



Mackay Island National Wildlife Refuge

MACKAY ISLAND NATIONAL WILDLIFE REFUGE

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Mackay Island National Wildlife Refuge

ESTABLISHING AUTHORITIES. . .

- **Migratory Bird Conservation Act of 1929 provided basic authority for establishment and acquisition of the refuge. Congress established the refuge on December 30, 1960**
- **Eight tracts totalling 7,835 acres were targeted for acquisition. Acquisition began in 1961. In 1991, a proposal was developed to expand the refuge. Acquisition is currently underway to acquire inholdings. The area of the refuge is now 8,138 acres.**



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SECRETARIAL PROCLAMATION BOUNDARY:

- **Secretary of the Interior signed a proclamation on August 15, 1963 establishing a proclamation boundary that included the Mackay Island Refuge and the surrounding waters as an area where waterfowl hunting would be prohibited**



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PURPOSES . . .

- **Protect and maintain the wetlands and associated areas of Mackay Island**
- **Provide habitat for wintering and native waterfowl with emphasis on greater snow geese**



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WILDLIFE SPECIES OF MANAGEMENT CONCERN

Migratory land birds of concern

Greater snow goose

Canada goose

Tundra swan

American black duck

Wood duck

Mallard

Pintail

Teal

Wading birds

Marsh birds

Bald eagle

Peregrine falcon

Osprey

Red-tailed hawk

Cooper's hawk

Great horned owl

Screech owl

Anadromous fish

White-tailed deer



Invasive Species:

Nutria

Common reed



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HABITAT DIVERSITY ...

- brackish marsh (4,368 acres)**
- maritime swamp forest (1,515 acres)**
- moist soil units (876 acres)**
- open water (770 acres)**
- roads (266 acres)**
- farmland (220 acres)**
- administrative areas (26 acres)**
- upland forest (5 acres)**



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HABITAT MANAGEMENT ...

Impoundment management

- water management
- levee maintenance
- mowing
- discing

Fire management

- to protect against wildfire
- to enhance wildlife habitat

Cooperative farming

Mechanical and chemical control of noxious weeds





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PEOPLE . . .

- Fishing
- Deer Hunting
- Wildlife Observation
- Interpretation
- Education
- Photography

and . . .
non-wildlife dependent
activities like hiking
and biking





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RESOURCE PROTECTION

(including land acquisition and monitoring of permitted activities) . . .

- **Administration areas totalling 26 acres**
- **Highway and utility easements**
- **Natural Heritage Areas**
- **Outstanding Resource Waters**



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LAW ENFORCEMENT ISSUES . . .

Dumping/littering

Poaching

Feeding/baiting wildlife

Trespass

Tree cutting/wood gathering

No hunting in Proclamation Boundary

Fishing

Trespass

Target practice

Vandalism

Hunting blinds

Vehicle access

(One full-time law enforcement officer)



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MACKAY ISLAND NWR COMPREHENSIVE CONSERVATION PLAN



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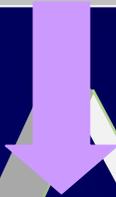
The Process to date . . .

- Biological Reviews August 2000**
- Preplanning December 2000**
- Public Involvement (see handouts) June 2001**
- Issues, Vision, Goals August 2001**
- Alternative/Objective Development September 2001**

REFUGE VISION



GOALS



OBJECTIVES



Strategies

Projects

Strategies

Projects

Strategies

Projects



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Vision Statement

The Mackay Island National Wildlife Refuge will provide habitat for migratory birds and endangered species as an integral part of the National Wildlife Refuge System. The refuge will restore, enhance, and maintain the health and diversity of wildlife habitats within the Back Bay and Currituck Sound watersheds. The refuge will also provide opportunities for wildlife dependent recreation. The refuge will develop and maintain partnerships with other agencies and organizations to accomplish the refuge goals and objectives.

GOALS

Wildlife, Fish and Plant Populations: Preserve, protect, and maintain healthy and viable populations of migratory birds, wildlife, fish, and plants including federal and state endangered species and trust species.

Habitat: Restore, enhance, and maintain the health and biodiversity of brackish marsh, forests, and other habitats to insure optimum ecological productivity and protect the water quality of Currituck Sound and Back Bay.

