DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS-R4-ES-2011-0020]

[92220-1113-0000-C6]

RIN 1018-AX60

Endangered and Threatened Wildlife and Plants; Reclassification of the Continental U.S. Breeding Population of the Wood Stork from Endangered to Threatened

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule and notice of petition finding.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service or USFWS), propose to reclassify the continental United States (U.S.) breeding population of wood stork from

endangered to threatened under the Endangered Species Act of 1973, as amended (Act). We find that the best available scientific and commercial data indicate that the endangered designation no longer correctly reflects the current status of the continental U.S. breeding population of the wood stork due to a substantial improvement in the species' overall status. This proposed rule also constitutes our 12-month finding on the petition to reclassify the species.

DATES: We will accept comments on this proposed rule received or postmarked on or before [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]. We must receive requests for a public hearing, in writing at the address shown in the **FOR FURTHER INFORMATION CONTACT** section, by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may submit comments by one of the following methods:

- *Federal eRulemaking Portal*: *http://www.regulations.gov*. Follow the instructions for submitting comments on Docket No. FWS–R4–ES–2011–0020.
- *U.S. mail or hand-delivery*: Public Comments Processing, Attn: FWS–R4–ES–2011–0020; Division of Policy and Directives Management; U.S. Fish and Wildlife Service; 4401 N. Fairfax Drive, Suite 222; Arlington, VA 22203.

We will post all comments on *http://www.regulations.gov*. This generally means that we will post any personal information you provide us (see the **Public Comments** section below for more information).

FOR FURTHER INFORMATION CONTACT: Field Supervisor, North Florida Ecological Services Field Office, 7915 Baymeadows Way, Suite 200, Jacksonville, FL 32256; telephone 904–731–3336; facsimile 904–731–3045. If you use a telecommunications device for the deaf (TDD), please call the Federal Information Relay Service (FIRS) at 800–877–8339, 24 hours a day, 7 days a week.

SUPPLEMENTARY INFORMATION:

Executive Summary

Why we need to publish a rule

- In September 2007, we completed a 5-year status review, which included a recommendation to reclassify the continental U.S. breeding population of the wood stork from endangered to threatened.
- In May 2009, we received a petition to reclassify the continental U.S. breeding population of wood stork; the petition incorporated the Service's 5-year review as its sole supporting information.
- On September 21, 2010, we published a 90-day finding that the petition presented substantial information indicating that reclassifying the wood stork may be warranted (75 FR 57426).

- This proposed rule, in accordance with section 4(b)(3)(B) of the Endangered Species Act (Act), constitutes our 12-month finding on the petition we received.

Summary of the Major Provisions of this Proposed Rule

- We propose to reclassify the continental U.S. breeding population of wood stork from endangered to threatened.
- This proposed rule constitutes our 12-month petition finding.
- We determine that the continental U.S. breeding population of wood stork meets the criteria of a distinct population segment (DPS) under our 1996 DPS policy (61 FR 4722).
- We propose to amend the List of Endangered and Threatened Wildlife (50 CFR 17.11(h)) to reflect that the U.S. wood stork DPS is found in the States of Florida, Georgia, South Carolina, North Carolina, Alabama, and Mississippi.

The basis for our action

- The continental U.S. breeding population of wood stork was listed under the Act in 1984, prior to publication of the joint policy of the National Marine Fisheries Service and U.S. Fish and Wildlife Service (Services) regarding the recognition of distinct vertebrate population segments (61 FR 4722). We find that the continental U.S. breeding population of wood stork meets the discreteness and significance elements of the Services' DPS policy and is a valid DPS.
- When the continental U.S. breeding population of wood stork was listed in 1984, the population was known to occur only in Florida, Georgia, South Carolina, and Alabama. Based on new information about where the population is found and

where nesting is occurring, the population is now known to occur in North Carolina and Mississippi in addition to Florida, Georgia, South Carolina, and Alabama.

- The best available scientific and commercial data indicate that since the continental U.S. breeding population of wood stork was listed as endangered in 1984, the population has been increasing and its breeding range has expanded significantly.
- Downlisting criteria from the recovery plan have been met or exceeded. We have had 3-year population averages of total nesting pairs of wood storks higher than 6,000 nesting pairs since 2003. However, the 5-year average number of nesting pairs is still below the benchmark of 10,000 nesting pairs identified in the recovery plan for delisting. In addition, productivity, even though variable, is sufficient to support a growing population.
- As a result of continued loss, fragmentation, and modification of wetland habitats in parts of the wood stork's range, we find that the continental U.S. wood stork DPS meets the definition of a threatened species under section 3 of the Act.

Public Comments

We intend that any final action resulting from this proposed rule will be as accurate and as effective as possible. Therefore, we are requesting comments from other concerned governmental agencies, Native American Tribes, the scientific community,

industry, or any other interested party concerning this proposed rule. We particularly seek information and comments concerning:

(1) The historical and current status and distribution of the wood stork, its biology and ecology, and ongoing conservation measures for the species and its habitat.

(2) Wood stork nesting colony location data (latitude/longitude in decimal degrees to confirm or improve our location accuracy); nest census counts and survey dates; years when a colony was active or not; years and dates when a colony was abandoned (fully or partially); and annual productivity rates (per total nest starts and per successful nests) and average chicks per nest estimates from continental U.S. colonies.

(3) Current or planned activities within the geographic range of the continental U.S. breeding population of the wood stork that may impact or benefit the species, including any acquisition of large tracts of wetlands, wetland restoration projects, planned developments, roads, or expansion of agricultural or mining enterprises, especially those near nesting colonies and surrounding suitable foraging habitats.

Prior to issuing a final rule on this proposed action, we will take into consideration all comments and additional information we receive. Such information may lead to a final rule that differs from this proposal. All comments and recommendations, including names and addresses, will become part of the administrative record for the final rule.

You may submit your comments and materials concerning this proposed rule by one of the methods listed in the **ADDRESSES** section. If you submit a comment via *http://www.regulations.gov*, your entire comment, including any personal identifying information, will be posted on the website. Please note that comments submitted to this website are not immediately viewable. When you submit a comment, the system receives it immediately. However, the comment will not be publicly viewable until we post it, which might not occur until several days after submission. If you mail or hand deliver hard copy comments that include personal identifying information, you may request at the top of your documents that we withhold this information from public review. However, we cannot guarantee that we will be able to do so. To ensure that the electronic docket for this rulemaking is complete and all comments we receive are publicly available, we will post all hard copy comments on *http://www.regulations.gov*.

Public Hearing

The Act (16 U.S.C. 1531 *et seq*.) provides for one or more public hearings on this proposal, if requested. We must receive your request for a public hearing within 45 days after the date of this Federal Register publication (see **DATES**). Such requests must be made in writing and addressed to the Field Supervisor (see **FOR FURTHER INFORMATION CONTACT** section above).

Background

Much of the basic biological information presented in this section is based upon existing literature published on the continental U.S. breeding population of the wood stork. This section summarizes information found in a large body of published literature and reports, including the revised recovery plan for the continental U.S. breeding population of the wood stork (USFWS 1997), The Birds of North America Online species account for wood stork (Coulter *et al*. 1999), and the South Florida Multi-Species Recovery Plan (USFWS 1999).

Taxonomy and Species Description

The wood stork (*Mycteria americana*) is one of 19 species of storks that make up the family Ciconiidae (Coulter *et al*. 1999, p. 3). It is one of three species of storks found in the western hemisphere (Coulter *et al*. 1999, p. 3) and the only stork that breeds north of Mexico (Ogden 1990, p. B-3). The wood stork shows no obvious morphological differentiation across its range, and no subspecies have been proposed.

The wood stork is a large, long-legged wading bird, with a head-to-tail length of 85–115 centimeters (cm) (33–45 inches (in)) and a wingspread of 150–165 cm (59–65 in- or roughly 5 to 5.5 feet). The plumage is white, except for iridescent black primary and secondary wing feathers and a short black tail. Storks fly with their necks and legs extended. On adults, the rough, scaly skin of the head and neck is unfeathered and

blackish in color, the legs are dark, and the feet are dull pink. The bill color is also blackish. Immature storks, up to the age of about 3 years, differ from adults in that their bills are yellowish or straw-colored and there are varying amounts of dusky feathers on the head and neck. During courtship and early nesting season, adults have pale salmon coloring under the wings, fluffy coverts (feathers under the base of a bird's tail) that are longer than the tail, and toes that brighten to a vivid pink.

Life Span

Wood storks are considered a long-lived species with delayed breeding, with first breeding generally occurring for 3- to 4-year old birds. The greatest recorded longevities are 17+ years for a wild adult wood stork caught and fitted with a satellite tag and leg bands in 1998, and recently documented at the Harris Neck nesting colony in 2011 (Larry Bryan, SREL, pers. comm., 2011), and 27.5 years for a captive bird (Brouwer *et al*. 1992, p. 132).

Feeding

The specialized feeding behavior of the wood stork involves tactilocation, also called grope feeding, where the stork uses its bill to find small fish. Wood storks feed primarily on fish between 2 and 25 cm (1 and 10 in) in length (Kahl 1964, pp. 107–108; Ogden *et al.* 1976, pp. 325–327). Wood storks also occasionally consume crustaceans,

amphibians, reptiles, mammals, birds, and arthropods (Coulter *et al*. 1999, p. 7). Wood storks forage in a variety of shallow wetlands, wherever prey concentrations reach high enough densities, in water that is shallow and open enough for the birds to be successful in their hunting efforts (Ogden *et al*. 1978, pp. 15–17; Browder 1984, p. 94; Coulter and Bryan 1993, p. 59). Fish populations reach high numbers during the wet season, but become concentrated in increasingly restricted habitats as drying occurs. Typical foraging sites include freshwater marshes, swales, ponds, hardwood and cypress swamps, narrow tidal creeks or shallow tidal pools, and artificial wetlands (such as stock ponds; shallow, seasonally flooded, roadside or agricultural ditches; and impoundments) (Coulter and Bryan 1993, p. 59; Coulter *et al.* 1999, p. 5). The wetland foraging areas near a nesting colony play a vital role during the nesting season (Cox *et al*. 1994, p. 135). Nesting wood storks generally use foraging sites that are located within a 30- to 50-kilometer (km) (18- to 31-mile (mi)) flight range of the colony; successful colonies are those that have options to feed during a variety of rainfall and surface water conditions (Coulter 1987, p. 22; Bryan and Coulter 1987, p. 157; Coulter *et al*. 1999, pp. 17–18; Herring 2007, p. 60; Bryan and Stephens 2007, p. 6; Meyers 2010, p. 5; Lauritsen *et al*. 2010, p. 3; Tomlinson 2009, p. 30). Early in the nesting season, the short-hydroperiod wetlands supply most of the forage, whereas later, the long-hydroperiod wetlands supply the prey needed to successfully fledge the offspring (Fleming *et al*. 1994, p. 754).

Mating and Reproduction

Wood storks are seasonally monogamous, probably forming a new pair bond every season. There is documented first breeding at 3 and 4 years old. Nest initiation varies geographically. Wood storks lay eggs as early as October and as late as June in Florida (Rodgers 1990, pp. 48–51). Wood storks in north Florida, Georgia, and South Carolina initiate nesting on a seasonal basis regardless of environmental conditions (USFWS 1997, p. 6). They lay eggs from March to late May, with fledging occurring in July and August. Historically, nest initiation in south Florida was in December and January; however, in response to the altered habitat conditions (wetland drainage, hydroperiod alteration) in south Florida, wood storks nesting in Everglades National Park and in the Big Cypress region of Florida have delayed initiation of nesting to February or March in most years since the 1970s. Colonies that start after January in south Florida risk having young in the nests when May–June rains flood marshes and disperse fish, which can cause nest abandonment.

Females generally lay a single clutch of two to five eggs per breeding season, but the average is three eggs. Females sometimes lay a second clutch if nest failure occurs early in the season (Coulter *et al.* 1999, p. 11). Average clutch size may increase during years of favorable water levels and food resources. Incubation requires about 30 days and begins after the female lays the first one or two eggs. Nestlings require about 9 weeks for fledging, but the young return to the nest for an additional 3 to 4 weeks to be fed. Actual colony production measurements are difficult to determine because of the prolonged fledging period, during which time the young return daily to the colony to be

fed.

