DEPARTMENT OF THE INTERIOR

FINAL

ENVIRONMENTAL ASSESSMENT

CONTINUATION OF BIG AND UPLAND GAME HUNTING and the INITIATION OF SAMBAR DEER HUNTING on ST. VINCENT NATIONAL WILDLIFE REFUGE

Prepared by:

FISH AND WILDLIFE SERVICE

U.S. Department of the Interior

Apalachicola, Florida

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SUMMARY

( ) Draft (X) Final Environmental Assessment

U.S. Department of the Interior

1. Type of Action: Administrative

2. Brief Description of Proposed Action: The U.S. Fish and Wildlife Service (Service) proposes to continue upland and big game hunting and to initiate public hunting of the sambar deer on St. Vincent Island. The sambar deer herd will be reduced to approximately 100 and maintained at that level through annual removals equivalent to annual recruitment. The proposed actions will be carried out under authorities contained in the Refuge Recreation Act of 1962 and the National Wildlife Refuge Administration Act of 1966, as amended. Approximately 11,450 acres of the 12,358 acre island will be open to hunting. Hunting will be allowed within the framework established by the Florida Game and Fresh Water Fish Commission (FGFWFC). Proposed hunting will not endanger any threatened/endangered species. Annual hunt proposals, coordinated with the FGFWFC will specify species, hunting methods, seasons, bags and refuge specific regulations.

3. Summary of Environmental Impacts and Adverse Environmental Effects: There will be a seasonal reduction of hunted species and public use will increase moderately. No land use changes will occur. The initiation of sambar deer hunting will greatly improve the management of island ungulates. Competition by sambar deer and feral pigs with white-tailed deer for food, particularly fall mast, will be decreased. Loggerhead sea turtle nest success will be enhanced. A quality outdoor recreational experience will be available to the public. Disturbance to resident endangered species will be minimal. Some damage to small vegetation will occur. The potential for cultural resources (pottery shards) to be removed will be increased.

4. Alternatives Considered: Two alternatives were considered: (1) No Action and (2) Close refuge to upland and big game hunting.

5. Comments Have Been Requested and Received From the Following:

Florida Game and Fresh Water Fish Commission
Manager, Apalachicola National Estaurine Research Reserve
U.S. Department of the Interior, Fish and Wildlife Service

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ENVIRONMENTAL ASSESSMENT
HUNT PLAN
ST. VINCENT NATIONAL WILDLIFE REFUGE

I. DESCRIPTION OF THE PROPOSAL

The continuation of limited public hunting of upland game (50 CFR 32.21), big game (50 CFR 32.31), and the addition of sambar deer (Cervis unicolor) to the list of legal game on St. Vincent National Wildlife Refuge in Franklin County, Florida is proposed. This proposal involves the continuation of hunting on approximately 11,450 acres of the 12,358 acre St. Vincent Island. Included in the proposal is the public hunting of sambar, an exotic deer introduced in 1908.

Upland and big game hunting will be allowed in accordance with State and Federal regulations. The length of the season(s) and harvest limits will be set in accordance with population management objectives as determined by the Service in coordination with the FGFWFC.

II. DESCRIPTION OF THE ENVIRONMENT

General - The St. Vincent National Wildlife Refuge was established in 1968 as a waterfowl sanctuary and contains 12,490 acres. The primary feature is the four-by-nine mile, 12,358 acre St. Vincent Island, 6 miles southwest of Apalachicola in Franklin County, Florida.

Biological Features - St. Vincent Island is triangular in shape. It is dominated by a series of east to west sand ridges less than 20 feet above mean sea level and contains many natural biocommunities. The island contains a unique mix of beach dunes, saltwater and freshwater marshes, sloughs and lakes, pine-palmetto flatlands and hardwood hammocks.

Table 1. St. Vincent Island's habitat includes a variety of vegetation types.

