitters or bands are lost. In addition, we will make every effort within the 10-year life of the project, to capture and similarly apply color bands to any future offspring of reintroduced NEP whooping cranes. This would be accomplished by capturing and marking offspring prior to fledging. With little nesting expected during the early phase of the project, we believe that nearly all young birds would be captured and marked. Later in the project, however, it may become more difficult to mark offspring if increased nesting occurs in remote locations. For at least the 10-year life of the reintroduction project, the color banding of all offspring will include attempts to capture any unmarked juvenile cranes that migrate with, and are clearly part of, NEP family groups.

**Issue 5:** Any whooping crane originating from eastern U.S. reintroduction efforts should maintain the NEP status, even if one occurs outside the designated NEP area.

**Our Response:** If the eastern U.S. NEP whooping cranes from the eastern U.S. NEP moves out of the designated eastern U.S. NEP area, the status of those birds would then be considered endangered. Section 10(l) of the Act, which provides for the establishment of experimental populations, directs that experimental populations be delineated by geographic boundaries, and that an NEP cannot overlap or include currently occupied range of the species. In the event that one of the eastern U.S. NEP whooping cranes wanders into the Central Flyway, we will immediately initiate discussions with the involved State or States to determine the appropriate action to take. This action could include non-intervention if the crane is moving through on migration and no adverse impacts are expected, or some form of intervention to attempt to remove or relocate the bird or birds, if determined necessary by us or if requested by the involved State. As provided for in paragraph (b)(i) and (ii) of this final rule, the course of action will not include closure of hunting areas or seasons, including those pertaining to conservation orders, for the purpose of protecting individual cranes known to have originated from the eastern U.S. whooping crane NEP.

The Service, the recovery team, and the reintroduction partnership, in consultation with the States, will constantly evaluate the behavior of all reintroduced cranes and will attempt to remove or relocate birds that exhibit unsatisfactory behavior. In addition, we will reevaluate the expected number of whooping crane reintroduction if significant numbers of cranes move into
the Central Flyway on a routine basis, or if any mixing with the AWP population occurs. The reevaluation could result in modifications to the project, or termination if warranted. Mixing of the AWP and eastern U.S. reintroduced population is undesirable due to the potential for disease transmission or other adverse impacts and was a primary reason for the recovery team recommendation to pursue the Wisconsin-to-Florida migration route. Based upon research with sandhill cranes, and migration behavior of the AWP population, it is believed that any mixing which may occur will be extremely rare. However, we agree to manage eastern U.S. NEP whooping cranes that move into the Central Flyway to the maximum extent possible to prevent disruption of human activities, but still meet the requirements of the Act.

Issue 6: It is inappropriate to allow for penalties less than those of the Act in the event of an accidental shooting. Current restrictions against the illegal take of protected migratory birds, as well as those restrictions in place for the Mexican wolf, a federally listed endangered species, dictate that the hunter is responsible for identification of their quarry before shooting. Our Response: We stated in the proposed rule that in the event an accidental shooting occurred in the course of an otherwise lawful activity (i.e., hunting in accordance with all laws and regulations), Endangered Species Act penalties would not apply; however, any Federal penalties under the Migratory Bird Treaty Act and/or State penalties may still apply. The incidental take provision was proposed in an effort to allay concerns of hunters and other sectors of the public. They were concerned that their property rights, business, or recreational activities would be negatively impacted by Federal restrictions and penalties if a whooping crane was injured or killed accidentally as a result of an activity they were carrying out legally. We do not believe this provision of our regulation is likely to lead to the increased incidence of illegal shooting of whooping cranes. In recent years, shootings, intentional or otherwise, of wild whooping cranes from the AWP flock or the reintroduced Florida nonmigratory NEP have been rare. We believe that mortality to the eastern U.S. whooping crane NEP from shooting, even with the relaxation of penalties in place, is likely to be low. Substantial outreach efforts will be made to seek the cooperation of the hunting public and emphasize species identification to minimize potential mishaps. In the event a whooping crane is shot intentionally, (for example, if shot deliberately when no hunting season was open), the penalties of the Act would still apply.

Issue 7: Tax dollars should not be spent on this project or any other endangered species recovery effort. Our Response: We are responsible for the protection and recovery of federally listed threatened and endangered species, as mandated by the Act. The Act does not provide us with the discretion to refuse to pursue recovery of any individual species; rather, we are mandated to apply our resources in an effective manner to accomplish the recovery of all federally listed species. This project is being coordinated with the multiple-partner Whooping Crane Eastern Partnership (WCEP), a collaborative group of government and non-government entities working together to accomplish the reintroduction of the whooping crane to the eastern United States. The WCEP is committed to 50 percent of the project budget from private sources. This will reduce the amount of Federal tax dollars necessary to implement the project.

