



Roanoke River National Wildlife Refuge

ROANOKE RIVER NATIONAL WILDLIFE REFUGE

October 2001

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Roanoke River National Wildlife Refuge

ESTABLISHING AUTHORITIES. . .

- **Congress identified the Roanoke River as a national priority under the emergency Wetlands Resources Act. The Act identified the Roanoke River bottomlands as a high national priority for the conservation of wetlands in order to maintain the public benefits they provide and to help fulfill international obligations contained in various migratory bird treaties and conventions.**
- **The Migratory Bird Hunting and Conservation Stamp Act of 1934, The Migratory Bird Conservation Act of 1919, and the Land and Water Conservation Fund Act of 1965 provided the authority for the establishment and acquisition of the refuge.**



Roanoke River National Wildlife Refuge

Purposes . . .

“... for the use as an inviolate sanctuary, or any other management purpose, for migratory birds ...”

“...to assist in preserving, developing, and assuring accessibility to all citizens of the United States ... such quality and quantity of outdoor recreation resources ... desirable for individual active participation ...”

“...to maintain the public benefits wetlands provide and to help fulfill international obligations contained in various migratory bird treaties and conventions...”



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WILDLIFE SPECIES OF MANAGEMENT CONCERN

Kentucky warbler
Cerulean warbler
Swainson's warbler
Prothonotary warbler
Yellow-crowned night heron
Wood duck
American black duck
Mallard
Striped bass
Alewife
Blueback herring
Shortnose sturgeon





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HABITAT DIVERSITY . . .

cypress-tupelo swamp forest (12,073 acres)

coastal plain bottomland hardwood forest (6,257 acres)

freshwater marsh (43 acres)





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HABITAT MANAGEMENT . . .

- **Moist soil management**
- **Forest management**
- **Wood duck nest boxes**
- **Water quality monitoring**
- **Contaminant monitoring**



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PEOPLE . . .

- **Hunting**
- **Environmental education**
- **Environmental interpretation**
- **Wildlife observation**
- **Wildlife photography**

plus other activities such as hiking





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

- **Natural Heritage Area**
- **Continentially Important Bird Area**
- **Anadromous Fish Spawning Area**



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LAW ENFORCEMENT ISSUES . . .

- **Hunting Stands**
- **Baiting Wildlife**
- **Dumping/Littering**
- **Poaching**
- **Trespass**
- **Vehicular Access**
- **Defecators**
- **Lead Sinkers**

**(Law enforcement conducted as collateral duty by
Roanoke River NWR personnel. No full-time LE officers.)**



Roanoke River National Wildlife Refuge

ROANOKE RIVER NWR COMPREHENSIVE CONSERVATION PLAN



Roanoke River National Wildlife Refuge

The Process to date . . .