Habitat/Vegetative Type	Acres
Tidal Marsh	2,899
Slash Pine-Mixed Understory	2,332
Slash Pine/Cabbage Palm - Hammock	1,234
Scrub Oak Dunes	1,202
Sawgrass, Brush, Hypericum Marsh	1,144
Slash Pine/Palmetto/Ilex	1,040
Live Oak Dunes	505
Beach	377
Cattail	318
Freshwater Lakes	245
Cabbage Palm	221
Mixed Live-Scrub Oak Dunes	201
Hardwood Hammock	185
Live Oak/Grass Dune	155
Saltwater Pond	148
Slash Pine/Grass Dune	145
Sand Pine-Scrub Oak	7
TOTAL	12,358

The lakes are the eastern terminus of an entire, island-long freshwater ecological system. The southern half of the island contains most of the east to west ridges and all the freshwater lakes. The associated marshes between the sand ridges are narrow and shallow on the west end of the island, but become increasingly wider and deeper to the east. The lakes are located in the southeastern corner of the island. The northern half of the island is dominated by Big Bayou, Mallard Slough, its associated Spartina-Distichlis marshes, slash pine-palmetto flatwoods and needlerush marsh. Two long-narrow hardwood ridges run the length of the area north of Big Bayou (see map). A more detailed discussion of island vegetation is available in "Vegetation Cover Types of St. Vincent Island Refuge" compiled in the early seventies by Service Biologist Richard Thompson.

Birds of the refuge vary from songbirds to waterfowl. Some of the most conspicuous include catbird, little and great blue herons, common egret, willet, oyster catcher, brown pelican, royal tern, osprey, swallow-tailed kite, bald eagle, ring-necked duck and blue-winged teal. The refuge's tentative bird list includes 238 species. The bald eagle, osprey and little and great blue herons are some of the many refuge nesters.

Twenty-six mammals are known or suspected to occur on St. Vincent. The list includes ten bats and one exotic deer.

Reptiles and amphibians of the refuge number 34 and 10, respectively. Reptiles include the gopher tortoise, Atlantic ridley, American alligator and eastern indigo snake. The endangered loggerhead nests on the south beach and a newly established population of eastern indigo snakes, also an endangered species, appears to be thriving. The 10 amphibians are toads and frogs.

Known fishes from the island total 23. Fresh and salt water species are included and occur in common waters. Species present include redfish, least killifish, tidewater silversides, striped mullet, bluegill and largemouth bass.

Plants found in lower elevations of the inter-dunes and lakes include, but are not limited to, the following: widgeongrass (Ruppia maritina), four species of Potamogeton, two species of Naias, cattails (Typha latifolia and T. domingensis), Sagittaria latifolia and S. platyphylla, two species of Vallisneria, five species of Panicum, eight species of Cyperus, three species of Acnida, alligatorweed (Alternanthera philoxeroides, coontail (Ceratophyllum demersum), lotus (Nelumbo lutea), white waterlily (Nymphaea odorata), Hypericum ambiguum, Myriophyllum sp. and three species of bladderwort (Utricularia)

Cultural Features - St. Vincent was a private hunting preserve for many years prior to becoming a National Wildlife Refuge. The public was not allowed on the island while privately owned from 1907 to 1968. Some of the buildings constructed in 1909 remain and are essential to current management. Fort Mallory, an old Civil War fort near West Pass, although no longer visible, is a part of the island's history. One former owner, George Hatch, is buried on the island. A series of prehistoric shell middens form a discontinuous strip of higher ground along the northern shore of the island. Prehistoric shell middens are also located in the Cabbage Top and Tahiti Beach areas. All middens were widely scattered by Hurricanes Elena and Kate in 1985.

III. ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION

General - There will be no long-term adverse impacts. Temporary losses will involve renewable resources.

Land Use - Changes in land use will not occur.

Fishery Resources - Fish resources will not be directly affected. Fishing pressure may increase slightly.

Wildlife Resources - There will be no adverse impacts to game populations. Ungulate competition for fall mast crops will be reduced. The native white-tailed deer will have less competition for available mast.

Public hunting of upland game (raccoon) will enhance loggerhead sea turtle, soft-shelled turtle and gallinaceous bird nest success.

Since 1980 white-tailed deer population estimates have ranged from 175-450. Feral pig population estimates have ranged from 150-800. Current sambar population estimates range from

167-209. Public hunting of white-tailed and sambar deer, feral pig and raccoon will be a management activity to control population numbers.

Effects of visual and audible disturbances to nesting bald eagles will be minimized by closing the nest areas to all entry.

Plant Resources - There will be some impacts on vegetation. Trampling, bending and scuffing of grasses, shrubs and trees will occur.

Recreation - Hunting activities have traditionally generated over 50% of the total public use on St. Vincent NWR. Other forms of public use will be discouraged during the hunts. Sambar deer hunting will generate additional recreational opportunities.