Issue 8: Wild sandhill cranes should not be used to guide released whooping cranes to the wintering area. The Service has not demonstrated the ability to retrieve whooping cranes from the central Florida sandhill crane wintering grounds and bring them to the desired wintering location at Chassahowitzka NWR. Our Response: We agree that it may prove difficult to retrieve whooping cranes that migrate to central Florida and relocate them to Chassahowitzka NWR. However, we support the recovery team’s recommended approach that multiple reintroduction methods be available so that strategies may be adapted to a wide range of possible scenarios in accomplishing this reintroduction. We will not use the wild sandhill crane guided migration method for the first year of the project. As indicated in the “Reintroduction Protocol” section, we will use ultralight aircraft to lead the initially released whooping cranes in migration to Florida. In the future, before we consider using wild sandhill cranes to guide released whooping cranes in migration, we will consult with the State of Florida and obtain the State’s concurrence before proceeding with that approach.

Issue 9: It is appropriate to expand the proposed NEP area to include the 11 additional northeastern States discussed in the proposed rule. To do so at this time would be an efficient use of the Service’s rulemaking resources, rather than putting off this action until a later date. Our Response: In the proposed rule, we specifically asked for comments on the appropriateness of including 11 additional States in the northeastern United States in the designated eastern U.S. whooping crane NEP area. This action could help minimize potential for conflicts with human activities that may result from an eastern United States whooping crane wandering into one of those States, where the status of such birds would be considered as endangered. During the comment period we received one comment about adding the States to the NEP. No comments were received from any of the 11 northeastern States. After further consideration, we have decided that including those States within this NEP area is not necessary at this time. We believe the likelihood that a whooping crane from the eastern U.S. NEP will stray into those States is slight. If future movements of whooping cranes indicate that including the northeastern States within the eastern United States NEP area would be prudent, we will consult with the affected States and propose adding them through a separate rulemaking.

Issue 10: Why are species still considered endangered when humans can clone animals and any living thing? Our Response: While cloning techniques have advanced significantly during the past few years, and it is now technically possible to clone higher organisms, the technology is far from being perfected to a point where it could be applied on an operational scale. In addition, extensive questions and issues still remain from many standpoints including science, genetics, ethics, economic feasibility, as well as national and international laws and policies. As such, it is premature to consider cloning as a viable strategy for restoring endangered species. Even if cloning does prove to be effective in the future, it is not likely that cloning would be implemented exclusively as the only method used to achieve species’ recovery. In addition, the purpose of the Act goes beyond restoring the number of individuals but is to conserve populations in the wild and the ecosystems upon which they depend.

Issue 11: Whooping cranes should not be released in Wisconsin because of the potential for agricultural damage by the birds. Reintroduction efforts should be pursued using release sites in Michigan. Our Response: We believe the potential for adverse impact on agriculture by whooping cranes is low due to the small number of birds that...
will be present and the habitat and food preferences of whooping cranes. Because they prefer shallow, open-water marsh habitat and food is primarily aquatic animal matter (e.g., aquatic insects, invertebrates, minnows, frogs), the whooping cranes are not likely to cause agricultural damage. In the Environmental Assessment, we analyzed all reasonable alternatives for conducting the whooping crane reintroduction into the eastern United States, including establishing release sites in Michigan. Based upon careful consideration of all factors associated with the reintroduction, we have determined that the preferred alternative is to release the whooping cranes in Wisconsin.

**Required Determinations**

**Regulatory Planning and Review**

In accordance with the criteria in Executive Order 12866, this final rule to designate NEP status for the whooping crane reintroduction into the eastern United States is not a significant regulatory action subject to Office of Management and Budget review. This rule will not have an annual economic effect of $100 million and will not have an adverse effect upon any economic sector, productivity, competition, jobs, the environment, or other units of government. Therefore, a cost-benefit economic analysis is not required.

Lands where releases would be conducted include Necedah and Horicon National Wildlife Refuges, and the Crex Meadows State Wildlife Area in Wisconsin. The wintering site in Florida is primarily Chassahowitzka National Wildlife Refuge and may include the adjacent St. Martin’s Marsh Aquatic Preserve and Crystal River State Buffer Preserve. Following release, birds from the NEP are likely to utilize private lands adjacent to both the release areas and the wintering site. Because of the substantial regulatory relief provided by NEP designations, we do not believe the reintroduction of whooping cranes will conflict with existing human activities or hinder public or private use of lands within the NEP area. Likewise, no governments, individuals, or corporations will be required to manage specifically for reintroduced whooping cranes.