•Preplanning

December 2000

•Biological Reviews

**December 1999-
December 2000**

Public involvement

June 2001

•Issues, Vision, Goals

August 2001

**Alternative/Objective
Development**

September 2001

REFUGE VISION



GOALS



OBJECTIVES

Strategies

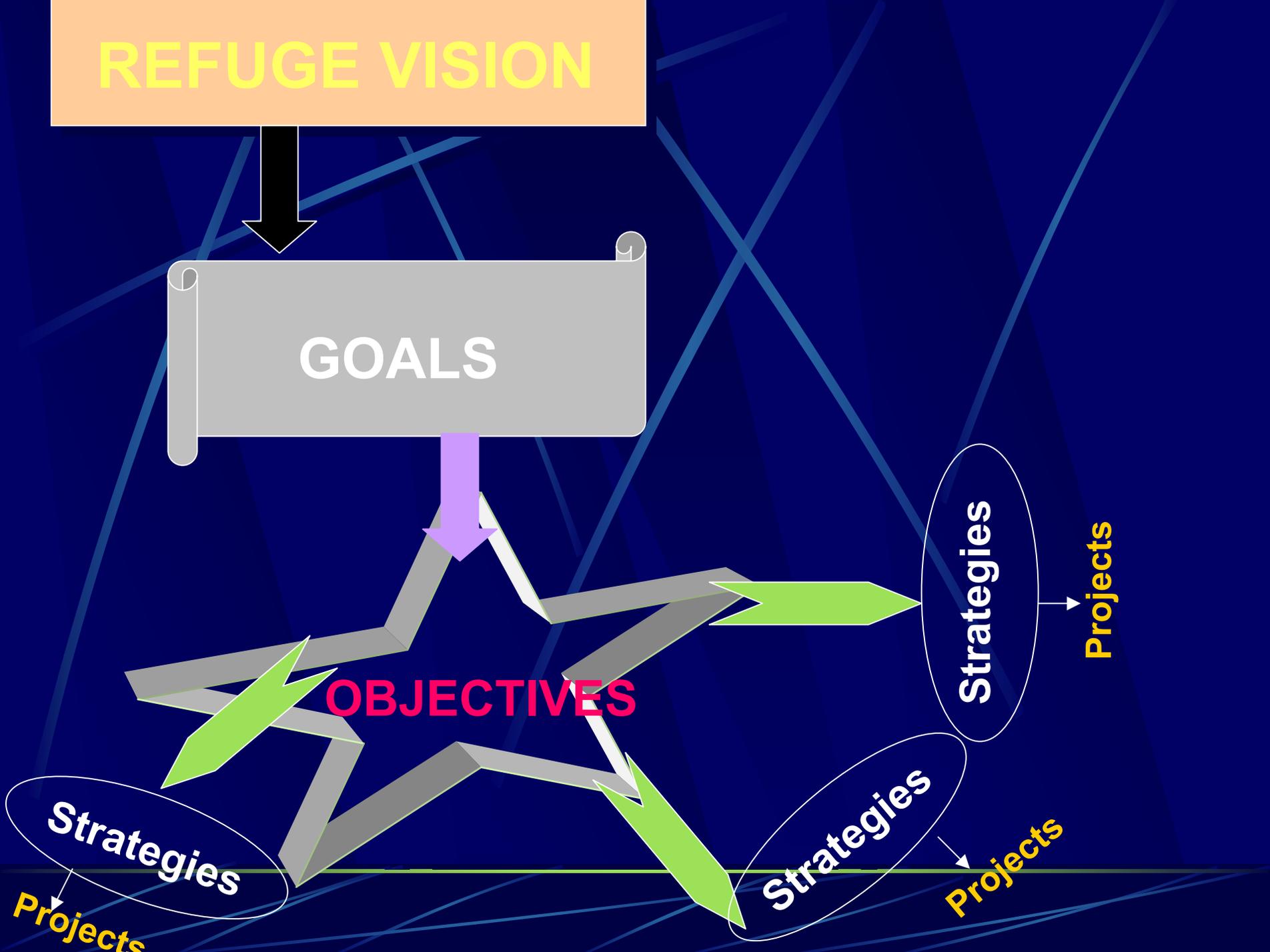
Projects

Strategies

Projects

Strategies

Projects



Vision Statement

The Roanoke River National Wildlife Refuge will protect, enhance, and manage high quality habitat for a diversity and abundance of migratory birds, fish, and other wildlife. Through new and existing partnerships, the refuge will foster and practice sound conservation in land management and river flow management to assure the physical and biological integrity of the Roanoke River floodplain.

The refuge will provide compatible wildlife-dependent public use opportunities, including environmental education, interpretation, and recreation. The refuge will provide increased opportunities to learn about the ecological and cultural importance of the Roanoke River floodplain. The refuge will become a national destination, and activities on the refuge will contribute to the local economy.

GOALS

WILDLIFE, FISH AND PLANT POPULATIONS: Protect, maintain, and enhance healthy and viable populations of indigenous migratory birds, wildlife, fish, and plants including federal and state threatened and endangered species and trust species.

HABITAT: Restore, maintain, and enhance the health and biodiversity of forested wetland habitats to insure optimum ecological productivity.

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. Continue to participate in local efforts to sustain economic health through nature-based tourism.

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 FROM SCOPING MEETINGS

- **Consider reintroducing historically existing species such as shortnose sturgeon, Atlantic sturgeon**
- **Consider a sturgeon viability study**
- **Evaluate hatchery capacity relative to needs**
- **Conduct viability study to evaluate the potential impact of top predators on beaver and nutria**
- **Address beaver control**
- **Control nutria**
- **Maintain fish populations**
- **Conduct fish surveys**
- **Conduct water quality surveys every year**
- **Maintain USGS water quality surveys**
- **Continue to partner with other agencies to monitor water**
- **Continue surveys of wildlife (waterfowl, neotropical migrant songbirds, turkey)**
- **Conduct surveys to get long term trends**
- **Get staff to do wildlife surveys**
- **Base management on surveys**
- **Compile data on large game (deer, bear, turkey) on which to base management**