Social and Cultural Values - A quality outdoor recreational experience compatible with refuge objectives will remain available. The hunts will enable the general public to engage in traditional recreation. Removal of cultural resources (pottery shards, etc.) will be minimized by pre-hunt regulations discussions and active law enforcement. In the process hunters will gain additional knowledge about St. Vincent Island's history.

Other - Hunters afield are expected to indirectly add to the coliform bacteria of the island's freshwater system. The amount will be unknown but is not expected to be critical to the island's resources nor adjacent resources.

IV. MITGATING MEASURES INCLUDED IN THE PROPOSED ACTION

Federal and State regulations will be enforced. The hunts will be conducted with considerable controls. Hunters will be required to check in, check their game, and check out at a designated check station. Conducted as proposed the hunts will meet the refuge hunting activity hours objectives.

Actions implemented to manage white-tailed deer will have a better chance of having the desired result. Past management has involved the annual reductions of feral pigs and white-tailed deer (two of the three ungulates on St. Vincent Island). The proposed actions, when implemented, will aid in the maintenance of all ungulate populations within the island's carrying capacity, decrease raccoon numbers which will decrease predation on nesting turtles and birds, reduce sambar deer and feral pig utilization of fall mast which will increase fall food availability for whitetails. Competition for browse will also be decreased.

Any conflicts between hunting and other public uses will be avoided by discouraging other forms of public use during the hunts. The public's appreciation for refuge management and associated programs will be improved.

The data collected at the check stations will enable the Service to make estimates of deer herd health and formulate annual hunt regulations that will help foster a quality recreational experience for the hunting public. Law enforcement efforts to apprehend and prosecute violators of hunt regulations will minimize the killing of nontarget species.

V. ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

An unknown number of people will be distressed by and opposed to hunting on the refuge. An unknown number of people will be opposed to the hunting of sambar deer. Some vegetation will be destroyed. Littering and wildfire potential will increase. An unknown percentage of the annual harvest will be a result of crippling loss. Nontarget species could be killed.

VI. RELATIONSHIP BETWEEN LOCAL SHORT-TERM USE OF THE ENVIRONMENT AND MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

There will not be any adverse long-term environmental effects from the implementation of the proposed action. Long-term impacts of the proposed action are expected to be favorable and in the best interest of the public. Substantial long-term benefits of the proposed action will be increased recreational opportunities and sound, effective management of refuge wildlife populations.

VII. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS

Individuals of plant and animal species will be lost through trampling and annual harvest, respectively. However, there will be no irreversible and irretrievable commitments of resources since the proposal involves renewable resources.

VII. ALTERNATIVES TO THE PROPOSED ACTION

1. No Action - The no action option will be the continuation of upland and big game hunting without the addition of sambar deer. This option will maintain status quo. The present level of competition between sambar and white-tailed deer for fall mast crops and browse will remain. Management hunts for white-tailed deer, turkey, feral pig and raccoon will continue.
2. Close Upland and Big Game Hunting - This alternative will result in an overpopulation of big game on St. Vincent Island. Populations will be controlled through disease and starvation rather than hunting. Feral pig and raccoon populations will increase. Staff time expended on predator control for loggerhead sea turtle nest protection will escalate.

IX. CONTROVERSIAL ASPECTS AND INTENSITY OF PUBLIC INTEREST

The local public supports the hunting of big and upland game. Some controversy can be expected with the initiation of sambar deer hunting. The degree of intensity of public interest will be related to perceived impacts on traditional hunts.

X. CONSULTATION AND COORDINATION WITH OTHERS

The Service has consulted and coordinated the proposals with the FGFWFC. Intra-Service Section 7 Consultations concerning endangered species have been completed.

The results of the 1984-85 St. Vincent Island sambar deer ecology study were discussed with the FGFWFC's staff in Tallahassee, Florida, September 19, 1986. Extensive discussions concerning the proposal addressed in this assessment were conducted with the staff of the FGFWFC's Northwest District Office, Panama City, Florida, Service Biologist Wendell Metzen, Jacksonville, Florida, and the hunting public on St. Vincent Island. The potential and possibility of hunting sambar deer on St. Vincent Island has been discussed in a public meeting with the Franklin County Commission. A public meeting to further discuss the proposal was accomplished February 19, 1987 in Apalachicola, Florida.