This rule will not create inconsistencies with other agency’s actions or otherwise interfere with an action taken or planned by another agency. Because of the substantial regulatory relief provided by NEP designations, we do not believe the presence of whooping cranes will obligate any agency or government to take an action which would conflict with their existing authorities or activities within the NEP area. This rule will allow any agency or citizen to conduct otherwise legal activities under provisions of the Act.

This rule will not materially affect entitlements, grants, user fees, loan programs or the rights or obligations of their recipients. This rule will not raise novel legal or policy issues. We have previously designated an experimental population of whooping cranes in Florida and for other species at numerous locations throughout the nation.

**Regulatory Flexibility Act**

The Department of the Interior certifies that this document will not have a significant economic effect on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 et seq.). The area affected by this rule includes 20 States within the eastern United States. We do not expect this rule to have any significant effect on recreational, agricultural, or development activities within the NEP area. There will be no federally-mandated closures of seasons or areas to hunting or conservation order actions for protection of the NEP. We expect only temporary access restrictions to limited areas in the vicinity of rearing and release facilities at times during the spring/summer rearing period, during migration with ultralight aircraft, or at the wintering site. In the primary release area, these closures are not expected to occur outside of existing, long-established closed areas on Necedah NWR. Any temporarily restricted access to areas will be of the minimum size and duration necessary to provide for protection to the NEP cranes during rearing or release activities, and will be conducted in close coordination with the States. Because any such access restrictions will be of short duration and will not require Federal closure of hunting areas or seasons, we do not expect any significant effect on recreational activities. Because no new or additional economic or regulatory restrictions will be imposed upon States, Federal agencies, or members of the public due to the presence of members of the NEP, this rulemaking is not expected to have any significant adverse impacts to recreation, agriculture, or any development activities. The designation of an NEP in this rule will significantly reduce the regulatory requirements regarding the reintroduction of these whooping cranes. We do not believe the presence of whooping cranes will conflict with existing or proposed human activity, or State, Tribal, or private use of lands within the NEP area.

**Small Business Regulatory Enforcement Fairness Act (SBREFA)**

This rule is not a major rule under 5 U.S.C. 804(2), the Small Business Regulatory Enforcement Fairness Act. This rule will not have an annual effect on the economy of $100 million or more for reasons outlined above. It will not cause a major increase in costs or prices for consumers, individual industries, Federal, State, or local government agencies, or geographic regions. The rule does not have significant adverse effects on competition, employment, investment, productivity, innovation, or the ability of U.S.-based enterprises to compete with foreign-based enterprises.

**Unfunded Mandates Reform Act**

The NEP designation will not place any additional requirements on any city, county, or other local municipalities. The NEP designation has been endorsed by all of the States within the NEP area. A Small Government Agency Plan is not required. Because this rulemaking does not require that any action be taken by local or State government or private entities, we have determined and certify pursuant to the Unfunded Mandates Reform Act, 2 U.S.C. 1502 et seq., that this rulemaking will not impose a cost of $100 million or more in any given year on local or State governments or private entities (i.e., it is not a “significant regulatory action”).

**Takings**

In accordance with Executive Order 12630, the rule does not have significant takings implications. We do not expect this rule to have a potential takings implication under Executive Order 12630 because it would exempt individuals or corporations from prosecution for take that is accidental and incidental to an otherwise lawful activity. In addition, private entities would also be exempt from any restrictions imposed by consultation requirements under section 7(a)(2) of the Act, as consultation will not likely be conducted except on National Wildlife Refuges or National Parks. Because of the substantial regulatory relief provided by NEP designations, we do not believe the reintroduction of whooping cranes would conflict with existing human activities or hinder public use of lands within the NEP area. None of the States within the NEP area will be required to modify land use policy for reintroduced whooping cranes, and all of those States have endorsed the
NEP designation. A takings implication assessment is not required.

**Federalism**

In accordance with Executive Order 13132, the rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment. This rule will not have substantial direct effects on the States, on the relationship between the Federal Government and the States, or on the distribution of power and responsibilities among the various levels of government. As stated above, designation of this population as nonessential experimental will preclude any additional regulatory burdens on public and private entities within the NEP area. A Federalism assessment is not required.

**Civil Justice Reform**

In accordance with Executive Order 12988, the Office of the Solicitor has determined that the rule does not unduly burden the judicial system and meets the requirements of sections 3(a) and 3(b)(2) of the Executive Order.