Wood storks experience considerable variation in production among colonies, regions, and years in response to local and regional habitat conditions and food availability (Kahl 1964, p. 115; Ogden *et al.* 1978, pp. 10–14; Clark 1978, p. 183; Rodgers and Schwikert 1997, pp. 84–85). Several recent studies documented production rates to be similar to rates published between the 1970s and 1990s. Rodgers *et al.* (2008, p. 25) reported a combined production rate for 21 north- and central-Florida colonies from 2003 to 2005 of 1.19±0.09 fledglings per nest attempt (n = 4,855 nests). Rodgers *et al.* (2009, p. 3) also reported the St. Johns River basin production rate of 1.49±1.21 fledglings per nest attempt (n = 3,058 nests) and for successful nests an average fledgling rate of 2.26 ±0.73 fledglings per nest attempt (n = 2,105 nests) from 2004 to 2008. Bryan and Robinette (2008, p. 20) reported rates of 2.3 and 1.6 fledged young per nesting attempt in 2004 and 2005, respectively, for South Carolina and Georgia. Murphy and Coker (2008, p. 5) reported that since the wood stork was listed in 1984, South Carolina colonies averaged 2.08 young per successful nest with a range of 1.72 to 2.73. The Palm Beach County (PBC) Solid Waste Authority colony (M. Morrison, PBC, pers. comm., 2011) was documented with 0.75 fledgling per nesting attempt in 2010, with annual rates ranging from 0.11 to 1.49 (2003 to 2010). The Corkscrew Sanctuary colony in Naples, Florida (J. Lauritsen, Audubon, pers. comm., 2011), documented no nesting in 2010, but an average of 2.29 fledglings per nesting attempt in 2009, with average annual rates ranging from 0.00 (abandonment) to 2.55 (2001–2010).

Habitat

Wood storks use a wide variety of freshwater and estuarine wetlands for nesting, feeding, and roosting throughout their range and thus are dependent upon a mosaic of wetlands for breeding and foraging. For nesting, wood storks generally select patches of medium to tall trees as nesting sites, which are located either in standing water such as swamps, or on islands surrounded by relatively broad expanses of open water (Ogden 1991, p. 43). Colony sites located in standing water must remain inundated throughout the nesting cycle to protect against predation and nest abandonment. A wood stork tends to use the same colony site over many years, as long as the site remains undisturbed, and sufficient feeding habitat remains in the surrounding wetlands. Wood storks may abandon traditional wetland sites if changes in water management result in water loss from beneath the colony trees.

Typical foraging sites include a mosaic of shallow water wetlands. Several factors affect the suitability of potential foraging habitat for wood storks. Foraging habitats must provide both a sufficient density and biomass of forage fish and other prey and have vegetation characteristics that allow storks to locate and capture prey. Calm water, about 5 to 40 cm (2 to 16 in) in depth, and free of dense aquatic vegetation, is preferred (Coulter and Bryan 1993, p. 61). During nesting, these areas must also be sufficiently close to the colony to allow storks to deliver prey to nestlings efficiently.

Hydrologic and environmental characteristics have strong effects on fish density, and these factors may be some of the most significant in determining foraging habitat suitability.

Alterations in the quality and amount of foraging habitats in the Florida Everglades and extensive drainage and land conversions throughout south Florida led to the initial decline of the wood stork nesting population. Since listing under the Act, wood stork nesting and winter counts appear to be increasing slightly in south Florida and the Everglades (Newman 2009, p. 51; Alvarado and Bass 2009, p. 40), but the timing and location of nesting has changed in response to alterations in hydrology and habitat (Ogden 1994, p. 566). The overall distribution of the breeding population of wood storks is also in transition. The wood stork appears to have adapted to changes in habitat in south Florida in part by nesting later, nesting in colonies in the interior Everglades system (Ogden 1994, p. 566), and by expanding its breeding range north into Georgia, South Carolina, and North Carolina (Brooks and Dean 2008, p. 58).

Distribution

The wood stork occurs in South America from northern Argentina, eastern Peru, and western Ecuador, north into Central America, Mexico, Cuba, Hispaniola, and the southern United States. The breeding range includes the southeastern United States in North America, Cuba and Hispaniola in the Caribbean, and southern Mexico through

Central America (Figure 1). In South America, the breeding range is west of the Andes south from Colombia to western Ecuador, east of the Andes from Colombia south through the Amazonas in Brazil to eastern Peru, northern Bolivia and northern Argentina east to the Atlantic coast through Paraguay, Uruguay, and north to the Guianas (Figure 1; Coulter *et al.* 1999, p. 2). The winter range in Central and South America is not well studied, but wood storks are known to occur year-round as a resident throughout the breeding range.

At the time of listing in 1984, the range of the continental U.S. breeding population of wood storks was Florida, Georgia, South Carolina, and Alabama. Breeding was restricted primarily to peninsular Florida (22 colonies in 1983), with only four colonies occurring in Georgia and South Carolina. The current breeding range includes peninsular Florida (48 colonies in 2010), the coastal plain and large river systems of Georgia (21 colonies) and South Carolina (13 colonies), and southern North Carolina (1 colony). The breeding range also extends west to south-central Georgia and the panhandle of Florida to the Ochlockonee River system. The nonbreeding season range includes all of Florida; the coastal plains and large river systems of Alabama, Georgia, South Carolina; and southern North Carolina and eastern Mississippi.

Wood storks are not true migrants, but some individuals do undergo lengthy inter-regional travel in response to resource availability (Coulter *et al*. 1999, p. 3; Bryan *et al*. 2008, p. 39). Generally, wood storks disperse following breeding. As the rainy season

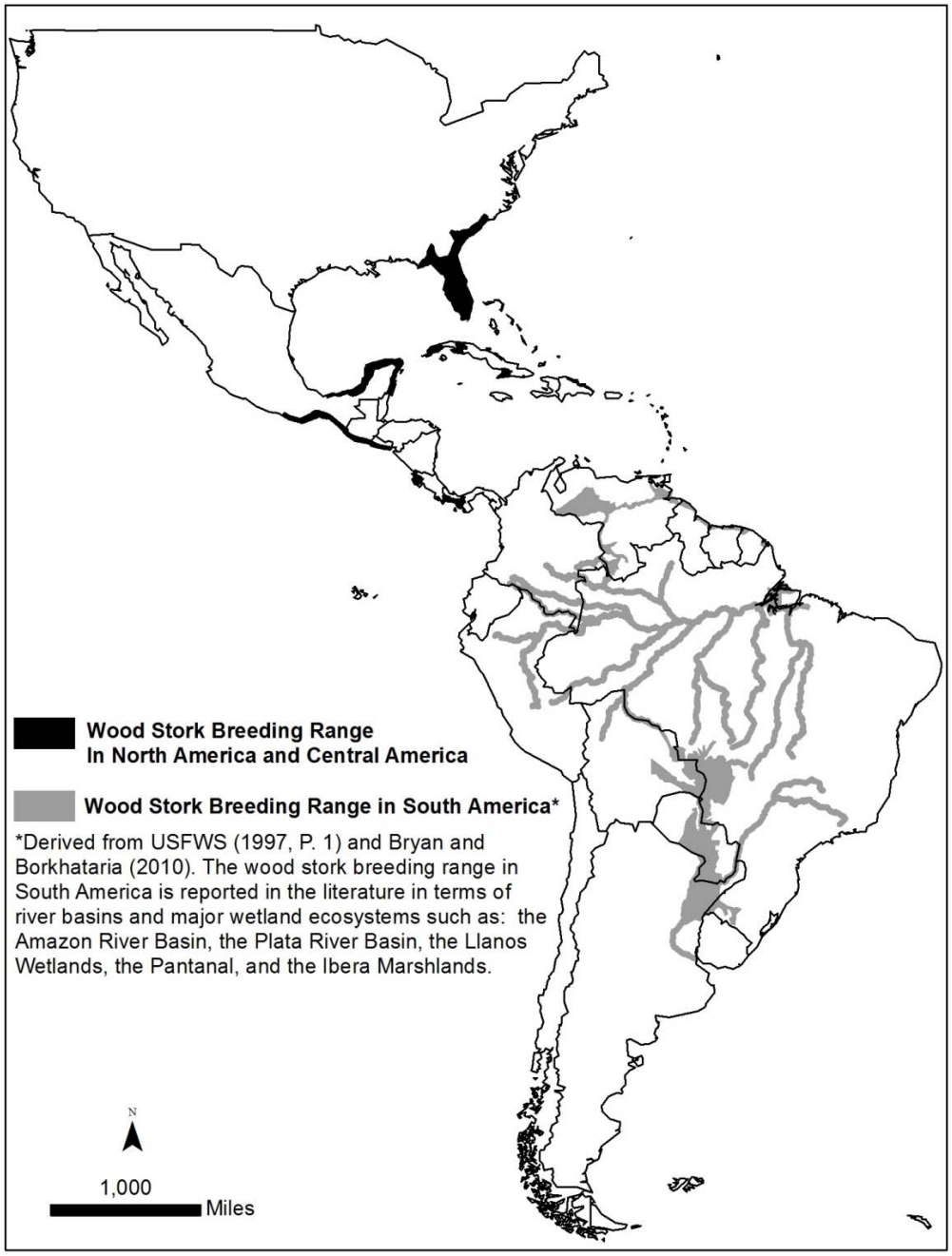

Figure 1. Breeding range of the wood stork in North, Central, and South America (USFWS 1997, p.1; Coulter *et al.* 1999, p.1; Bryan and Borkhataria 2010).

begins in May in south Florida and the Everglades, post-breeding wood storks, fledglings, and juveniles disperse throughout peninsular Florida and many move northward along the coastlines and coastal plain of Georgia, South Carolina, North Carolina and westward along large river basins in Alabama and eastern Mississippi. Individuals from northern Florida, Georgia, and South Carolina colonies also disperse across the coastal plain and coastal marshes in the southeast United States in July to August after the breeding season. Most wood storks in this population winter in south and central Florida and along the coast of peninsular Florida, Georgia, and South Carolina. These inter-regional movements have been documented through color marking, banding, radio-telemetry and satellite-telemetry studies (Comer *et al.* 1987, p. 165; Ogden 1996, p. 34; Coulter *et al.* 1999, p. 4; Savage *et al*. 1999, p. 65; Bryan *et al*. 2008, pp. 39–41). Wood storks are seasonal visitors in Texas, Louisiana, the lower Mississippi Valley, and California. These are post breeders and juveniles from Central America (Rechnitzer 1956, p. 431; Coulter *et al.* 1999, pp. 4–5). Bryan *et al.* (2008, pp. 39–40) suggest that wood storks observed in western Mississippi and Louisiana originate from Central America, and wood storks found in eastern Mississippi originate from the continental U.S. population. Behaviorally, wood storks are not predisposed to travel across the open waters like the Gulf of Mexico, as they use thermals for soaring flight for long-distance movements. The lack of thermals over open water restricts movements back and forth across the Gulf of Mexico from Florida to Central and South America or the Caribbean.

Rangewide Status and Demographics

At the global level, the International Union for Conservation of Nature (IUCN) classifies the wood stork as a species of "least concern." This is due to the apparent demographic stability documented in its large range that encompasses portions of North, Central, and South America (IUCN 2010, p. 1). Bryan and Borkhataria (2010, p. 2) compiled and summarized the conservation status for wood storks in Central and South America and provide the following description with regard to the rangewide status of the wood stork:

> The IUCN Red List/BirdLife International listing classifies the wood stork as a species of "least concern" for its entire range (BirdLife International 2008, 2009). This classification is based on breeding/resident range size, population trends, population size. This classification is due in part to an extremely large global breeding range (estimated at 14,000,000 km^2) and a moderately small to large population estimate (38,000–130,000 birds). Although the species' global population trend is thought to be decreasing, the decline is not thought to be sufficiently rapid to reach critical thresholds to threaten the species (BirdLife 2009: a "vulnerable" population exhibits a >30% decline over 10 years or three generations). Population size estimates for South America range from 50,000–100,000 wood storks (Byers *et al*. 1995) and approximately 48,000–70,000 wood storks in Central and North America (Kushlan *et al*. 2002).

The continental U.S. wood stork population decline between 1930 and 1978 is attributed to reduction in the food base necessary to support breeding colonies, which is thought to have been related to loss of wetland habitats and changes in hydroperiods (Ogden and Nesbitt 1979, p. 521; Ogden and Patty 1981, p. 97; USFWS 1997, p. 10; Coulter *et al.* 1999, p. 18). The continental U.S. breeding population is considered

regionally endangered by IUCN due to habitat degradation (IUCN 2011). Ogden (1978, p. 143) concluded the continental U.S. wood stork breeding population in the 1930s was probably less than 100,000 individuals, or between 15,000 and 20,000 pairs. The estimated continental U.S. population of breeding wood storks throughout the southeastern United States declined from 15,000–20,000, to about 10,000 pairs in 1960, to a low of 2,700–5,700 pairs between 1977 and 1980 (Ogden *et al.* 1987, p. 752). The low of 2,700 nesting pairs was documented in 1978, during the severe drought when many wood storks likely did not breed. In the initial 26-year period of listing under the Act (1984 to 2010), 17 surveys of all known nesting colonies of the wood stork in the continental U.S. population's breeding range (Florida, Georgia, South Carolina, and North Carolina) were completed. Eleven of those resulted in counts exceeding 6,000 pairs. Seven of those higher counts occurred during the past 10 years (2002, 2003, 2004, 2006, 2008, 2009, and 2010, Table 1, Service 2010). Two counts of over 10,000 pairs have occurred during the past 5 years, and the count of 12,720 pairs in 2009 is the highest on record since the early 1960s. This population estimate along with a conservative estimate of 4,000 pre-breeding age birds suggest 30,000 storks were inhabiting the United States in 2009 (Bryan and Borkhataria 2010, p. 2). From 2009 to 2011 there was a decline in observed wood storks likely due to drought. It should be noted that the wood stork is a long-lived species that demonstrates considerable variation in nesting population numbers in response to changing hydrological conditions. This long reproductive lifespan allows wood storks to tolerate reproductive failure in some years, and naturally occurring events have undoubtedly always affected the breeding success of

this species, causing breeding failures and variability in annual nesting (USFWS 1997, p. 11) and productivity.