Copies of the draft plan to implement the proposal addressed in this assessment and copies of a draft of this assessment were provided the FGFWFC, Service Management Biologist and Endangered Species Office, Jacksonville, Florida, and Woody Miley, The Apalachicola National Estaurine Research Reserve Manager, Apalachicola, Florida.

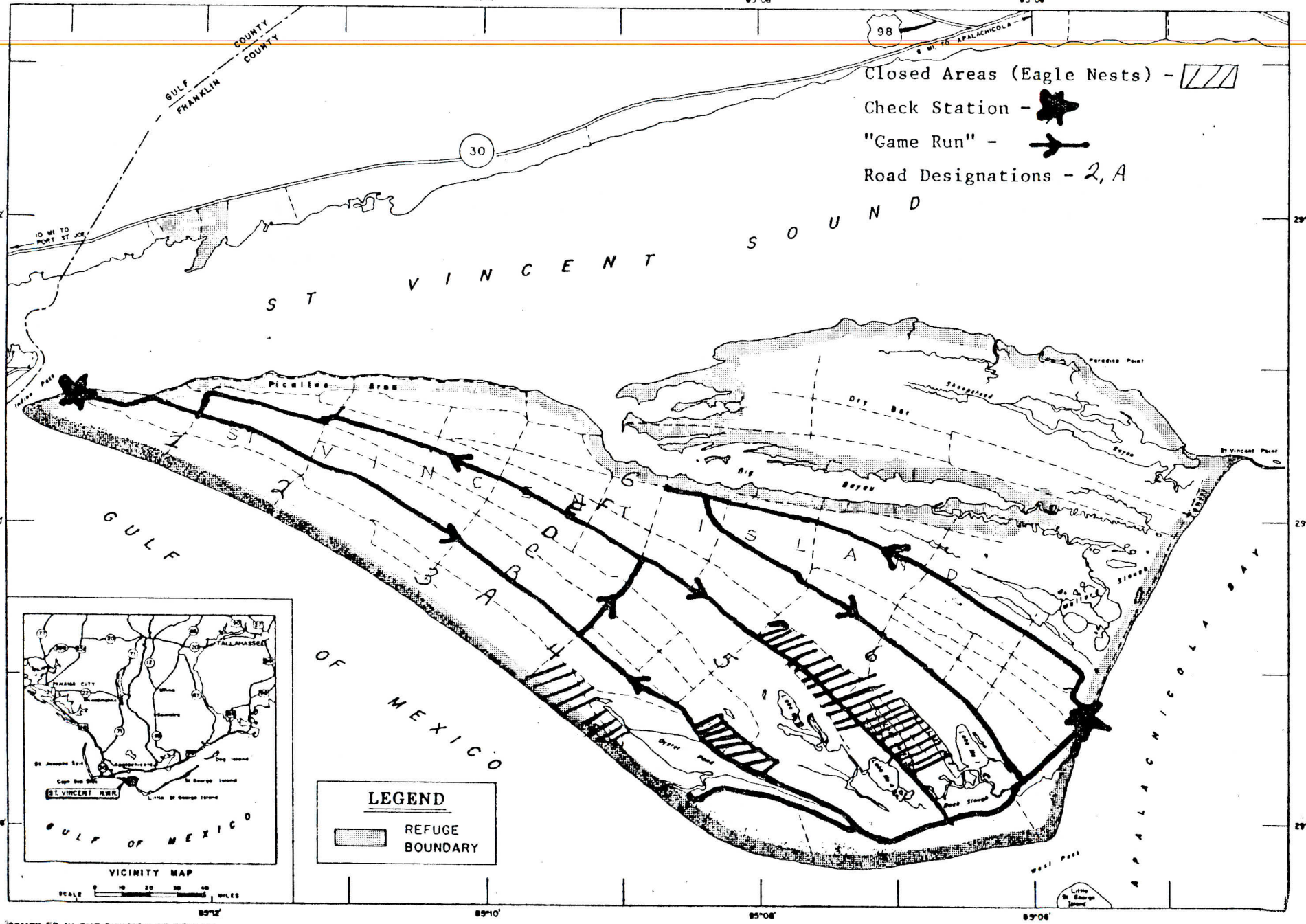
Appendix I

ST. VINCENT NATIONAL WILDLIFE REFUGE

FRANKLIN COUNTY, FLORIDA

UNITED STATES
DEPARTMENT OF THE INTERIOR

UNITED STATES
FISH AND WILDLIFE SERVICE



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