**Government-to-Government Relationship With Tribes**

In accordance with the President’s memorandum of April 29, 1994, “Government-to-Government Relations with Native American Tribal Governments” (59 FR 22951) and E.O. 13175, we have notified the Native American Tribes within the nonessential experimental population area about this proposal. They have been advised through verbal and written contact, including informational mailings from the Service. Information was also sent to the Great Lakes Indian Fish and Wildlife Commission, 1854 Authority, Chippewa Ottawa Resource Authority, and Native American Fish and Wildlife Society. If future activities resulting from this rule may affect Tribal resources, a Plan of Cooperation will be developed with the affected Tribe or Tribes.

**Paperwork Reduction Act**

This rule contains information collection activity for experimental populations. We have OMB approval for the collection under OMB Control Number 1018–0094. The Service may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

**National Environmental Policy Act**

We have prepared an environmental assessment as defined under the authority of the National Environmental Policy Act of 1969. It is available from Service offices identified in the ADDRESSES section.

**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. As this rule is not expected to significantly affect energy supplies, distribution, or use, this action is not a significant energy action and no Statement of Energy Effects is required.

**Effective Date**

We find good cause under the Administrative Procedure Act (5 U.S.C. 553(d)(3)) to make this rule effective upon publication. The prompt release of currently available captive-reared whooping cranes is necessary because: (1) There is a limited time during which chicks will hatch in the captive whooping crane flock and be available for rearing; (2) the facilities in which the crane chicks are held are not designed to hold the birds for extended periods; and (3) the young cranes become less suitable for wild release if they are held in captivity too long. If young cranes cannot be transported to Wisconsin by late June or early July 2001 for further stages of rearing and to begin training for the migration process, the reintroduction will likely have to be delayed until next year. Therefore, good cause exists for this rule to be effective immediately upon its publication.

**References Cited**

A complete list of all references cited in this final rule is available upon request from the Green Bay Field Office (see ADDRESSES section).

**Authors**

The principal authors of this rule are Joel Trick and Janet Smith, U.S. Fish and Wildlife Service, Green Bay, WI (Phone: 920–465–7440); Tom Stehn, U.S. Fish and Wildlife Service, Austwell, TX (Phone 361–286–3559); and Linda Walker, U.S. Fish and Wildlife Service, Jacksonville, FL (Phone: 904–232–2580).

**List of Subjects in 50 CFR Part 17**

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, Transportation.

**Regulation Promulgation**

Accordingly, we amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

**PART 17—[AMENDED]**

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


2. Amend § 17.11(h) by revising the existing entry for “Crane, whooping” under “BIRDS” to read as follows:

   **§ 17.11 Endangered and threatened wildlife.**

   * * * * *

   (h) * * *

   **Species**

<table>
<thead>
<tr>
<th>Common name</th>
<th>Scientific name</th>
<th>Historic range</th>
<th>Vertebrate population where endangered or threatened</th>
<th>Status</th>
<th>When listed</th>
<th>Critical habitat</th>
<th>Special rules</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIRDS</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crane, whooping</td>
<td>Grus americana</td>
<td>Canada, U.S.A. (Rocky Mountains east to Carolinas), Mexico.</td>
<td>Entire, except where listed as an experimental population.</td>
<td>E</td>
<td>1, 3</td>
<td>17.95(b)</td>
<td>NA</td>
</tr>
<tr>
<td>Do</td>
<td>do</td>
<td>do</td>
<td>do</td>
<td>do</td>
<td>487, 621, 710</td>
<td>NA</td>
<td>17.84(h)</td>
</tr>
</tbody>
</table>
3. Amend §17.84 by revising paragraphs (h)(1), (h)(2), (h)(4)(ii), (h)(4)(iii), (h)(4)(iv), (h)(5), (h)(6), (h)(8), (h)(9), and (h)(10), adding paragraph (h)(11), and adding a map at the end of paragraph (h) to read as follows:

**§17.84 Special rules—vertebrates.**

* * * * *

(h) Whooping crane (Grus americana).

(1) The whooping crane populations identified in paragraphs (h)(9)(i) through (iii) of this section are nonessential experimental populations.