Table 1. Wood Stork Nesting Data in the Southeastern United States (Service 2011).

YEAR	TOTAL		FLORIDA		GEORGIA		SOUTH CAROLINA		NORTH CAROLINA	
	Nesting Pairs	Colonies	Nesting Pairs	Colonies	Nesting Pairs	Colonies	Nesting Pairs	Colonies	Nesting Pairs	Colonies
1975	9,752	27	9,610	24	142	3				
1976	5,310	17	5,294	16	16	1				
1977	5,263	25	5,125	21	138	4				
1978	2,695	18	2,595	16	100	2				
1979	4,648	24	3,800	22	55	2				
1980	5,063	25	4,766	20	297	5				
1981	4,442	22	4,156	19	275	2	11	1		
1982	3,575	22	3,420	18	135	2	20	1		
1983	5,983	25	5,600	22	363	2	20	1		
1984	6,245	29	5,647	25	576	3	22	1		
1985	5,193	23	4,562	30	557	5	74	1		
1986			**		648	4	120	3		
1987			**		506	5	194	3		
1988			**		311	4	179	3		
1989			**		543	6	376	3		
1990			**		709	10	536	6		
1991	4,073	37	2,440	25	969	9	664	3		
1992			**		1,091	9	475	3		
1993	6,729	43	4,262	29	1,661	11	806	3		
1994	5,768	47	3,588	26	1,468	14	712	7		
1995	7,853	54	5,523	31	1,501	17	829	6		
1996			**		1,480	18	953	7		
1997			**		1,379	15	917	8		
1998			**		1,665	15	1,093	10		
1999	7,768	71	6,109	51	1,139	13	520	8		
2000			**		566	7	1,236	11		
2001	5,582	44	3,246	23	1,162	12	1,174	9		

2002	7,855	70	5,463	46	1,256	14	1,136	10		
2003	8,813	78	5,804	49	1,653	18	1,356	11		
2004	8,379	93	4,726	63	1,596	17	2,057	13		
2005	5,572	73	2,304	40	1,817	19	1,419	13	32	1
2006	11,279	82	7,216	48	1,928	21	2,010	13	125	1
2007	4,406	55	1,553	25	1,054	15	1,607	14	192	1
2008	6,118	73	1,838	31	2,292	25	1,839	16	149	1
2009	12,720	86	9,428	54	1,676	19	1,482	12	134	1
2010	8,149	94	3,828	51	2,708	28	1,393	14	220	1
2011	9,579	88	5,292	45	2,160	19	2,031	23	96	1

** No survey data available for North and Central Florida.

Previous Federal Action

On February 28, 1984, the Service published a final rule listing the continental U.S. breeding population of the wood stork as endangered under the Act, due primarily to the loss of suitable feeding habitat, particularly in south Florida, and a declining population (49 FR 7332). The endangered status covers wood storks in the States of Alabama, Florida, Georgia, and South Carolina (the known range of the continental U.S. breeding population at the time of listing). We developed a recovery plan in 1986 for the continental U.S. breeding population of the wood stork. The recovery plan was revised on January 27, 1997, and addressed existing and new threats and species needs.

We published a notice in the **Federal Register** on November 6, 1991 (56 FR 56882) that we were conducting a 5-year review for all endangered and threatened species listed before January 1, 1991, including the wood stork. The notice indicated that if significant data were available warranting a change in a species' classification, we would propose a rule to modify the species' status. We did not recommend a change in the wood stork's listing classification under the Act at that time. On September 27, 2006 (71 FR 56545), we published a notice in the **Federal Register** that we were initiating another 5-year status review for the wood stork. We solicited information from the public concerning the status of the species, including the status and trends of threats to the species under section 4(a)(1) of the Act. We completed the 5-year status review on September 27, 2007. Completed in accordance with section 4(c)(2) of the Act, the 5-year status review contains a detailed description of the species' natural history and status,

including information on distribution and movements, behavior, population status and trends, and factors contributing to the status of the continental U.S. breeding population. It also presents a detailed analysis of the five factors that are the basis for determination of a species' status under section 4(a)(1) of the Act. A copy of the 5-year status review is available on our website (*http://www.fws.gov/ecos/ajax/docs/five_year_review/doc1115.pdf*) and includes a recommendation to reclassify the continental U.S. breeding population of the wood stork from endangered to threatened.

We received a petition to reclassify the continental U.S. breeding population of the wood stork as threatened on May 28, 2009, from the Pacific Legal Foundation on behalf of the Florida Homebuilders Association. The petition presented the Service's 2007 5-year status review as its sole supporting information. The petition incorporated the status review by reference, including a summary of the five-factor analysis contained in the status review, which included a recommendation to reclassify the species. We found that the petition presented substantial information indicating that reclassifying the continental U.S. breeding population of the wood stork to threatened may be warranted. We published a notice announcing our 90-day finding and initiation of the species' status review in the **Federal Register** on September 21, 2010 (75 FR 57426).

Current Federal Action

Section 4(b)(3)(B) of the Act requires that for any petition to revise the Lists of Endangered and Threatened Wildlife and Plants (Lists) that presents substantial information, we must make a finding within 12 months of the date of the receipt of the petition, on whether the requested action is (a) Not warranted, (b) warranted, or (c) warranted but precluded from immediate proposal by other pending proposals of higher priority and expeditious progress is being made to add qualified species to the Lists. This proposed rule constitutes our 12-month finding that the action sought by the May 28, 2009, petition is warranted.

Distinct Vertebrate Population Segment Analysis

On February 7, 1996, we published in the **Federal Register** our ‘‘Policy Regarding the Recognition of Distinct Vertebrate Population Segments Under the Endangered Species Act’’ (DPS Policy) (61 FR 4722). For a population to be listed under the Act as a distinct vertebrate population segment, three elements are considered: (1) The discreteness of the population segment in relation to the remainder of the species to which it belongs; (2) the significance of the population segment to the species to which it belongs; and (3) the population segment's conservation status in relation to the Act's standards for listing, (*i.e.,* is the population segment, when treated as if it were a species, endangered or threatened). The Act defines "species" to include "… any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature" (16 U.S.C. 1532(16)). The best available scientific information supports

recognition of the continental U.S. breeding population of the wood stork as a distinct vertebrate population segment. We discuss the discreteness and significance of the population segment within this section; the remainder of the document discusses the status of the continental U.S. wood stork DPS.

Discreteness

The DPS policy states that a population segment of a vertebrate species may be considered discrete if it satisfies either one of the following conditions:
(1) It is markedly separated from other populations of the same taxon as a consequence of physical, physiological, ecological, or behavioral factors. Quantitative measures of genetic or morphological discontinuity may provide evidence of this separation; or
(2) It is delimited by international governmental boundaries between which significant differences exist in control of exploitation, management of habitat, conservation status, or regulatory mechanisms that are significant in light of section 4(a)(1)(D) of the Act.

Globally, wood storks occur only in the Western Hemisphere and are comprised of a mosaic of breeding populations in North, Central, and South America, and the Caribbean, each with unique nesting sites, foraging areas, and seasonal movement patterns in response to regional environmental factors. Historically, wood storks nested in all Atlantic and Gulf coastal United States from Texas to South Carolina (Bent 1926; Cone and Hall 1970; Dusi and Dusi 1968; Howell 1932; Oberholser 1938; Oberholser

and Kincaid 1974; Wayne 1910), although the colonies outside Florida formed irregularly and contained few birds (Ogden and Nesbitt 1979, p. 512).

Currently, the continental U.S. breeding population of wood storks is documented only in Mississippi, Alabama, Florida, Georgia, South Carolina, and North Carolina. The continental U.S. wood stork population represents the northernmost extent of the wood stork's range and the only population breeding in the continental United States (USFWS 1997, p. 1; Coulter *et al.* 1999, pp. 2–3) The continental U.S. population's breeding range is separated by the Strait of Florida from the nearest nesting population, which is located in Cuba, 151 km (94 mi); it is approximately 965 km (600 mi) over the Gulf of Mexico from the nearest North American nesting colony, which breeds in southern Mexico. However, wood storks are not behaviorally predisposed to travel across the open ocean. Wood storks use thermals for soaring flight for long-distance movements. The lack of thermals over water may restrict movements from Florida to the Caribbean or to Mexico and Central and South America (Coulter *et al*. 1999, p. 4). The available evidence does not suggest that wood storks have crossed the Florida Straits between the Caribbean islands and the United States or crossed the Gulf of Mexico to or from Central and South America.

Lengthy inter- and intra-regional movements, related to food availability, to the wetlands of the Mississippi River Basin and adjacent coastal plain river basins have been documented from both the continental U.S. population and Central American wood storks (Coulter *et al*. 1999, p. 5; Bryan *et al.* 2008, pp. 40–41). These studies suggest

post-breeding dispersal occurs along the coastal plain, not across the Gulf of Mexico, and that wood storks observed in eastern Mississippi originate from the southeast United States, and those observed in western Mississippi and Louisiana originate from Central America. A small percentage of wood storks from both the United States and Central America apparently overlap during this post-breeding season dispersal within Mississippi. There may be some small but unknown level of mixing between continental U.S. and Central American breeding populations in Mississippi (Bryan *et al.* 2008, pp. 40–41; R. Borkhataria, University of Florida, pers. comm., 2010). However, based upon satellite-telemetry studies (*e.g.*, Hylton 2004; Hylton *et al*. 2006; Bryan *et al*. 2008; Borkahatria 2009; Lauritsen 2010) and other marking studies, mixing appears negligible. Based on the above information, if the continental U.S. population were extirpated, it is our assessment that repopulation from the Central American wood storks would not be sufficient to replenish the depleted population in the foreseeable future.

Genetic data support the conclusion that wood storks occurring in the southeastern United States function as one population. Stangle *et al*. (1990, p. 15) employed starch gel electrophoretic techniques to examine genetic variation in Florida wood stork colonies. The study did not indicate significant allozyme differences within or between colonies. Van Den Bussche *et al*. (1999, p. 1083) used a combination of DNA or allozyme approaches and found low levels of genetic variability and allelic diversity within Georgia and Florida colonies, suggesting one population of wood storks in the southeastern United States. A genetic comparison using mtDNA between

continental U.S. and Brazilian wood storks (the north and south ends of the geographic range) reveals that either a demographic decline or a recent evolutionary bottleneck reduced the levels of mitochondrial DNA (mtDNA) variability of the continental U.S. population (Lopes *et al*. 2011, p. 1911). The genetic structuring assessment revealed nonsignificant differentiation between the continental U.S. and Brazilian wood storks, indicating that either the populations were only recently separated or that gene flow continues to occur at low levels, and the haplotype network analysis indicated low levels of gene flow between populations that were closely related in the past (Lopes *et al*. 2011, p. 1911). Genetic studies indicate that there are nonsignificant differences between continental U.S. and Brazilian wood storks. However, satellite tracked movements of U.S. and Central American wood storks indicate that U.S. and Brazilian birds likely do not interbreed (Hylton 2004; Hylton *et al*. 2006; Bryan *et al*. 2008; Borkahatria 2009; Lauritsen 2010). Based on the genetic information, we conclude that a past demographic decline has led to the reduced levels of genetic variability in all populations of wood stork that were studied, that continental U.S. and other populations were only recently separated, that the southeastern U.S. populations act as a single population, and there is negligible or very low gene flow between populations in the United States and Brazil.

Consequently, we conclude based on the best available information that the continental U.S. breeding population of the wood stork is markedly separated from wood stork populations in the Caribbean, Mexico, Central America, and South America based on physical separation and wood stork dispersal behavior.

Significance

The DPS policy states that populations that are found to be discrete will then be examined for their biological or ecological significance to the taxon to which they belong. This consideration may include evidence that the loss of the population would create a significant gap in the range of the taxon. The continental U.S. breeding population of the wood stork represents the northernmost portion of the species' range in the world (Coulter *et al.* 1999, p. 2) and the only population breeding in the United States. Loss of this population would result in a significant gap in the extent of the species' range. Because the nearest populations in the Caribbean and North America would not likely be able to naturally repopulate the continental U.S. breeding population if it were extirpated, wood storks would no longer breed in the Everglades and in the salt and fresh water wetlands of Florida, Georgia, South Carolina, and North Carolina. Maintaining a species throughout its historical and current range helps ensure the species' population viability and reduce impacts to species as a whole due to localized stochastic events. Therefore, we find that loss of continental U.S. breeding population of the wood stork, whose range has expanded to include Mississippi and North Carolina (USFWS 2007, p. 11), would constitute a significant gap in the range of the species as a whole.

Summary

Based on the above analysis, we conclude that the continental U.S. breeding population of wood storks meets both the discreteness and significance elements of the 1996 DPS policy. Therefore, we recognize this population as a valid DPS.