Public Use: Provide the public with safe, high quality wildlife dependent recreational and educational opportunities that focus on the wildlife and habitats of the refuge and the National Wildlife Refuge System.

Administration: Acquire and manage adequate funding, human resources, facilities, equipment, and infrastructure to accomplish the other refuge goals.

Resource Protection: Protect refuge resources by limiting the adverse impacts of human activities and development.

WILDLIFE ISSUES

- **Consider sika deer introduction**
- **Continue surveys currently being conducted**
- **Continue to make survey data public**
- **Coordinate wildlife activities and notify other agencies that have responsibility for what areas**
- **Hire a biologist**
- **Maintain water quality for fish**
- **Management plans should have goals and objectives for fish and wildlife**
- **Secure funding and hire adequate staff to do surveys**

HABITAT ISSUES

- **Expand proclamation boundary (SAV for diving ducks: redheads, ruddy, canvasback, scaup)**
- **Need more habitat for upland mammals**
- **Consider SAV restoration in cooperation with other agencies**
- **Continue common reed control**
- **Control alligator weed**
- **Evaluate loss of bass habitat to salt water intrusion in Currituck Sound**
- **Expand NCWRC joint venture activity**
- **Hire more staff**
- **Increase controlled burning**
- **Increase water quality monitoring**
- **Maintain flexibility in management (adaptive management)**
- **Maintain intensive management of moist soil areas**
- **Maintain prescribed fire program**
- **Manage better for deer**
- **Monitor to investigate the impact of Lynnhaven River connection to Currituck Sound through Canal#2 (salinity)**
- **Perform water quality monitoring in ocean and sound waters**
- **Track invasion of invasive species, e.g., giant salvinia, develop plan to manage them, and respond rapidly**
- **Turbidity, storms and overwash from storms factors in water quality and SAV production**
- **Use herbicides as necessary especially on common reed**

PUBLIC USE ISSUES

- **Advertise refuge programs more**
- **Allow horseback riding**
- **Continue cooperation with NCWRC on hunting**
- **Continue hunting program and expand program to fit new lands**
- **Continue public use**
- **Decrease parking lot size**
- **Develop and maintain newsletter**
- **Encourage cooperation with private, nonprofit organizations to manage cultural resources**
- **Establish a memorial for Joseph Knapp**
- **Expand deer hunting season during rut season (late October-November)**
- **Expand deer hunting season in December**
- **Hire staff to implement public use program**
- **Increase environmental education**
- **Increase the number of open road days**
- **Prefer deer hunting program with assigned stands**
- **Provide access for and allow human drives for deer hunting**
- **Use refuge for education programs for children in cooperation with other agencies**

RESOURCE PROTECTION ISSUES

- **Acquire more land**
- **Expand NCWRC joint venture activity**
- **Favor cooperative agreements**
- **Hire staff to handle land acquisition**
- **Need to purchase more land as it becomes available**
- **Opposed to acquisition**

LAW ENFORCEMENT ISSUES

- **Add another full time officer**
- **Establish rest areas for waterfowl**
- **Hire law enforcement staff**
- **Need more staff to conduct controlled hunts**
- **Restrict speedboats in the sound**



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3 Alternatives Derived from Public Involvement and Strategic Planning . . .

- 1. Existing conditions (status quo)**
- 2. Moderate program increases**
- 3. Optimum program increases**



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ALTERNATIVE 1: No Action – Status Quo (6 Non-Fire and 1.5 Fire Employees Shared with Currituck National Wildlife Refuge)