HABITAT ISSUES FROM SCOPING MEETINGS

- **Beaver contributing to improved mink habitat**
- **Year round river flow management key to refuge habitat**
- **Man made impoundments to flood lowlands**
- **Sustain flow to sustain industries downstream**
- **Address withdrawal of water from lake by Virginia Beach**
- **Document water budget needs from lake**
- **Maintain participation in water management issues**
- **Hire a hydrologist for the NE North Carolina refuges**
- **Document effect of flow regimes on habitat (water quality, vegetation)**
- **Address the impact of the manipulation of water on river on habitat**
- **Address the impact of water withdrawals on habitat**
- **Define the water flows that will maintain refuge ecosystem health**
- **Assess the impact of inter-basin transfer of water**
- **Insure the rights of riparian landowners**
- **Identify animal travel corridors considering safety on roads and opportunities for crossings**
- **Integrate CCP with transportation Plans (TIP=Transportation Improvement Project)**
- **Designate habitat affected by flood control vs other water regulation**

HABITAT MANAGEMENT ISSUES FROM SCOPING MEETINGS

- **Maintain flexibility to use a variety of management tools**
- **Control exotic and invasive plant and animal species**
- **Develop a timber management step-down plan**
- **Study beaver management techniques (eg Clemson Levelers)**

PUBLIC USE ISSUES FROM SCOPING MEETINGS

- **Educate public on the water management of the river**
- **Do not impose restrictions on motorized boats**
- **Consider allowing camping to facilitate refuge being part of Roanoke River Canoe Trail (become part of partnership)**
- **Increase public education programs**
- **Extend access at the Kuralt Trail**
- **Increase hunting and fishing**
- **Monitor the impact of increased public use**
- **Develop an interpretative center, evaluate parking and access**
- **Examine existing perimeter roads for safety and access**
- **Restrict non-toxic shot when possible (rifle shot still lead)**
- **Investigate canoe platforms to facilitate overnight camping on refuge by canoeists**
- **Design canoe platforms for people with disabilities (multiple steps for access at different water levels)**
- **Consider building a wildlife observation tower to see rookery or canopy of forest**
- **Provide trails with good access**
- **Develop trails accessible by bicycles**

RESOURCE PROTECTION ISSUES FROM SCOPING MEETINGS

- **Hire a dedicated law enforcement officer**
- **Hire designated and adequate law enforcement personnel for public safety**
- **Consider law enforcement on non-refuge land**
- **Acquire more land to meet habitat needs**
- **Set priorities in acquisition planning**
- **Target corridors up river and towards Great Dismal Swamp and Pocosin Lakes in acquisition planning**
- **Consider easements and cooperative agreements**
- **Consider Goodman Island and Great Island for wilderness**
- **Don't nominate any wilderness, but designate certain areas for no management to get the same effect**
- **Support wilderness designations**



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3 Management 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

- Wildlife program focused on neotropical migratory songbird point counts**
- Habitat program focused on bottomland hardwood forest health and reproduction studies**
- Public use program focused on hunting**
- Shop and storage building rented**
- Law enforcement by collateral duty officers**



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ALTERNATIVE 2: Moderate Program Increases

- Wildlife program diversified to all species**
- Habitat program diversified to all habitats**
- Public use program diversified to all priority public uses**
- Shop and storage building Service-owned**
- Law enforcement by full time officer and collateral duty officers**



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ALTERNATIVE 3: Optimum Program Increases

- Wildlife program diversified to all species with enhanced non-breeding and interior swamp species monitoring**
- Habitat program diversified to all habitats with comparison of health and regeneration plots to reference sites**
- Public use program diversified to all priority public uses with enhanced education, outreach, and observation**
- Shop and storage building Service-owned**
- Law enforcement by full time officer and collateral duty officers**



Roanoke River National Wildlife Refuge

Land Protection Levels

- 1. Status Quo (18,273 acres in current ownership)**
- 2. In-holdings (17,806 acres)**
- 3. Waterfowl and Anadromous Fish Habitats (48,011 acres)**
- 4. 100-Year Floodplain Conservation (23,457 acres)**
- 5. 500-Year Floodplain Conservation (8,561 acres)**

Activity at All Land Protection Levels

Alternative 1. Post boundaries.