Recovery Actions

We published the original recovery plan for the continental U.S. breeding population of wood stork on September 9, 1986, and revised it on January 27, 1997 (Service 1997). The recovery plan identifies four primary recovery actions for the continental U.S. breeding population of the wood stork. Species-focused recovery tasks include: (1) Protect currently occupied habitat, (2) restore and enhance habitat, (3) conduct applied research necessary to accomplish recovery goals, and (4) increase public awareness. These primary recovery actions have been initiated. Many of the actions listed under these categories are of high priority to implement and are ongoing.

Recovery Task (1): Protect currently occupied habitat. At a minimum, for continued survival of the continental U.S. breeding population, currently occupied nesting, roosting, and foraging habitat must be protected from further loss or degradation. Watersheds supporting natural nesting habitat should remain unaltered, or be restored to function as a natural system if previously altered. Recovery actions under this recovery task include: (1.1) Locate important habitat, (1.2) prioritize habitat, (1.3) work with

private landowners to protect habitat, (1.4) acquire land, (1.5) protect sites from disturbance, and (1.6) use existing regulatory mechanisms to protect habitat.

Recent habitat models (*e.g.*, Gawlik 2002; Herring 2007; Borkhataria 2009; Rodgers *et al.* 2010); ongoing annual monitoring of nesting colonies (*e.g.*, Cook and Korboza 2010; Brooks and Dean 2008; Murphy and Coker 2008; Winn *et al.* 2008; Frederick and Meyer 2008); surveys of nesting colony core foraging areas in Florida, Georgia, and South Carolina (*e.g.*, Herring 2007; Bryan and Stephens 2007; Lauritsen 2010; Tomlinson 2009; Meyer 2010); and satellite-telemetry studies (*e.g.*, Hylton 2004; Hylton *et al*. 2006; Bryan *et al*. 2008; Borkahatria 2009; Lauritsen 2010) are helping to update conservation information and tools that are used to identify, prioritize, protect, restore, and acquire important wood stork habitats. Core foraging areas near large colonies on protected lands, like Corkscrew Swamp Sanctuary in Florida, Harris Neck National Wildlife Refuge in Georgia, and Washo Plantation in South Carolina, have been identified. However, alteration and loss of foraging habitat continues as a threat to recovery, as such habitat continues to be lost today through the continual expansion of the human environment, resulting in new development and associated roads and other infrastructure. The Service has developed a brochure, Wood Stork Conservation and Management for Land Owners, to assist public and private land managers in protecting and restoring wood stork habitat (Service 2001). The wood stork habitat management guidelines are also being updated (Bryan 2006) and are an important conservation tool to provide guidance on protecting wood storks and their habitats. In an effort to minimize

loss of wetland habitats important to wood stork recovery, like those within the core foraging area of a nesting colony, the Service's South and North Florida Ecological Services Field Offices have also developed a "May Affect" key to assist regulators with review of wetland dredge and fill permit applications.

Recovery Task (2): Restore and enhance habitat. A prerequisite for recovery of the wood stork in the southeastern United States is the restoration and enhancement of suitable habitat throughout the mosaic of habitat types used by this species. Recovery actions include: (2.1) Restore the Everglades and Big Cypress system, (2.2) enhance nesting and roosting sites throughout the range, and (2.3) enhance foraging habitat by modifying hydrologic regimes in existing artificial impoundments to maximize use by wood storks.

Wood storks depend upon a mosaic of wetlands throughout the coastal plain of the southeastern United States for breeding and foraging. Ecosystems and wetlands are being restored throughout the southeastern United States through programs such as the Comprehensive Everglades Restoration Program (CERP) (RECOVER 2009); Kissimmee River Restoration Project, which includes a goal to restore over 40 square miles of river and floodplain ecosystem including 43 miles of meandering river channel and 27,000 acres of wetlands (USACE 2011); and Upper St. Johns Basin Restoration Project, which has enhanced and restored 150,000 acres of marsh (SJRWMD 2011). These and other large-scale wetland restoration projects are significantly contributing to wood stork

recovery by reducing the threat of habitat loss. Management plans such as State wildlife action plans (*http://www.wildlifeactionplans.org/*) help to identify important habitats on which to focus conservation efforts. Other management plans such as the North American Waterfowl Management Plan (USFWS 2011) also help to identify focus areas for conservation. By highlighting important habitats or areas, such as the ACE Basin and Winyah Bay in South Carolina, funds and conservation initiatives are directed towards restoring these important habitat areas and contribute to recovery by reducing the threat due to loss of habitat. Thousands of acres are being protected, enhanced, restored, and brought under conservation easements to assist in wildlife conservation through programs such as the Wetland Reserve Program (WRP) and the Farm Bill, including 70,000 acres of wetlands in Alabama, Florida, Georgia, Mississippi, North Carolina, and South Carolina in 2010 (NRCS 2011). The WRP is a voluntary program offering landowners the opportunity to protect, restore, and enhance wetlands on their property. The U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS) provides technical and financial support to help landowners with their wetland restoration efforts. The goal of the NRCS is to achieve the greatest wetland functions and values, along with optimum wildlife habitat, on every acre enrolled in the program. This program offers landowners an opportunity to establish long-term conservation and wildlife practices and protection, and therefore provides some benefits to wood stork recovery. In Florida, the WRP program has restored over 200,000 acres of wetlands (Simpkins, Service, pers. comm., 2011) and over 115,000 acres in Alabama, Georgia, and South Carolina. A majority of the Florida WRP-restored acres have been within the Everglades and Big

Cypress systems. A 2006 WRP restoration of 200 acres of farmland in Camilla, Georgia, now supports the newest Georgia wood stork colony, with over 100 nesting pairs annually. This task will be complete once viable nesting occurs throughout the range of this DPS. The most significant wetland restoration goal for wood storks is to recover viable nesting subpopulations in the traditional Everglades and Big Cypress nesting areas as outlined by CERP. Overall, future wetland restoration efforts in the Southeast U.S. will be beneficial to wood stork recovery.

Recovery Task (3): Conduct applied research necessary to accomplish recovery goals. Recovery efforts for the wood stork will be more effective with a better understanding of population biology, movement patterns of continental U.S. and neighboring populations of wood storks, foraging ecology and behavior, the importance of roost sites, and the possible impacts of contaminants. Recovery actions include: (3.1) Determine movement patterns of continental U.S. and neighboring populations of wood storks, (3.2) determine population genetics, (3.3) monitor productivity of stork populations, (3.4) monitor survivorship of stork populations, (3.5) determine extent of competition/cooperation between wood storks and other wading birds in mixed nesting colonies, (3.6) determine foraging ecology and behavior, (3.7) determine the importance of roost sites, and (3.8) determine the impacts of contaminants on wood stork populations. The following is a summary of several recent monitoring and research findings.

The South Florida Wading Bird Report (1996–2010) annually reports on habitat monitoring and research with respect to the CERP and foraging and nest monitoring projects for wood storks and wading birds utilizing the Everglades and Big Cypress systems. This report provides an annual assessment on the Restoration Coordination and Verification Program (RECOVER), the system-wide science arm of the CERP. Per Recovery Action 3.1 and 3.6, satellite-telemetry studies are providing new insight into movement patterns (*e.g.*, Hylton 2004; Bryan *et al.* 2008; Borkhataria 2009; Lauritsen 2010). Surveys to determine foraging distances from nesting colonies and satellite-telemetry research are helping to update our understanding of wood stork foraging ecology and of core foraging areas (*e.g.*, Herring 2007; Bryan and Stephens 2007; Borkhataria 2009; Meyers 2010; Lauritsen 2010; Tomlinson 2009). Satellite-telemetry data and banding studies are helping to refine survival estimates (Borkhataria 2009, pp. 63–64) for population modeling (Borkhataria 2009) as identified under Recovery Action 3.4. Ongoing systematic reconnaissance flights of the Everglades, Kissimmee River, water conservation areas, Big Cypress National Preserve, and Upper St. Johns River are monitoring wood stork abundance and distribution in south Florida (Cheek 2010, pp. 22–26; Alvarado and Bass 2010, pp. 30–39; Nelson 2010, p. 40; D. Hall, SJRWMD, pers. comm., 2008). Annual nesting colony surveys help to monitor the status of the breeding population. Per Recovery Action 3.3, recent productivity research and monitoring efforts have documented productivity rates to be similar to rates documented between the 1970s and 1990s (Rodgers *et al*. 2008; Bryan and Robinette 2008), and Rodgers *et al*. (2008, p. 25) suggest the need to develop an unbiased estimator of productivity that takes into

consideration the lack of nesting during some years to more accurately estimate wood stork productivity at the regional level. A genetic structuring and haplotype network analysis comparison indicates that either a demographic decline or a recent evolutionary bottleneck reduced the levels of genetic variability in the continental U.S. population (Lopes *et al*. 2011, p. 1911) is research addressing Recovery action 3.2. The genetic structuring assessment revealed nonsignificant differentiation, indicating that continental U.S. and Brazilian wood stork populations were only recently separated or that gene flow between these populations continues to occur at low levels. The haplotype network analysis indicated low current levels of gene flow between populations that were closely related in the past (Lopes *et al*. 2011, p. 1911).

Recovery Task (4): Increase public awareness. Wood storks utilize a wide variety of wetland habitats. They are visually unique and generate interest from the public. These factors have made the wood stork the subject of many environmental education materials and programs. There are many brochures, videos, and educational packets available. Recovery actions include: (4.1) Increase awareness and appreciation through educational materials, and (4.2) provide opportunities for the public to view wood storks in captivity.

Examples of such wood stork educational efforts to increase public awareness can be found on our website (*http://www.fws.gov/northflorida/WoodStorks/wood-storks.htm*) and the websites of many of our recovery partners, including the Everglades National

Park (*http://www.nps.gov/ever/naturescience/woodstork.htm*), Florida Fish and Wildlife Conservation Commission (*http://myfwc.com/research/wildlife/birds/wood-storks/*), Georgia Department of Natural Resources (*http://www.georgiawildlife.com/sites/default/files/uploads/wildlife/nongame/pdf/accounts/birds/mycteria_americana.pdf*), South Carolina Department of Natural Resources (*http://www.dnr.sc.gov/cwcs/pdf/Woodstork.pdf*), University of Florida (*http://www.wec.ufl.edu/faculty/frederickp/woodstork/*), Audubon Society (*http://birds.audubon.org/species/woosto*), Corkscrew Sanctuary Swamp (*http://www.corkscrewsanctuary.org/Wildlife/Birds/profiles/wost.pdf*), and others.

Opportunities for the public to view wood storks in the wild include almost all National Wildlife Refuges (NWR) and National Parks and Preserves in Florida and coastal Georgia and South Carolina, including the Everglades National Park, Ten Thousand Island NWR, J.N. Ding Darling NWR, Loxahatchee NWR, Pelican Island NWR, Merritt Island NWR, Harris Neck NWR, and ACE Basin NWR. Several wood stork nesting colonies can also be seen at public observation areas that do not disturb the colony, such as Audubon's Corkscrew Swamp Sanctuary, Parotis Pond in Everglades National Park, Pelican Island NWR, St. Augustine Alligator Farm, Jacksonville Zoo and Gardens, and Harris Neck NWR.

Recovery Achieved

The recovery criteria for the continental U.S. breeding population DPS of wood storks state that reclassification from endangered to threatened could be considered when there are 6,000 nesting pairs and annual average regional productivity is greater than 1.5 chicks per nest per year (both calculated over a 3-year average). Although variable, productivity appears to be sufficient to support continued population growth as evidenced by the increasing nesting population and range expansion.

1. Nesting pairs. The continental U.S. breeding population of the wood stork has been increasing since it was listed in 1984 (Brooks and Dean 2008, p. 58; Borkhataria 2009, p. 34). Regional nesting surveys to census wood stork colonies have been continuous in south Florida and Georgia since 1976, and in South Carolina since 1981. Nest censuses of the entire breeding range were conducted in 1975-1986, 1991, 1993-1995, 1997, 1999, and 2001-2010 (Table 1). The 3-year average for nesting pairs has exceeded the reclassification criterion of 6,000 every year since 2003 (Table 2). However, the nesting pair average is well below the 5-year average of 10,000 nesting pairs (a benchmark for delisting), and the 5-year averages for nesting in the Everglades and Big Cypress Systems are below 2,500 nesting pairs (another benchmark for delisting), as nesting in south Florida remains variable (Table 2).

Table 2. Wood stork nesting data in the southeastern United States and 3-year averages (Service 2011).