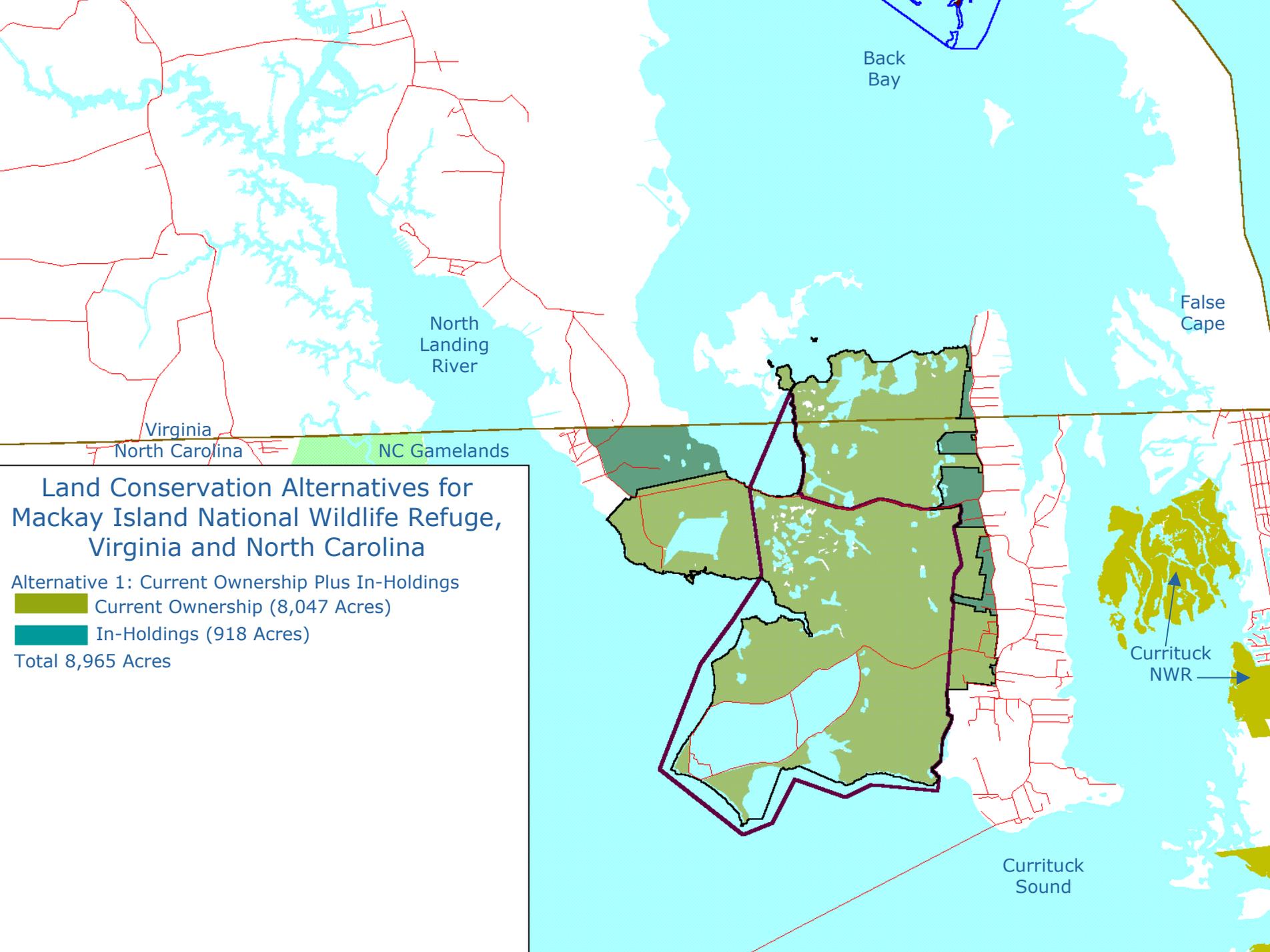
- No change from past management programs**
- No changes to current uses**
- No noticeable refuge program improvements**