Alternative 2. Post boundaries, inventory habitat.

**Alternative 3. Post boundaries, inventory habitat,
manage habitat.**

ROANOKE RIVER NATIONAL WILDLIFE REFUGE LAND CONSERVATION ALTERNATIVES

Mush Island

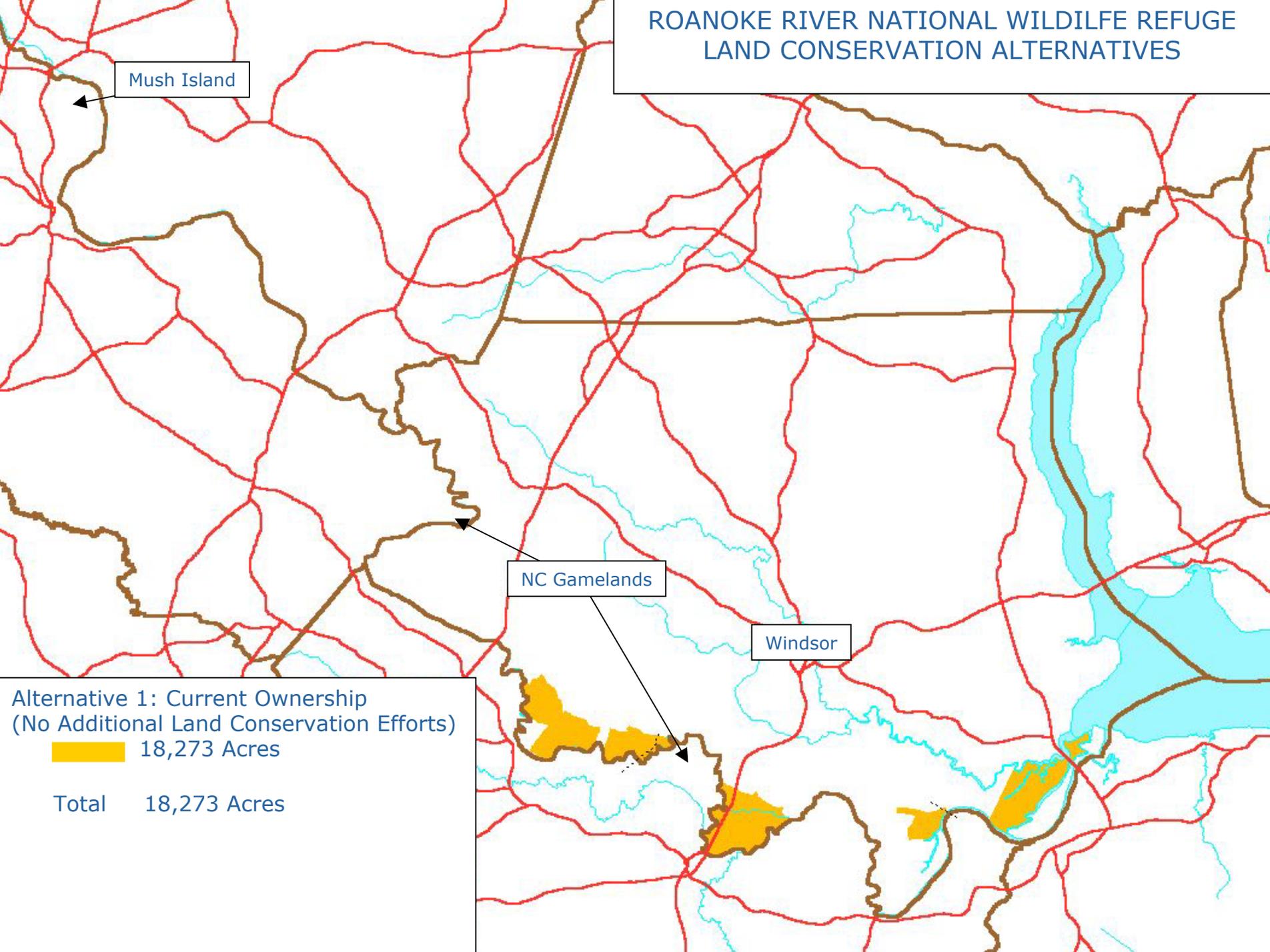
NC Gamelands

Windsor

Alternative 1: Current Ownership
(No Additional Land Conservation Efforts)