YEAR	TOTAL		South FL		Central/North FL		GA		SC		NC	
	Nesting Pairs	3yr Avg	Nesting Pairs	3yr Avg	Nesting Pairs	3yr Avg	Nesting Pairs	3yr Avg	Nesting Pairs	3yr Avg	Nesting Pairs	3yr Avg
1981	4,442		2,428		1,728		275		11			
1982	3,575		1,237		2,183		135		20			
1983	5,983	4,667	2,858	2,174	2,742	2,218	363	258	20	17		
1984	6,245	5,268	1,245	1,780	4,402	3,109	576	358	22	21		
1985	5,193	5,807	798	1,634	3,764	3,636	557	499	74	39		
1986			643	895			648	584	120	72		
1987			100	514			506	570	194	129		
1988			755	499			311	488	179	164		
1989			515	457			543	453	376	250		
1990			475	582			709	521	536	364		
1991	4,073		550	513	1,890		969	740	664	525		
1992			1,917	981			1,091	923	475	558		
1993	6,729		587	1,018	3,675		1,661	1,240	806	648		
1994	5,768		741	1,082	2,847		1,468	1,407	712	664		
1995	7,853	6,783	1140	823	4,383	3,635	1,501	1,543	829	782		
1996			1215	1,032			1,480	1,483	953	831		
1997			445	933			1,379	1,453	917	900		
1998			478	713			1,665	1,508	1,093	988		
1999			2,674	1,190			1,139	1,394	520	843		
2000			3,996	2,383			566	1,123	1,236	950		
2001	5,582		2,888	3,186	358		1,162	956	1,174	977		
2002	7,855		3,463	3,449	2,000		1,256	995	1,136	1,182		
2003	8,813	7,417	1,747	2,699	4,057	2,138	1,653	1,357	1,356	1,222		
2004	8,379	8,349	1,485	2,232	3,241	3,099	1,596	1,502	2,057	1,516		
2005	5,572	7,588	591	1,274	1,713	3,004	1,817	1,689	1,419	1,611	32	
2006	11,279	8,410	2,648	1,575	4,568	3,174	1,928	1,780	2,010	1,829	125	
2007	4,406	7,086	696	1,312	857	2,379	1,054	1,600	1,607	1,679	192	116

2008	6,118	7,268	344	1,229	1,494	2,306	2,292	1,758	1,839	1,819	149	155
2009	12,720	7,748	5,816	2,285	3,612	1,988	1,676	1,674	1,482	1,643	134	158
2010	8,141	8,993	1,220	2,460	2,600	2,571	2,708	2,225	1,393	1,571	220	168
2011	9,579	10,147	2,131	3,056	3,161	3,124	2,160	2,181	2,031	1,635	96	141

2. Productivity. There is also a need to systematically determine reproductive success (number of fledged young per nest and number of fledged young per successful nest) for a majority of the colonies in the same year(s) to better estimate productivity of the breeding population (USFWS 1997, p. 24). The Service acknowledges that the productivity dataset is incomplete, with less than 25 percent of the colonies surveyed for productivity during the past 4 years and 50 percent surveyed between 2003 and 2007. Brooks and Dean (2008, p.56) indicate the average productivity rate for all colonies monitored in the southeastern United States was 1.5 chick/nest attempt between 2004 and 2006; 1.2 chick/nest attempt between 2003 and 2005; and 1.5 chick/nest attempt between 2003 and 2006 (Brooks and Dean 2008, p. 56). Rodgers *et al*. (2008, p. 25) found that colonies farther north in Florida exhibited greater productivity, and that colonies in northeastern and northwestern Florida had greater fledging rates than colonies farther south in central Florida. Bryan and Robinette (2008, p. 20) found Georgia and South Carolina rates similar to North Florida rates. Due to funding and manpower constraints, rangewide, Statewide, and regional monitoring of wood stork productivity only has occurred episodically (e.g., early 1980s and 2000s). As there are now over 80 wood stork colonies, Rodgers *et al*. (2008, p. 32) identifies the need to develop a long-term program of monitoring that relies on monitoring of fewer colonies.

Based upon the nesting population criteria in the recovery plan, we can consider the continental U.S. breeding population of the wood stork for reclassification to

threatened status at this time because wood storks and their habitat would continue to receive the protections of the Act, and management efforts continue to maintain, enhance, and restore the amount and quality of available habitat to support a growing population. For the following reasons, we believe that the continental U.S. breeding population of the wood stork has surpassed the recovery criteria outlined as necessary for reclassification. As shown in Table 2 of this document, the nesting population is increasing and well above the reclassification benchmark (Brooks and Dean 2008, p. 58; Table 2). The total number of nesting colonies has remained stable in south Florida and the number of colonies in central and north Florida, Georgia, South Carolina, and North Carolina continue to increase (Ogden *et al.* 1987, p. 754; Brooks and Dean 2008, p. 54; Table 1). The nesting range continues to expand with new colonies documented in North Carolina and western Georgia. Although variable (particularly in south Florida) and not yet well documented, productivity appears to be sufficient to support continued population growth, as evidenced by the increasing population and range expansion described above. Population trends suggest that the overall population may approach the delisting benchmark of 10,000 nesting pairs during the next 15 to 20 years. Nesting numbers suggest a stable or increasing population, however, data are not available to evaluate the productivity criterion of 1.5 chicks per nest per year.

Summary of Factors Affecting the Species

Section 4 of the Act and its implementing regulations (50 CFR part 424) set forth the procedures for listing, reclassifying, or removing a species from, the Federal Lists of Endangered and Threatened Wildlife and Plants. Under section 3 of the Act, a species is "endangered" if it is in danger of extinction throughout all or a "significant portion of its range" and is "threatened" if it is likely to become endangered within the foreseeable future throughout all or a "significant portion of its range." The word "range" refers to the range in which the species currently exists, and the word "significant" refers to the value of that portion of the range being considered to the conservation of the species. The "foreseeable future" is the period of time over which events or effects reasonably can or should be anticipated, or trends extrapolated. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1) of the Act: (A) The present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; or (E) other natural or manmade factors affecting its continued existence.

The following analysis examines all five factors currently affecting or that are likely to affect the wood stork within the foreseeable future:

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

Throughout its range in the southeastern United States, wood storks are dependent upon wetlands for breeding and foraging. Preventing loss of wood stork nesting habitat and foraging wetlands within a colony's core foraging area is of the highest priority. In addition, winter foraging habitat is important to recovery, as it may determine the carrying capacity of the continental U.S. wood stork DPS. While the immediacy and the magnitude of this factor are substantially reduced when compared to when this species was originally listed, the destruction, fragmentation, and modification of its wetland habitats continues to occur and could accelerate in the absence of the protections of the Act.

Hefner *et al.* (1994, p. 21) estimated that 1.3 million acres of wetlands lost in the southeastern United States between the mid 1970s and mid 1980s were located in the Gulf-Atlantic Lower Coastal Plain, an area upon which wood storks are dependent. Ceilley and Bartone (2000, p.70) suggest that short hydroperiod wetlands provide a more important pre-nesting food source and provide for a greater early nestling survivorship for wood storks than previously known. Wetlands that wood storks use for foraging are being lost through permitted activities where mitigation is provided. However, it is not known if wood stork foraging wetlands are being replaced with like-quality foraging wetlands within the core foraging area of an impacted colony. Lauritsen (2010, pp.4-5) suggests that today's mitigation practices lead to a disproportionate loss of short hydroperiod wetlands. The impacts of the loss of short hydroperiod (isolated) wetlands,

which supply most of the food energy for initiating reproduction (Fleming *et al*. 1994, p. 754), may result in abandonment of nest colonies by wood storks (*e.g*., Corkscrew Swamp Sanctuary). Frederick and Meyer (2008, p. 15) suggest that the decline in colony size in Florida reflects the increasingly fragmented nature of Florida's wetlands resulting from development.

The decline of south Florida's Everglades and Big Cypress ecosystems is well-documented (*e.g*., Davis and Ogden 1994). Prior to 1970, a majority (70 percent) of the wood stork population nested south of Lake Okeechobee and declined from 8,500 nesting pairs in the early 1960s to around 500 pairs in the late 1980s and early 1990s (Service 1997). The primary cause of this decline was the loss of wetland function of these south Florida ecosystems that resulted in reduced prey availability or loss of wetland habitats (Service 1997, p. 10).

Wood storks use manmade wetlands for foraging and breeding purposes. Manmade wetlands include, but are not limited to, storm water treatment areas and ponds, golf course ponds, borrow pits, reservoirs, roadside ditches, agricultural ditches, drainages, flow-ways, mining and mine reclamation areas, and dredge spoil sites. The impacts can be positive in certain scenarios as these wetlands can provide protected foraging and nesting habitat, and may offset some losses of natural wetlands caused by development. A significant number of wood stork colonies are located where water management practices can impact the nesting habitat negatively. Colonies that are

perpetually flooded will have no tree regeneration. Draining surface waters of a colony's wetland or pond will prevent wood storks from nesting, and lowered water levels after nest initiation facilitate raccoon predation. Lowering surface water or water table may occur through water control structures, manipulating adjacent wetlands, or water withdrawals from the local aquifer and can prevent wood storks from nesting or cause colony failure.

While habitat loss, fragmentation, and degradation continue to occur throughout the range of the continental U.S. population of wood stork, there are also protection, acquisition, and restoration efforts in progress. Natural wetlands are being targeted for acquisition to be protected through the management of public lands for wildlife and water conservation (NRCS 2006, p. 1). In Florida, the Wetlands Reserve Program has restored over 200,000 acres of wetlands and over 115,000 acres in Alabama, Georgia, and South Carolina during the past 18 years. Thousands of acres of wetlands are also being protected on private lands to assist in habitat and wildlife protection through restoration in conjunction with establishing conservation easements (Dahl 2006, p. 16). Wetland losses are being avoided, minimized, and mitigated through the regulatory process (Votteler and Muir 2002, pp. 1–2). Large-scale restoration projects like the CERP, Kissimmee River Restoration Project, and St. Johns River Headwaters Restoration Project are significant conservation efforts that greatly benefit wood stork recovery.

Additionally, the species' response to the threat of habitat loss and degradation indicates its ability to adapt and seek out new nesting and foraging areas. Since 1980, wood storks have expanded their breeding range north into Georgia, South Carolina, and North Carolina, and the total number of breeding adults is now approaching the delisting criterion set out in the species' recovery plan. Seventy percent of the population now breeds north of Lake Okeechobee and the Everglades (Brooks and Dean 2008, p. 53). These positive indicators throughout the range suggest that the viability of the continental U.S. wood stork DPS may no longer be as closely tied to the health of the Everglades for reproduction.

With regard to important wood stork habitats, a number of the nesting colonies occur on Federal conservation lands and are consequently afforded protection from development and large-scale habitat disturbance. Wood stork colonies also occur on a variety of State-owned properties, and existing State and Federal regulations provide protection on these sites. However, approximately half of known wood stork colonies occur on private lands. Through conservation partnerships, colonies can be protected through the owners' stewardship. In an effort to minimize potential loss of colony sites, partnerships have been developed through conservation easements, wetland restoration projects, and other conservation means. Also, the wetland areas near nesting colonies play a vital role in the success of a nesting colony. Due to the regulatory status of wetlands, conservation of wetlands shown to be important to wood storks can be largely

achieved through the application of existing wetland laws, such as the Clean Water Act (33 U.S.C. 1251 *et seq*.) and the interagency cooperation provisions of the Act.

In summary, loss, fragmentation, and modification of wetland habitats continue as threats to wood storks. Changes in local habitat conditions are known to impact wood storks. Based on the best available scientific information, it is our assessment that the species is showing the ability to respond to these threats through expansion of its range, adjusting reproductive timing, and utilizing a variety of wetlands for foraging, roosting, and breeding, including manmade wetlands. Historically, the core of the wood stork breeding population was located in the Everglades and Big Cypress systems of south Florida. Populations there had diminished because of deterioration of the habitat. In recognition of the importance of the Everglades and Big Cypress systems to wood stork recovery, the recovery plan stated that, as a prerequisite for full recovery, these ecosystems should once again provide the food resources that are necessary to support traditional wood stork nesting patterns at historical nesting areas. However, current data show that the breeding range has now almost doubled in area and shifted northward along the Atlantic coast as far as southeastern North Carolina. As a result of their range expansion, dependence of wood storks on any specific wetland complex has been reduced. Even though habitat destruction and modification are still a threat to recovery, the improved wood stork population statistics suggest that wetland habitat is not yet limiting the population, at least at the landscape level (USFWS 2007, p.16). Habitat loss, fragmentation, and modification of wetland habitats continue around nesting

colonies and core foraging areas, and are a significant factor affecting the viability of the continental U.S. wood stork DPS.

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

Monitoring of and research on wood storks over the past 20 years has increased. A small number of scientific research permits with potential to harm individual wood storks have been issued. This level of take/harm is not expected to adversely impact wood stork recovery or present a threat to the species.

Wading birds and other waterbird species, including wood storks, can impact production at fish farms. A Georgia catfish farmer located approximately 25 miles west of the Chewmill and Birdsville colonies in Jenkins County, Georgia, has documented hundreds of woods storks aggregating and foraging on the littoral edges of the ponds during the late summer in recent years. U.S. Department of Agriculture, Wildlife Services Division (Wildlife Services) has documented hundreds of wood storks, and in one case 1,000 wood storks, roosting on fish pond dikes in the eastern Mississippi, west-central Alabama area (J. Taylor, U.S. Department of Agriculture, pers. comm., 2007). Wildlife Services found that the wood storks were generally loafing, and if they were feeding, they were taking diseased and oxygen-deprived fish and not impacting production. Nonetheless, operators of fish farms often respond to such activities by taking wood storks. Unpermitted wood stork take has been documented at a Mississippi

catfish farm and a Florida tropical fish farm. Each of these incidents ended in prosecution for shooting wood storks. However, wood stork take at aquaculture facilities likely still occurs. To what extent this type of take occurs is unknown. Migratory Bird Treaty Act (MBTA; 16 U.S.C. 701 *et seq*.) depredation permits assist in minimizing unauthorized take. Depredation permits are issued to allow the take of migratory birds that are causing serious damage to public or private property, pose a health or safety hazard, or are damaging agricultural crops or wildlife. Wildlife Services provides expert technical advice and information regarding hazing and harassment techniques.