Access to office area limited to weekdays

Conduct regular prescribed burns

Limited public use and public use programs conducted by assistant manager

Law enforcement conducted with officer shared with Currituck NWR

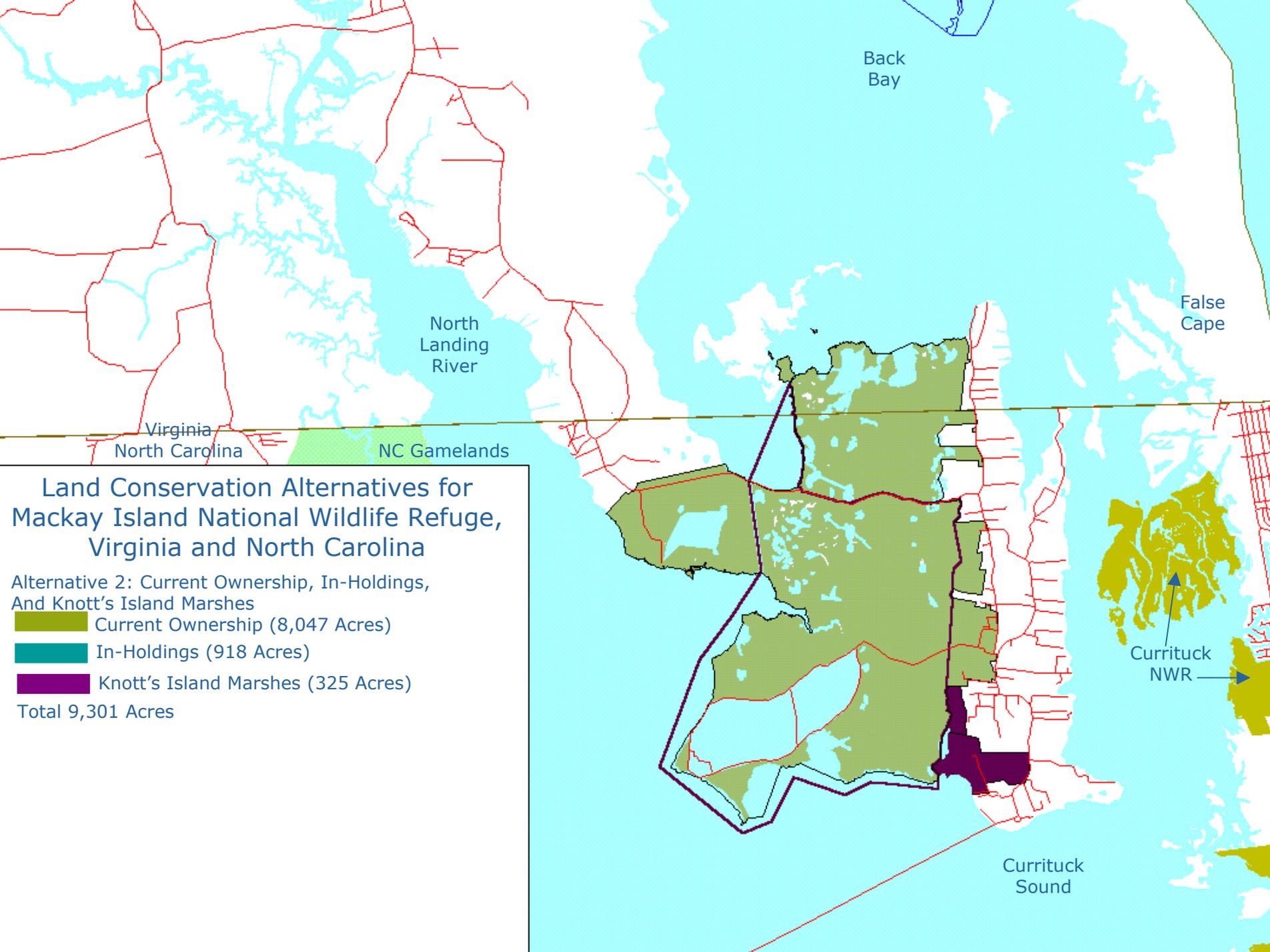




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ALTERNATIVE 2: Moderate program increases (13 Non-Fire and 1.5 Fire Employees Shared with the Currituck National Wildlife Refuge)

- Implement comprehensive wildlife survey**
- Implement diverse public use program**
- Provide access to office area on alternate weekends**
- Conduct regular prescribed burns**
- Build new office and convert existing office to environmental education center**
- Law enforcement conducted with officer shared with Currituck NWR**





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ALTERNATIVE 3: Optimum program increases (16 Non-Fire and 3.5 Fire Employees Shared with Curriuck National Wildlife Refuge)

- Implement comprehensive wildlife survey and management**
- Implement enhanced public use program**
- Provide access to office area every weekend**
- Conduct regular prescribed burns**
- Build new office and convert existing office to environmental education center**
- Provide law enforcement officer for each refuge**