 18,273 Acres

Total 18,273 Acres



ROANOKE RIVER NATIONAL WILDLIFE REFUGE LAND CONSERVATION ALTERNATIVES

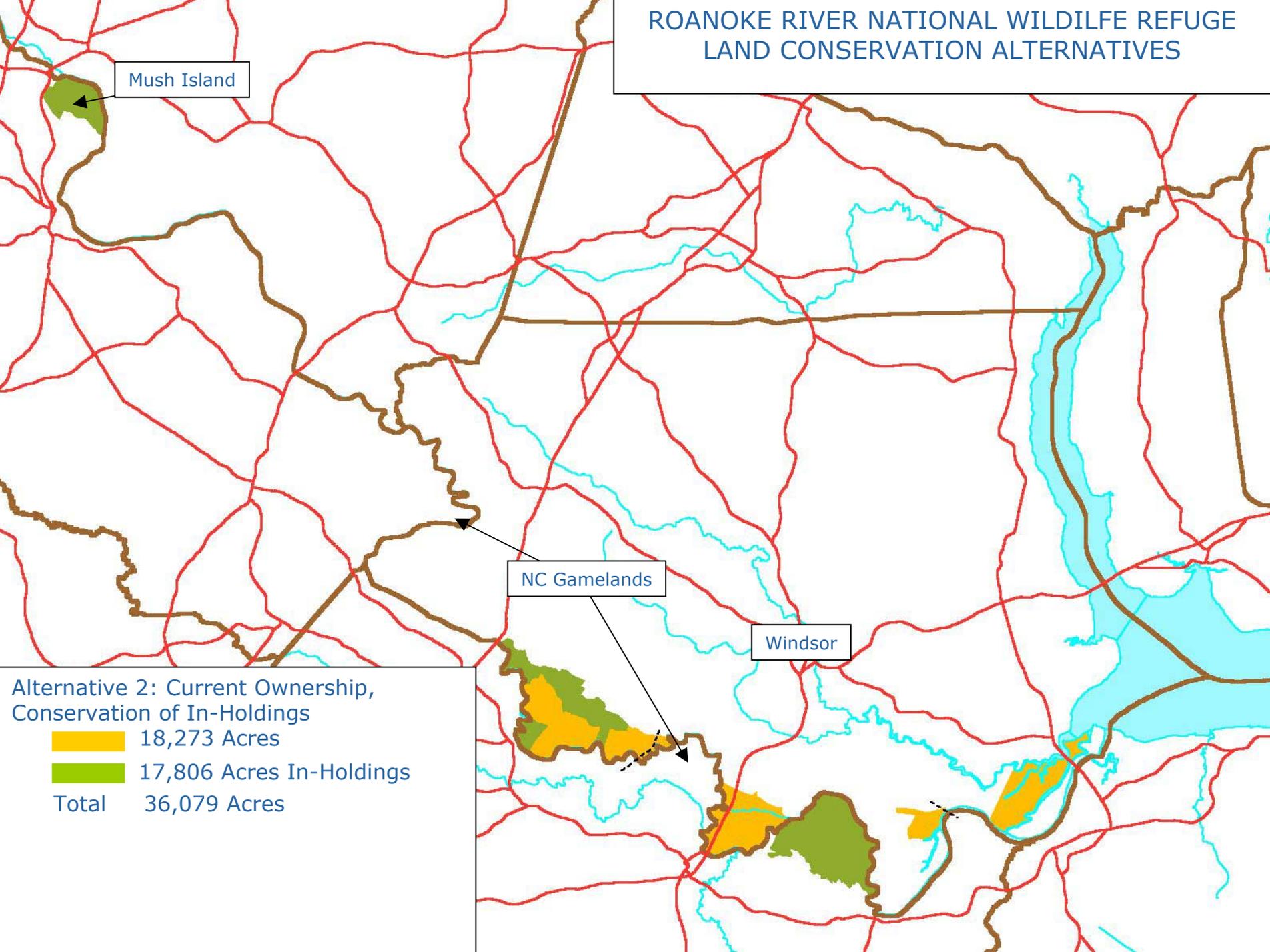
Mush Island

NC Gamelands

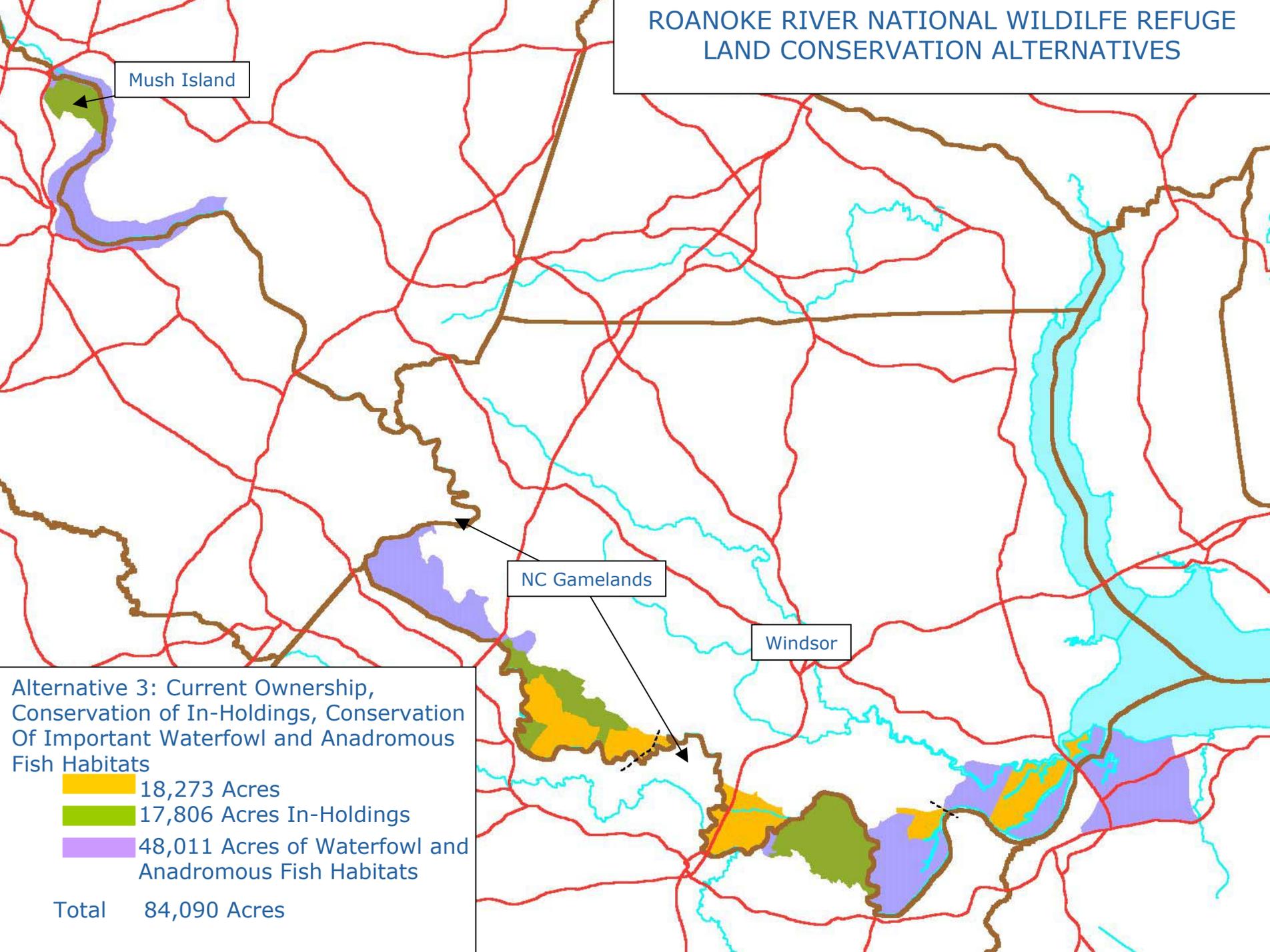
Windsor

Alternative 2: Current Ownership,
Conservation of In-Holdings

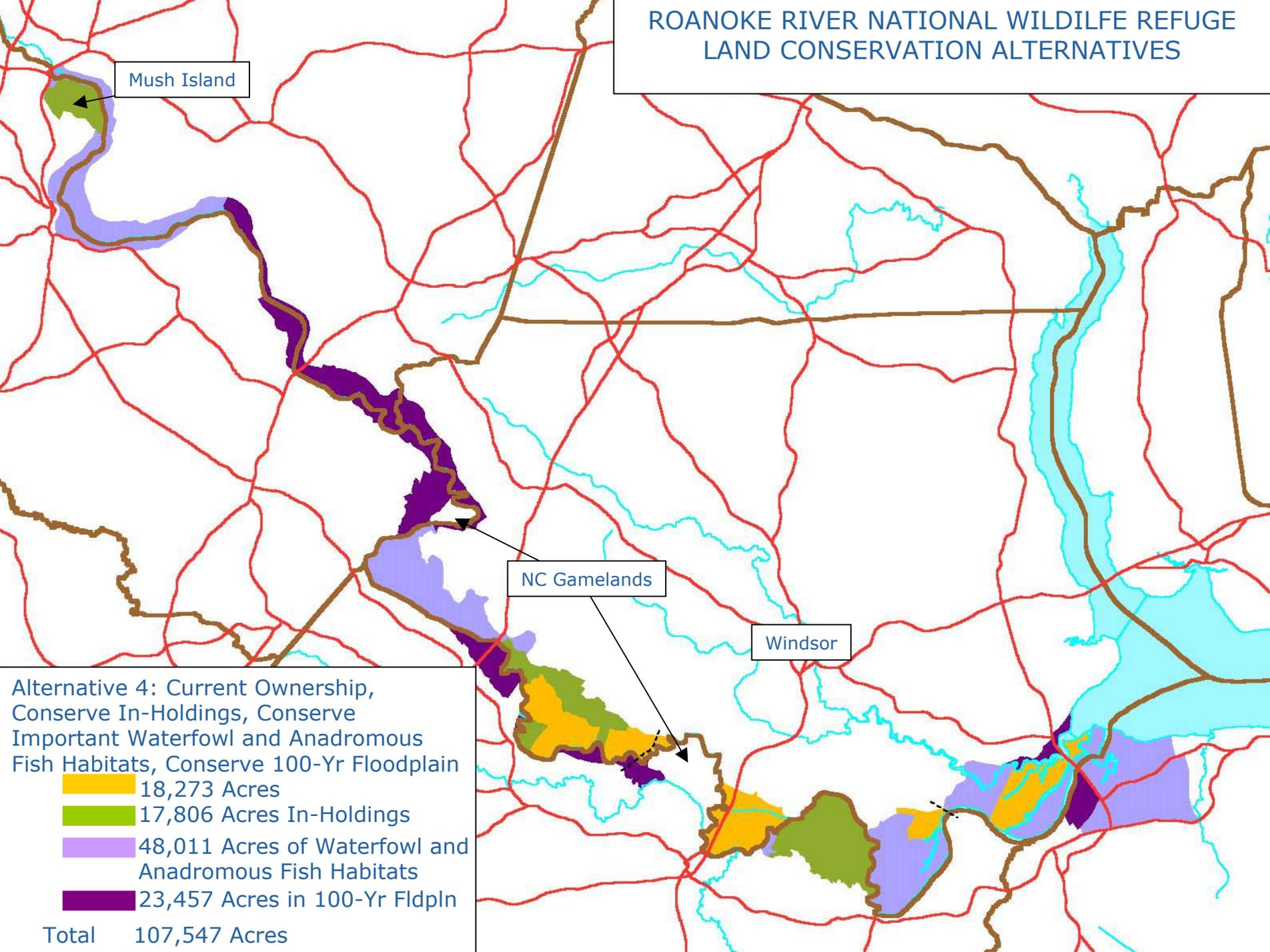
	18,273 Acres
	17,806 Acres In-Holdings
Total	36,079 Acres



ROANOKE RIVER NATIONAL WILDLIFE REFUGE LAND CONSERVATION ALTERNATIVES



ROANOKE RIVER NATIONAL WILDLIFE REFUGE LAND CONSERVATION ALTERNATIVES



Mush Island

NC Gamelands

Windsor

Alternative 4: Current Ownership,
Conserve In-Holdings, Conserve
Important Waterfowl and Anadromous
Fish Habitats, Conserve 100-Yr Floodplain

18,273 Acres
17,806 Acres In-Holdings
48,011 Acres of Waterfowl and Anadromous Fish Habitats
23,457 Acres in 100-Yr Fldpln
Total 107,547 Acres

ROANOKE RIVER NATIONAL WILDLIFE REFUGE LAND CONSERVATION ALTERNATIVES