Research permits are issued to eliminate or minimize impacts to wood storks from scientific research. Overutilization was not identified as a threat at the time of listing in 1984, and we conclude that overutilization for commercial, recreational, scientific, or educational purposes is not a threat to the continental U.S. wood stork DPS now or in the foreseeable future.

C. Disease or Predation.

There is limited information regarding potential impacts from disease or parasites. Hematozoa (blood parasites) have been documented to a limited extent in wood storks in Florida and Georgia (Forrester *et al*. 1977, p. 1273; Fedynich *et al*. 1998, p. 166). Avian malaria has recently been documented in continental U.S. wood storks, but the available information does not indicate that avian malaria is a significant factor affecting the DPS.

Adequate water levels under nesting trees or surrounding nesting islands deter raccoon predation of wood stork colonies. Water level manipulation that keeps levels too low can facilitate raccoon predation of wood stork nests. In many cases, colonies also have a population of alligators nearby that deter raccoon predation (Coulter and Bryan 1995, p. 242), and removal of alligators from a nesting colony site could lead to increased raccoon predation. Human disturbance may cause adults to leave nests, exposing the eggs and downy nestlings to predators (*e.g.*, fish crows), sun, and rain. Great horned owls have been documented nesting in and near colonies and likely impact the colony to some degree.

A breeding population of Burmese pythons has been documented in the Florida Everglades, and a recent study documented that pythons had preyed upon wood storks (Dove *et al*. 2011, p. 128). If these snakes or other species of nonnative reptiles become established in additional areas within the south Florida ecosystem, they could pose a threat to nesting wood storks and other species of colonial-nesting water birds but at the present time pythons do not pose a significant factor affecting the continental US breeding population of wood stork.

As summarized above, we have a few documented instances of disease and predation within range of the continental U.S. wood stork DPS. However, this information does not indicate that disease or predation occur at a level that would

threaten the continental U.S. wood stork DPS, now or in the foreseeable future. We will continue to work closely with our State and Federal wildlife agency partners, those who monitor wildlife diseases in the wild, and those conducting research of wood storks in order to monitor these potential threats.

D. The Inadequacy of Existing Regulatory Mechanisms.

In addition to the Act, the MBTA provides Federal protection to the continental U.S. wood stork DPS. Florida, Georgia, South Carolina, North Carolina, Alabama, and Mississippi wildlife laws also list and protect wood storks. These Federal and State laws prohibit the taking of a wood stork, their nests, or their eggs, except as authorized through permitted activities such as scientific research and depredation permits. However, the MBTA and State laws do not prohibit clearing, alteration, or conversion of wetland foraging habitats or nesting colony sites during the non-nesting season.

The Clean Water Act (CWA) regulates dredge and fill activities that would adversely affect wetlands, which constitute wood stork habitat. Section 404 of the CWA regulates the discharge of dredged or fill materials into wetlands. Discharges of dredged or fill materials are commonly associated with projects to create dry land for development sites, water-control projects, and land clearing. The U.S. Army Corps of Engineers (Corps) and the Environmental Protection Agency (EPA) share the responsibility for implementing the permitting program under section 404 of the CWA.

These federal actions must not jeopardize the continued existence of any species protected under the Act.

When impacts to wetlands cannot be avoided or minimized, wetland mitigation is often employed to replace an existing wetland or its functions by creating a new wetland, restoring a former wetland, or enhancing or preserving an existing wetland. This is done to compensate for the authorized destruction of the existing wetland. As discussed earlier, it is not known if wood stork foraging wetlands are being replaced with like-quality foraging wetlands within the core foraging areas of impacted colonies.

There is currently little protection for isolated wetland habitats under section 404 of the CWA. A 2001 U.S. Supreme Court opinion (*Solid Waste Agency of Northern Cook County* (SWANCC) v. *US Army Corps of Engineers*, 531 U.S. 159 (2001)) substantially reduced the jurisdiction of the Federal Government in regulating isolated wetlands. While many States in the southeastern United States regulate those activities affecting wetlands that are not protected by section 404 of the CWA, Florida is the only State known to regulate isolated wetlands. In South Carolina, Georgia, Alabama, and North Carolina, there are no State laws that protect isolated wetlands. The EPA and the Corps have developed draft guidance for determining whether a waterway, water body, or wetland is protected by the CWA (76 FR 24479, May 2, 2011). If implemented, the guidance will increase the extent of waters over which the agencies assert jurisdiction

under the CWA and thus would provide protection to additional wood stork foraging wetlands that are currently unprotected from modification or elimination.

The Service recommends, through its Wood Stork Habitat Management Guidelines (Ogden 1990), that active colony sites be protected from local hydrologic changes and from human activities (e.g.timber harvesting, vegetation removal, construction, and other habitat-altering activities) which are likely to be detrimental to the colony (Service 1997, p. 18). The Service also recommends that feeding sites be protected to the maximum extent possible. The Service's South Florida and Jacksonville Ecological Services Field Offices have developed "May Affect" keys to assist regulators with review of wetland dredge and fill permit applications and in an effort to minimize loss of wetland habitats important to wood stork recovery, like those within the core foraging area of a nesting colony.

In summary, there are a number of regulatory mechanisms implemented by Federal and State agencies to protect wood storks and conserve their habitat. Take of wood storks is illegal under both the Act and MBTA. The CWA minimizes impacts on jurisdictional wetlands that are important to Wood Storks, however the CWA alone is not sufficient to eliminate all impacts, as discussed in Factor A. Whether existing habitat protections and conservation mechanisms are inadequate can only be assessed by monitoring the status of the wood stork population. Recent trends indicate that the range is expanding and the breeding population has increased, suggesting that the combination

of the CWA, the Act, MBTA, and state regulations are adequate to protect jurisdictional wetlands to allow population growth. However, non-jurisdictional wetlands continue to be lost to development due to lack of existing regulatory mechanisms, and therefore, loss of these wetlands continues as a threat to this species.

E. Other Natural or Manmade Factors Affecting Its Continued Existence.

Climate Change

The terms "climate" and "climate change" are defined by the Intergovernmental Panel on Climate Change (IPCC). "Climate" refers to the mean and variability of different types of weather conditions over time, with 30 years being a typical period for such measurements, although shorter or longer periods also may be used (IPCC 2007, p. 78). The term "climate change" thus refers to a change in the mean or variability of one or more measures of climate (e.g., temperature or precipitation) that persists for an extended period, typically decades or longer, whether the change is due to natural variability, human activity, or both (IPCC 2007, p. 78). Various types of changes in climate can have direct or indirect effects on species. These effects may be positive, neutral, or negative, and they may change over time, depending on the species and other relevant considerations, such as the effects of interactions of climate with other variables (e.g., habitat fragmentation) (IPCC 2007, pp. 8–14, 18–19). In our analyses, we use our

expert judgment to weigh relevant information, including uncertainty, in our consideration of various aspects of climate change.

The IPCC concluded that evidence of warming of the climate system is unequivocal (IPCC 2007a, p. 30). Numerous long-term changes have been observed, including changes in arctic temperatures and ice, widespread changes in precipitation amounts, ocean salinity, wind patterns, and aspects of extreme weather, including droughts, heavy precipitation, heat waves, and the intensity of tropical cyclones (IPCC 2007b, p. 7). While continued change is certain, the magnitude and rate of change is unknown in many cases. Species that are dependent on specialized habitat types, are limited in distribution, or are located in the extreme periphery of their range will be most susceptible to the impacts of climate change. Such species would currently be found at high elevations or in extreme northern/southern latitudes, or are dependent on delicate ecological interactions or sensitive to nonnative competitors. Wood storks nest in a wide variety of natural and human made habitats (e.g., fresh water wetlands to estuarine environs, cypress strands to mangrove islands, lake edges to river edges, impoundments to borrow pits); they are not dependent upon specialized habitat. They nest in trees and shrubby vegetation (native to exotic) where water is surrounding (island) or water is underneath the nesting vegetation and where there is suitable foraging habitat nearby (shallow water wetlands). The marshes and wetlands they use may be impacted by climate change depending on their location but wood storks have been shown to find other habitat if existing locations become unavailable.

Information on the subject of climate change in our files is not specific to the wood stork. While predictions of increased drought frequency, intensity, and duration suggest that nestling survival could be a limiting factor for the wood stork due to increased predation or possible loss or shift in the location of coastal colonies due to sea level rise, the species possesses other biological traits, like adaptability to changing habitat conditions that provide resilience to this threat. Wood storks are already responding to habitat changes by altering their nest locations. This has been seen in the recent expansion from Everglades colony locations in Florida to other areas in the southeastern United States (Brooks and Dean 2008). These expansions are in response to annual cycles; nest locations depend upon availability. Abandonment of old colonies and formation of new ones is a typical and fairly rapid process in wood storks (Frederick and Meyer 2008 p.12). Most wood stork colonies in the Southeast U.S. have relatively short survival histories and only a handful of colonies have survived more than 20 years and the large numbers of short-lived colonies indicate that wood stork colony abandonment and novel colony initiation seems to be typical of the species (Tsai *et al*. 2011, p. 2). The wood storks' ability to seek out new locations for nesting would seem to indicate that they will respond in a similar fashion to changes in habitat availability that result from sea level rise.

Although many species already listed as endangered or threatened may be particularly vulnerable to negative effects related to changes in climate, we also

recognize that, for some listed species, the likely effects may be positive or neutral. At this time, we have no evidence that climate changes observed to date have had any adverse effect on the wood stork or its habitat; this long-lived species is expected to adapt to future changes in habitat availability that may result from climate change.

Contamination Events

Contamination events can be triggered by restoration or natural events, such as hurricanes or flooding, that can expose concentrations of contaminants. For example, from November 1998 through early April 1999, a bird mortality event occurred on the north shore of Lake Apopka, Florida, on former farmlands that had been purchased by the St. Johns River Water Management District and NRCS. An estimated 676 birds died on-site, mostly white pelicans (*Pelecanus erythrorhynchos*) and various species of wading birds, including the wood stork. Of the estimated 1,991 wood storks present in the area, 43 died on-site (Rauschenberger 2007, p. 16). The cause of death was attributed to organochlorine pesticide (OCP) toxicosis (Rauschenberger 2007, p. 16). The birds were exposed to OCPs by eating OCP-contaminated fish, which became easy prey as fish moved from ditches into the flooded fields, located in the eastern part of the restoration area (Rauschenberger 2007, p. 16).

Mercury, heavy metals, and other contaminants that may impair reproduction and cause other health issues are being studied in wood storks and many other wading bird

species (Bryan *et al*. 2012; Gallaher *et al*. 2011; Martin 2010; Frederick and Jayasena 2010; Brant *et al*. 2002; Bryan *et al*. 2001; Gariboldi *et al*. 2001). Also, exposure to contaminants by foraging in manmade wetlands may pose a potential risk to wood stork health and reproduction. On the other hand, pesticide contamination has not generally been considered to adversely affect wood stork reproduction (Ohlendorf *et al*. 1978, p. 616).

Algal Blooms (Red Tide Events)

Harmful algal blooms, specifically red tide events, have become more prevalent along Florida's coast. Brevitoxicosis was documented in 2005 as the cause of death of a wood stork (Spalding 2006). Wood storks can be exposed to harmful microalgae and their toxins through a variety of mechanisms, including aerosolized transport (*i.e.*, respiratory irritation in mammals, turtles, birds); bioaccumulation through consumption of prey containing toxins or toxic cells (crustaceans, gastropods, fish, birds, turtles, mammals); and mechanical damage by spines, setae, or other anatomical features of the cells (FWC 2007, p. 1). In addition to dead fish, large numbers of aquatic birds, particularly double-crested cormorants *(Phalacrocorax auritus)*, red-breasted mergansers *(Mergus merganser)*, and lesser scaup *(Aythya affinis)*, were found moribund or dead in red tide areas during the Florida west coast *Karenia brevis* red tide of October 1973 to May 1974 (FWC 2007).

Electrocution

Electrocution mortalities of wood storks from power lines have been documented and reported to us by power companies and by State and Federal wildlife law enforcement. In most cases, when a problem location is identified, it is retrofitted using standard avian protection guidelines to prevent electrocutions. The guidelines recommend using heavily insulated wire, spreading the wires apart to prevent grounding as body parts touch the wires, or burying the wires underground. The Service's Wood Stork Habitat Management Guidelines (Ogden 1990) include recommendations that new transmission lines be at least 1 mile away from colony sites and tall transmission towers no closer than 3 miles from active colonies. The Service also recommends similar guidance for cell phone towers and wind turbines.