(2) No person may take such species in the wild in the experimental population areas except when such take is incidental and incidental to an otherwise lawful activity, or as provided in paragraphs (h)(3) and (4) of this section. Examples of otherwise lawful activities include, but are not limited to, agricultural practices, pesticide application, water management, construction, recreation, trapping, or hunting, when such activities are in full compliance with all applicable laws and regulations. * * * * *

(3) Application, water management, construction, recreation, trapping, or hunting, when such activities are in full compliance with all applicable laws and regulations. * * * * *

(4) * * * * *

(ii) Relocate a whooping crane that has moved outside the eastern U.S. population area identified in paragraph (h)(9)(iii) of this section, or the Kissimmee Prairie or Rocky Mountain range of the experimental populations, when removal is necessary or requested and is authorized by a valid permit under §17.22;

(iii) Relocate whooping cranes within the experimental population areas to improve survival and recovery prospects;

(iv) Relocate whooping cranes from the experimental population areas into captivity;

* * * * *

(5) Any taking pursuant to paragraphs (h)(3) and (4) of this section must be immediately reported to the National Whooping Crane Coordinator, U.S. Fish and Wildlife Service, P.O. Box 100, Austwell, Texas 77950 (Phone: 361-286-3559), who, in conjunction with his counterpart in the Canadian Wildlife Service, will determine the disposition of any live or dead specimens.

(6) No person shall possess, sell, deliver, carry, transport, ship, import, or export by any means whatsoever, any such species from the experimental populations taken in violation of these regulations or in violation of applicable State fish and wildlife laws or regulations or the Endangered Species Act.

* * * * *

(8) The Service will not mandate any closure of areas, including National Wildlife Refuges, during hunting or conservation order seasons or closure or modification of hunting or conservation order seasons in the following situations:

(i) For the purpose of avoiding take of the nonessential experimental population identified in paragraph (h)(9)(iii) of this section;

(ii) If a clearly marked whooping crane from the nonessential experimental population identified in (h)(9)(iii) wanders outside the designated NEP area. In these situations, the Service will attempt to capture the stray bird and return it to the appropriate area if removal is requested by the State.

(9) All whooping cranes found in the wild within the boundaries listed in paragraphs (h)(9)(i) through (iii) of this section will be considered nonessential experimental animals. Geographic areas the nonessential experimental populations may inhabit include the following—

(i) The entire State of Florida. The reintroduction site is the Kissimmee Prairie portions of Polk, Osceola, Highlands, and Okeechobee Counties. Current information indicates that the Kissimmee Prairie is within the historic range of the whooping crane in Florida.

(A) No other natural populations of whooping cranes are likely to come into contact with the experimental population at Kissimmee Prairie. The only natural extant population, known as the Aransas/Wood Buffalo National Park population occurs west of the Mississippi River. This population nests in the Northwest Territories and adjacent areas of Alberta, Canada, primarily within the boundaries of the Wood Buffalo National Park, and winters along the Central Texas Gulf of Mexico coast at Aransas National Wildlife Refuge. The only other extant eastern U.S. population is the nonessential experimental population described in paragraph (h)(9)(iii) of this section. Remnant individuals of the Rocky Mountain nonessential experimental population occur in the western United States as described in paragraph (h)(9)(ii) of this section. (B) Whooping cranes adhere to their ancestral breeding grounds, leaving little possibility that individuals from the extant Aransas/Wood Buffalo National Park population will stray into Florida or the Rocky Mountain Population. Studies of whooping cranes have shown that migration is a learned rather than an innate behavior. The experimental population released at Kissimmee Prairie is expected to remain mostly within the prairie region of central Florida.

(ii) The States of Colorado, Idaho, New Mexico, Utah, and the western half of Wyoming. Whooping cranes in this area do not come in contact with whooping cranes of the Aransas/Wood Buffalo Population; and

(iii) That portion of the eastern contiguous United States which includes the States of Alabama, Arkansas, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Missouri, North Carolina, Ohio, South Carolina, Tennessee, Virginia, West Virginia, and Wisconsin. (See map following paragraph (h)(11) of this section). Whooping cranes within this population are expected to occur mostly within the States of Wisconsin, Illinois, Indiana, Kentucky, Tennessee, Georgia, and Florida, which is within the historic range of the whooping crane in the United States. The additional States included within the experimental population area are those expected to receive occasional use by the cranes, or which may be used as breeding or wintering areas in the event of future population expansion. Whooping cranes in this population are not expected to come in contact with whooping cranes of the Aransas/Wood Buffalo National Park Population.

(10) The reintroduced populations will be monitored during the duration of the projects by the use of radio telemetry and other appropriate measures. Any animal that is determined to be sick, injured, or otherwise in need of special care will be recaptured to the extent possible by Service and/or State wildlife personnel or their designated agent and given appropriate care. Such animals will be released back to the wild as soon as
Whooping Crane Nonessential Experimental Population Area in the Eastern U.S.