Other Threats

The following is a list of threats that have also been documented to occur, but we have concluded that due to low incident numbers and minimal documentation, the impacts at this time are very low and do not impede recovery.

Human disturbance is known to have a detrimental effect on wood stork nesting (Service 1997, pp. 10, 12). Wood storks have been documented to desert nests when

disturbed by humans, thus exposing eggs and young birds to the elements and to predation by gulls and fish crows (Coulter *et al*. 1999, p. 19).

Documentation of road kill mortalities of wood storks has increased (B. Brooks, USFWS, pers. comm., 2010). This may be due to better reporting or more storks using roadside ponds, ditches, swales, and flow-ways as foraging habitat.

Stochastic events, such as severe thunderstorms and hurricanes, pose a potential risk. Loss of nesting trees due to hurricanes can have a negative impact on nesting habitat. Severe local storm events have impacted individual colonies, causing chick mortality and even blowing nests out of trees.

The invasion of exotic plants into natural wetland areas can prevent wood storks from foraging due to high density and canopy cover of the plants (USFWS 2010, p. 127). Invasion into natural nesting habitats by exotic species, including Brazilian pepper (*Schinus terebinthifolius*), melaleuca (*Melaleuca quinquenervia*), and Australian pine (*Casuarina equisetifolia*), may present a problem; however, wood storks are using exotic species for nesting habitat at many manmade wetland colony sites, such as borrow pits. Even though wetlands overgrown with exotics may preclude wood storks from foraging within, they do have a conservation benefit as they flood during the wet season and provide a prey source to adjacent wetlands. Wood storks are also documented utilizing Brazilian pepper as nesting substrate (USFWS 1999, p. 4-396)**.**

A small number of sacred ibis (*Threskiornis aethiopicus*) escaped from a south Florida zoo and established a small breeding population in south Florida. They may compete with wood storks for nesting space within south Florida colonies.

Summary of Factor E

In summary, other natural or manmade factors affecting the wood stork's continued existence, such as contaminants, harmful algal blooms, electrocution, road kill, invasion of exotic plants and animals, human disturbance, and stochastic events, are all documented at minimal levels to affect wood storks. The wood stork utilizes a wide variety of habitats throughout its range in the southeastern United States; this ability to use alternative habitats (as evidenced by the wood storks expansion from the Everglades of Florida into marshes and tidal areas throughout the southeastern United States (Brooks and Dean 2008)), helps to buffer this species from some of the impacts to its habitat through natural or manmade threats. We conclude that other natural or manmade factors are not a significant factor affecting the continental U.S. wood stork DPS, now or in the foreseeable future.

Conclusion

Whether a species is currently on the brink of extinction in the wild depends on the life history and ecology of the species, the nature of the threats, and the species' response to those threats. Loss, fragmentation, and modification of wetland habitats continue as threats to continental U.S. wood storks. Based on the best available scientific information, it is our assessment that the species is showing the ability to respond to these threats through expanding its range, adjusting its reproductive timing, and utilizing a variety of wetlands, including manmade wetlands, to forage, roost, and breed. Current data show that the breeding range has now almost doubled in extent and shifted northward along the Atlantic coast as far as southeastern North Carolina. As a result, dependence of wood storks on any specific wetland complex has been reduced. Even though habitat destruction and modification are still a threat to recovery, the improved wood stork population statistics also suggest that wetland habitat is not yet limiting the population, at least at the landscape level.

A number of regulatory mechanisms are being implemented by Federal and State agencies to protect wood storks and conserve their habitat. Take of wood storks is illegal under both the Act and MBTA. Whether habitat protection and conservation mechanisms are inadequate must be assessed in terms of the wood stork population. Recent trends indicate that the range of the continental U.S. wood stork DPS is expanding and that the breeding population has increased, suggesting that existing regulatory mechanisms are adequate to allow population growth. However, we remain concerned that the status of this species would be expected to deteriorate should the Act’s

requirements to consult on all federal actions affecting the species' habitat or the prohibition on take (including significant habitat modification) be removed.

Other threats such as overutilization of the species for commercial, recreational, scientific, or educational purposes; disease and predation; and other natural or manmade factors (*e.g.*, contaminants, harmful algal blooms, electrocution, road kill, invasion of exotic plants and animals, human disturbance, and stochastic events) are known to occur but are not significant.

While there continue to be ongoing threats, the continental U.S. wood stork DPS is increasing and expanding its overall range. Population criteria for reclassification have been exceeded with 3-year population averages higher than 6,000 nesting pairs since 2003 (range of 7,086 to 8,996 nesting pairs). Delisting criteria of 10,000 nesting pairs (5-year average) has not been achieved. The wood stork population has exceeded 10,000 nesting pairs twice during the past 5 years (2006 and 2009), and the 2009 count of 12,720 nesting pairs represents the highest count since the early 1960s. Productivity, though variable, is sufficient to support a growing population. Based on the analysis presented above and the fact that downlisting criteria have been met, we believe the continental U.S. wood stork DPS is not presently in danger of extinction throughout its range. However, because loss, fragmentation, and modification of wetland habitats continue around nesting colonies and core foraging areas, and because delisting criteria have not been met, we conclude that the continental U.S. wood stork DPS is likely to become

endangered within the foreseeable future and therefore should be reclassified as threatened under the Act.

Significant Portion of the Range Analysis

Having determined that the continental U.S. wood stork DPS meets the definition of threatened, we must next consider whether there is a significant portion of the range where the wood stork is in danger of extinction. The phrase "significant portion of its range" (SPR) is not defined by the statute, and we have never addressed in our regulations: (1) The consequences of a determination that a species is either endangered or likely to become so throughout a significant portion of its range, but not throughout all of its range; or (2) what qualifies a portion of a range as "significant."

Two recent district court decisions have addressed whether the SPR language allows the Service to list or protect less than all members of a defined "species": *Defenders of Wildlife* v. *Salazar*, 729 F. Supp. 2d 1207 (D. Mont. 2010), concerning the Service's delisting of the Northern Rocky Mountain gray wolf (74 FR 15123, April 2, 2009); and *WildEarth Guardians* v. *Salazar*, 2010 U.S. Dist. LEXIS 105253 (D. Ariz. Sept. 30, 2010), concerning the Service's 2008 finding on a petition to list the Gunnison's prairie dog (73 FR 6660, February 5, 2008). The Service had asserted in both of these determinations that it had authority, in effect, to protect only some members of a "species," as defined by the Act (i.e., species, subspecies, or DPS), under the Act. Both

courts ruled that the determinations were arbitrary and capricious on the grounds that this approach violated the plain and unambiguous language of the Act. The courts concluded that reading the SPR language to allow protecting only a portion of a species' range is inconsistent with the Act's definition of "species." The courts concluded that once a determination is made that a species (i.e., species, subspecies, or DPS) meets the definition of "endangered species" or "threatened species," it must be placed on the list in its entirety and the Act's protections applied consistently to all members of that species (subject to modification of protections through special rules under sections 4(d) and 10(j) of the Act).

Consistent with that interpretation, and for the purposes of this proposed rule and finding, we interpret the phrase "significant portion of its range" in the Act's definitions of "endangered species" and "threatened species" to provide an independent basis for listing a species in its entirety; thus there are two situations (or factual bases) under which a species would qualify for listing: A species may be endangered or threatened throughout all of its range; or a species may be endangered or threatened in only a significant portion of its range. If a species is in danger of extinction throughout an SPR, it, the species, is an "endangered species." The same analysis applies to "threatened species." Therefore, the consequence of finding that a species is endangered or threatened in only a significant portion of its range is that the entire species will be listed as endangered or threatened, respectively, and the Act's protections will be applied across the species' entire range.

We conclude, for the purposes of this proposed rule and finding, that interpreting the SPR phrase as providing an independent basis for listing is the best interpretation of the Act because it is consistent with the purposes and the plain meaning of the key definitions of the Act; it does not conflict with established past agency practice (i.e., prior to the 2007 Solicitor's Opinion), as no consistent, long-term agency practice has been established; and it is consistent with the judicial opinions that have most closely examined this issue. Having concluded that the phrase "significant portion of its range" provides an independent basis for listing and protecting the entire species, we next turn to the meaning of "significant" to determine the threshold for when such an independent basis for listing exists.

Although there are potentially many ways to determine whether a portion of a species' range is "significant," we conclude, for the purposes of this proposed rule and finding, that the significance of the portion of the range should be determined based on its biological contribution to the conservation of the species. For this reason, we describe the threshold for "significant" in terms of an increase in the risk of extinction for the species. We conclude that a biologically based definition of "significant" best conforms to the purposes of the Act, is consistent with judicial interpretations, and best ensures species' conservation. Thus, for the purposes of this proposed rule and finding, a portion of the range of a species is "significant" if its contribution to the viability of the species is so important that, without that portion, the species would be in danger of extinction.

We evaluate biological significance based on the principles of conservation biology using the concepts of redundancy, resiliency, and representation. *Resiliency* describes the characteristics of a species that allow it to recover from periodic disturbance. *Redundancy* (having multiple populations distributed across the landscape) may be needed to provide a margin of safety for the species to withstand catastrophic events. *Representation* (the range of variation found in a species) ensures that the species' adaptive capabilities are conserved. Redundancy, resiliency, and representation are not independent of each other, and some characteristic of a species or area may contribute to all three. For example, distribution across a wide variety of habitats is an indicator of representation, but it may also indicate a broad geographic distribution contributing to redundancy (decreasing the chance that any one event affects the entire species), and the likelihood that some habitat types are less susceptible to certain threats, contributing to resiliency (the ability of the species to recover from disturbance). None of these concepts is intended to be mutually exclusive, and a portion of a species' range may be determined to be "significant" due to its contributions under any one of these concepts.

For the purposes of this proposed rule and finding, we determine if a portion's biological contribution is so important that the portion qualifies as "significant" by asking whether, *without that portion*, the representation, redundancy, or resiliency of the species would be so impaired that the species would have an increased vulnerability to threats to

the point that the overall species would be in danger of extinction (i.e., would be "endangered"). Conversely, we would not consider the portion of the range at issue to be "significant" if there is sufficient resiliency, redundancy, and representation elsewhere in the species' range that the species would not be in danger of extinction throughout its range if the population in that portion of the range in question became extirpated (extinct locally).

We recognize that this definition of "significant" establishes a threshold that is relatively high. On the one hand, given that the consequences of finding a species to be endangered or threatened in an SPR would be listing the species throughout its entire range, it is important to use a threshold for "significant" that is robust. It would not be meaningful or appropriate to establish a very low threshold whereby a portion of the range can be considered "significant" even if only a negligible increase in extinction risk would result from its loss. Because nearly any portion of a species' range can be said to contribute some increment to a species' viability, use of such a low threshold would require us to impose restrictions and expend conservation resources disproportionately to conservation benefit: Listing would be rangewide, even if only a portion of the range of minor conservation importance to the species is imperiled. On the other hand, it would be inappropriate to establish a threshold for "significant" that is too high. This would be the case if the standard were, for example, that a portion of the range can be considered "significant" only if threats in that portion result in the entire species' being currently endangered or threatened. Such a high bar would not give the SPR phrase independent

meaning, as the Ninth Circuit held in *Defenders of Wildlife* v. *Norton*, 258 F.3d 1136 (9th Cir. 2001).

The definition of "significant" used in this proposed rule and finding carefully balances these concerns. By setting a relatively high threshold, we minimize the degree to which restrictions would be imposed or resources expended that do not contribute substantially to species conservation. But we have not set the threshold so high that the phrase "in a significant portion of its range" loses independent meaning. Specifically, we have not set the threshold as high as it was under the interpretation presented by the Service in the *Defenders* litigation. Under that interpretation, the portion of the range would have to be so important that current imperilment there would mean that the species would be *currently* imperiled everywhere. Under the definition of "significant" used in this proposed rule and finding, the portion of the range need not rise to such an exceptionally high level of biological significance. (We recognize that if the species is imperiled in a portion that rises to that level of biological significance, then we should conclude that the species is in fact imperiled throughout all of its range, and that we would not need to rely on the SPR language for such a listing.) Rather, under this interpretation we ask whether the species would be endangered everywhere without that portion, *i.e.*, if that portion were completely extirpated. In other words, the portion of the range need not be so important that even being in danger of extinction in that portion would be sufficient to cause the remainder of the range to be endangered; rather, the *complete extirpation* (in a hypothetical future) of the species in that portion would be

required to cause the remainder of the range to be endangered.

The range of a species can theoretically be divided into portions in an infinite number of ways. However, there is no purpose to analyzing portions of the range that have no reasonable potential to be significant *and* threatened or endangered. To identify only those portions that warrant further consideration, we determine whether there is substantial information indicating that: (1) The portions may be "significant," and (2) the species may be in danger of extinction there or likely to become so within the foreseeable future. Depending on the biology of the species, its range, and the threats it faces, it might be more efficient for us to address the significance question first or the status question first. Thus, if we determine that a portion of the range is not "significant," we do not need to determine whether the species is endangered or threatened there; if we determine that the species is not endangered or threatened in a portion of its range, we do not need to determine if that portion is "significant." In practice, a key part of the portion status analysis is whether the threats are geographically concentrated in some way. If the threats to the species are essentially uniform throughout its range, no portion is likely to warrant further consideration. Moreover, if any concentration of threats applies only to portions of the species' range that clearly would not meet the biologically based definition of "significant," such portions will not warrant further consideration.

Applying the process described above, we evaluated the continental U.S. wood stork DPS's range to determine if any areas could be considered a significant portion of

its range, and a key portion of that determination is whether the threats are geographically concentrated in some manner. As detailed in the threat analysis in this proposed rule and finding, the primary threat to the wood stork—habitat loss, fragmentation, and modification—is a relatively uniform threat across the species' range.

It could be argued that at the time of listing, the threat of habitat destruction and fragmentation to the continental U.S. wood stork DPS at one time was concentrated in south Florida. With the current habitat regimes, nesting wood storks have persisted in south Florida with nesting numbers below historic counts but also varying annually from hundreds to several thousand in many years (Table 2). Even though we share above that no concentration of threats currently occurs in the range of this DPS, we provide here more detail on south Florida to show further why it is not a significant portion of range because of the emphasis on south Florida in the wood stork recovery plan.

The wood storks nesting in south Florida (the region south of Lake Okeechobee from Lee County on the west coast to Palm Beach County on the east coast, and the Everglades and Big Cypress systems) now represent approximately 25 percent of the breeding wood storks in the United States during the past 10 years (Tables 1 and 2). Total nesting pairs in this region have been quite variable, but showed a general pattern of decline during the 1970s and remained low through the mid 1980s. However, wood stork nesting increased in south Florida from the mid 1990s (an average of 400 to 500 pairs) to a high of 5,816 pairs in 2009. A 3-year running average since the time of listing

in 1984 ranges from 457 to 3,449 pairs, with considerable variability. These observed fluctuations in the nesting between years and nesting sites have been attributed primarily to variable hydrologic conditions during the nesting season (Crozier and Gawlik 2003, p. 1; Crozier and Cook 2004, pp. 1–2). Frequent, heavy rains during nesting can cause water levels to increase rapidly. The abrupt increases in water levels during nesting, termed reversals (Crozier and Gawlik 2003, p. 1), may cause nest abandonment, re-nesting, late nest initiation, and poor fledging success. For example, optimal foraging conditions in 2006 resulted in high nesting success, but the 2-year drought that followed in 2007 and 2008 resulted in no nesting success in the Corkscrew Sanctuary rookery (Lauritsen 2007, p. 11; Lauritsen 2008, p. 12). However, 2009 nesting data for Corkscrew Sanctuary rookeries noted 1,120 nests producing 2,570 nestlings (Lauritsen 2009, p. 13). Similar rebounds in nesting activity were recorded for other south Florida rookeries in 2009, with possibly the largest number of nest starts since 1975, estimated at about 4,000 nests throughout the Everglades and Big Cypress Systems (Newman 2009, p. 51) and a total of 5,816 nesting pairs (Table 2) in south Florida.

The CERP established performance measures and related goals for wood storks and other wading bird species. Metrics include the number of pairs of nesting wood storks and the location of the wood stork colonies. The timing of nesting, which shifted from historical periods of November through December to January through March, is also a metric. There have been some recent positive measures in Everglades restoration regarding these metrics. Restoration predicts that the return of natural flows and

hydrologic patterns will result in large, sustainable breeding wading bird populations, with large colonies in the coastal zone of the Everglades and a return to natural timing of nesting, with wood stork nest initiation in November or December. Cook and Kobza (2010, p. 2) suggest that Everglades National Park may be more attractive to nesting birds in recent years and that the 2009 breeding season was the best nesting year in south Florida since the 1940s. The 2009–2010 nesting year did show an improvement in nest timing with wood stork nesting in January, which is earlier than previous years, but which is still outside the nesting onset target of November to December (Newman 2009, p. 52; Gottlieb 2010, p. 42). Also, Cook and Kobza (2010, p. 2) report a general shift of colony locations to the coast in recent years.

Although the variability of habitat conditions affects the nesting efforts in south Florida and at times there is total failure of a colony or little to no nesting, we do not believe such variability will cause extirpation of wood storks in south Florida. Wood storks are a long-lived species that demonstrate considerable variation in population numbers in response to changing hydrological conditions (USFWS 1997, p. 10). We are not aware of any other threat within this portion of the range that would act synergistically and heighten our level of concern for the wood stork population. Consequently, although we recognize that it is desirable to improve the nesting success of wood storks in south Florida, we conclude that the present level of habitat threat, when combined with the restoration efforts of CERP, is not of a magnitude that leads us to delineate the wood storks in and around south Florida as being more in danger of

extinction than wood storks breeding in central/north Florida through North Carolina, nor as being a significant portion of the range of the continental U.S. wood stork DPS.

In summary, the primary threat to the continental U.S. wood stork DPS—habitat loss, fragmentation, and modification—is relatively uniform throughout the DPS's range. We have determined that none of the existing or potential threats currently place the continental U.S. wood stork DPS in danger of extinction throughout all or a significant portion of its range.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing increases public awareness of threats to the continental U.S. breeding population of the wood stork, and promotes conservation actions by Federal, State, and local agencies, private organizations, and individuals. The Act provides for possible land acquisition and cooperation with the State, and for recovery planning and implementation. The protection required of Federal agencies and the prohibitions against taking and harm are discussed, in part below.

A number of the nesting colonies of the continental U.S. wood stork DPS occur on Federal conservation lands and are consequently afforded protection from development and large-scale habitat disturbance. Wood stork colonies also occur on a variety of State-owned properties, and existing State and Federal regulations provide protection on these sites. There is also a significant number of wood stork colonies that occur on private lands, and through conservation partnerships, many of these colonies are protected through the owners' stewardship. In many cases these partnerships have been developed through conservation easements, wetland restoration projects, and other conservation means. The fact that wood stork habitat is primarily wetlands also assures the opportunity for conference or consultation on most projects that occur in wood stork habitat under the authorities described below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to the continental U.S. breeding population of the wood stork. If a Federal action may affect the wood stork or its habitat, the responsible Federal agency must consult with the Service to ensure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of the wood stork. Federal agency actions that may require consultation with us include Corps' involvement in projects such as residential development, mining operations, construction of roads and bridges, or dredging that requires dredge/fill permits. Protecting and restoring wetlands that wood storks are dependent upon through the environmental regulatory review

process is the most important action that Federal, State, and local regulatory agencies can undertake and is key to wood stork recovery.

The Act and its implementing regulations set forth a series of general prohibitions and exceptions that apply to all endangered and threatened wildlife. As such, these prohibitions would be applicable to the wood stork. These prohibitions, under 50 CFR 17.21 (17.31 for threatened wildlife species), make it illegal for any person subject to the jurisdiction of the United States to "take" (including to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or to attempt any of these) within the United States or upon the high seas, import or export, deliver, receive, carry, transport, or ship in interstate or foreign commerce in the course of a commercial activity, or to sell or offer for sale in interstate or foreign commerce, any endangered wildlife species. It also is illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken in violation of the Act. Certain exceptions apply to agents of the Service and State conservation agencies.

We may issue permits to carry out otherwise prohibited activities involving threatened wildlife species under certain circumstances. Regulations governing permits are codified at § 17.32 for threatened species. Such permits are available for scientific purposes, to enhance the propagation or survival of the species, and for incidental take in the course of otherwise lawful activities. For threatened species, permits are also available for zoological exhibition, educational purposes, and special purposes consistent

with the purposes of the Act.

Questions regarding whether specific activities will constitute a violation of section 9 of the Act should be directed to the U.S. Fish and Wildlife Service, North Florida Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT** section). Requests for copies of the regulations regarding listed species and inquiries about prohibitions and permits may be addressed to the U.S. Fish and Wildlife Service, Ecological Services Division, 1875 Century Boulevard, Suite 200, Atlanta, GA 30345 (telephone 404–679–7313, facsimile 404–679–7081).

Effects of This Rule

This rule, if made final, would revise 50 CFR 17.11(h) to reclassify the continental U.S. wood stork DPS from endangered to threatened on the List of Endangered and Threatened Wildlife. This proposed rule discusses how the continental U.S. wood stork DPS is no longer in danger of extinction throughout all or a significant portion of its range. However, this reclassification would not significantly change the protection afforded this species under the Act. Based on new information about the range of the continental U.S. wood stork DPS and where nesting is now occurring, this rule, if made final, would also revise 50 CFR 17.11(h) to reflect that the range of the continental U.S. wood stork DPS has expanded from Alabama, Florida, Georgia, and South Carolina to also include North Carolina and Mississippi (see *Distinct Vertebrate Population*

Segment Analysis section above).

Anyone taking, attempting to take, or otherwise possessing a wood stork, or parts thereof, in violation of section 9 of the Act is subject to a penalty under section 11 of the Act. Pursuant to section 7 of the Act, all Federal agencies must ensure that any actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of the continental U.S. wood stork DPS.

If this proposed rule is made final and the continental U.S. wood stork DPS is reclassified as threatened, recovery actions directed at the wood stork would continue to be implemented as outlined in the recovery plan (Service 1997). Highest priority recovery actions include: (1) Locate nesting habitat; (2) locate roosting and foraging habitat; (3) inform landowners; (4) protect (nesting) sites from disturbance; (5) use existing regulatory mechanisms to protect habitat; and (6) monitor productivity of stork populations. Other recovery initiatives also include appointing a recovery team to update the recovery plan to ensure the recovery criteria and actions reflect the most current information on the demographics, range, and habitat needs of the species.

Finalization of this proposed rule would not constitute an irreversible commitment on our part. Reclassification of the continental U.S. wood stork DPS from threatened status back to endangered status would be possible if changes occur in management, population status, or habitat, or if other factors detrimentally affect the DPS or increase

threats to the species' survival.

Peer Review

In accordance with our policy published on July 1, 1994 (59 FR 34270), we will solicit the expert opinions of at least three appropriate and independent specialists for peer review of this proposed rule. The purpose of such review is to ensure that decisions are based on scientifically sound data, assumptions, and analysis. We will send peer reviewers copies of this proposed rule immediately following publication in the **Federal Register**. We will invite peer reviewers to comment, during the public comment period, on the specific assumptions and conclusions regarding the proposed reclassification to threatened. We will summarize the opinions of these reviewers in the final decision document, and we will consider their input, and any additional information we receive, as part of our process of making a final decision on the proposal. Such communication may lead to a final regulation that differs from this proposal.

Required Determinations

Paperwork Reduction Act of 1995

This rule does not contain any new collections of information that require approval by the Office of Management and Budget (OMB) under the Paperwork

Reduction Act (44 U.S.C. 3501 *et seq*.). This rule will not impose recordkeeping or reporting requirements on State or local governments, individuals, businesses, or organizations. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

National Environmental Policy Act

We have determined that we do not need to prepare an environmental assessment or environmental impact statement, as defined in the National Environmental Policy Act of 1969 (42 U.S.C 4321 *et seq*.), in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244).

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), Executive Order 13175, and the Department of the Interior Manual Chapter 512 DM 2, we have considered possible effects on and have notified the Native American Tribes within the range of the continental U.S. breeding population of the wood stork about this proposal. They have been advised through a written informational mailing

from the Service. If future activities resulting from this proposed rule may affect Tribal resources, a Plan of Cooperation will be developed with the affected Tribe or Tribes.

Clarity of This Regulation (E.O. 12866)

We are required by Executive Orders 12866 and 12988 and by the Presidential Memorandum of June 1, 1998, to write all rules in plain language. This means that each rule we publish must:

(a) Be logically organized;

(b) Use the active voice to address readers directly;

(c) Use clear language rather than jargon;

(d) Be divided into short sections and sentences; and

(e) Use lists and tables wherever possible.

If you feel that we have not met these requirements, send us comments by one of the methods listed in the **ADDRESSES** section. To better help us revise the rule, your comments should be as specific as possible. For example, you should tell us the numbers of the sections or paragraphs that are unclearly written, which sections or sentences are too long, the sections where you feel lists or tables would be useful, *etc.*

References Cited

A complete list of references cited is available upon request from the North Florida Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

Authors

The primary authors of this document are the staff members of the North Florida Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

List of Subjects in 50 CFR Part 17

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

Proposed Regulation Promulgation

We propose to 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:

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

2. Amend § 17.11(h) by revising the entry for "Stork, wood" under "BIRDS" in the List of Endangered and Threatened Wildlife to read as follows:

§ 17.11 Endangered and threatened wildlife.

* * * * *

(h) * * *

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
*	*	*	*	*	*	*	
BIRDS							
*	*	*	*	*	*	*	
Stork, wood	*Mycteria americana*	U.S.A. (CA, AZ, TX, to Carolinas), Mexico, C. and S. America	U.S.A. (AL, FL, GA, MS, NC, SC)	T	142, ___	NA	NA
*	*	*	*	*	*	*	

* * * * *

Dated: December 14, 2012

Rowan W. Gould

Acting Director, Fish and Wildlife Service

Billing Code 4310–55–P

[FR Doc. 2012-30731 Filed 12/21/2012 at 4:15 pm; Publication Date: 12/26/2012]