

Eufaula

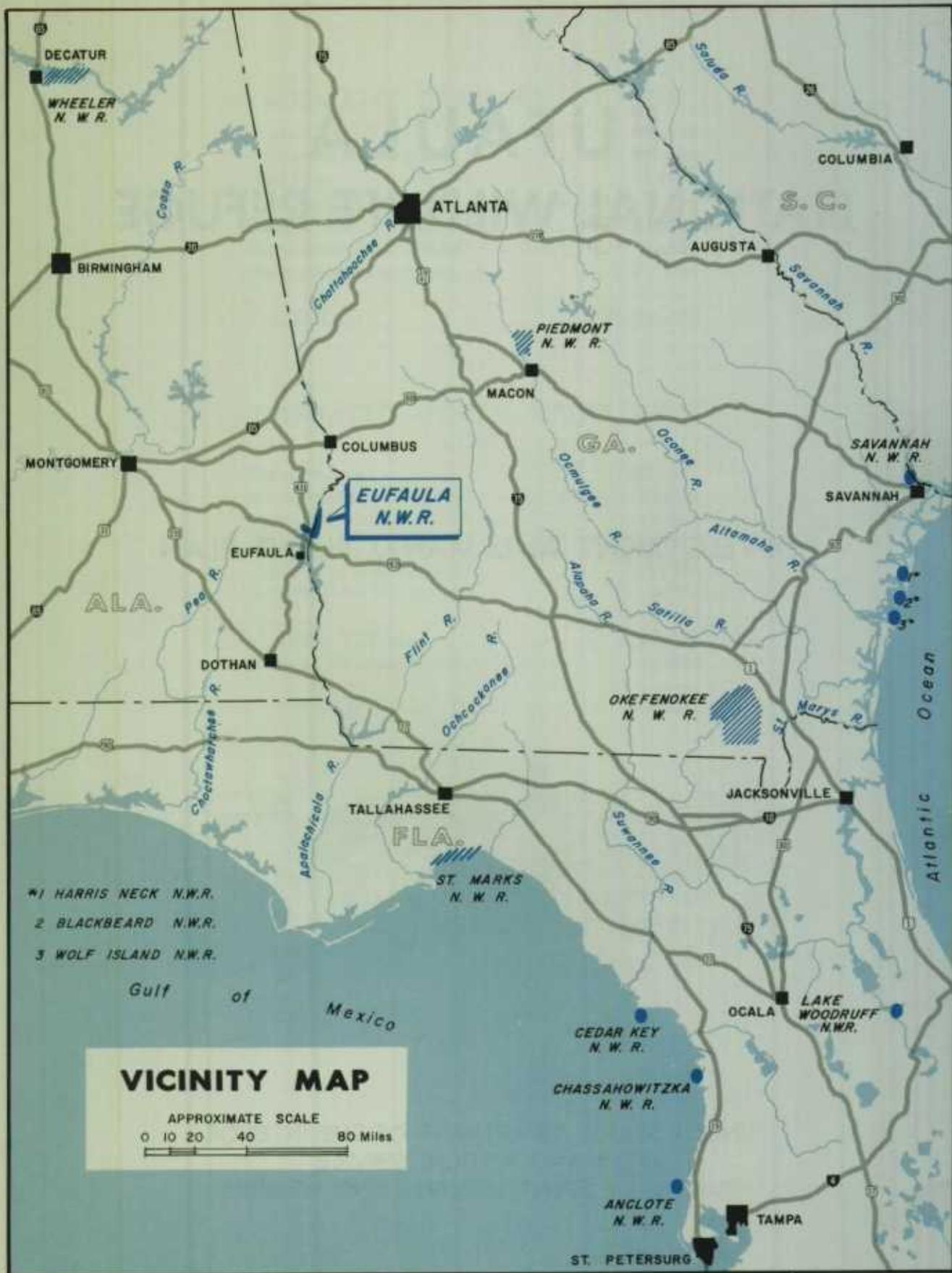
National Wildlife Refuge



EUFAULA NATIONAL WILDLIFE REFUGE

DEVELOPMENT AND MANAGEMENT PLAN

**UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE**



DECATUR
WHEELER
N. W. R.

BIRMINGHAM

ATLANTA

COLUMBIA

S. C.

AUGUSTA

PIEDMONT
N. W. R.

MACON

COLUMBUS

**EUFAULA
N. W. R.**

EUFAULA

SAVANNAH
N. W. R.

SAVANNAH

ALA.

DOTHAN

OKEFENOKEE
N. W. R.

TALLHASSEE

FLA.

ST. MARKS
N. W. R.

JACKSONVILLE

- *1 HARRIS NECK N.W.R.
- 2 BLACKBEARD N.W.R.
- 3 WOLF ISLAND N.W.R.

Gulf of Mexico

Atlantic Ocean

VICINITY MAP

APPROXIMATE SCALE

0 10 20 40 80 Miles

CEDAR KEY
N. W. R.

OCALA

LAKE
WOODRUFF
N.W.R.

CHASSAHOWITZKA
N. W. R.

ANGLOTE
N. W. R.

TAMPA

ST. PETERSBURG

PREFACE

Motivated by respect for the past and regard for the future, this generation must assume the tremendous charge of performing and improving conservation measures for the Nation's natural resources. Waterfowl, other migratory birds, wild animals, and fish have long furnished food, recreational opportunities, and pleasure to the world's people. Only through wise use and thoughtful development of the wildlife resource and its habitat can we continue to enjoy this great segment of our American heritage.

The Bureau of Sport Fisheries and Wildlife bears the Federal responsibility of protecting and managing the migratory bird resources, and wildlife refuges perform an integral role in the attainment of Bureau objectives. Eufaula Refuge holds promise of being an important link in the National Wildlife Refuge System.

The Eufaula National Wildlife Refuge, established pursuant to the Fish and Wildlife Coordination Act and in an atmosphere of high local public interest and support, encompasses 11,160 acres within and adjacent to the Walter F. George Reservoir. The refuge, located approximately six miles north of Eufaula, Alabama, and Georgetown, Georgia, occupies land in both Quitman and Stewart Counties, Georgia, and Barbour and Russell Counties, Alabama.

The development and management of Eufaula Refuge will provide: (1) migration and wintering habitat for large numbers of Canada geese and ducks; (2) breeding and rearing habitat for wood ducks; (3) habitat for other migratory birds and resident game birds and animals; and (4) recreational opportunities for all those who enjoy fishing, hunting, picnicking, hiking, sightseeing, studying of nature, and other out-of-door activities.

THE PAST

When virgin timber stood and streams flowed slowly, the Chattahoochee Valley harbored a wealth of wildlife. Canada geese and wild ducks fed, rested, and drifted along the Chattahoochee, Flint, and Apalachicola Rivers while migrating to the coast and on returning to their breeding grounds. Deer and turkey roamed the forest while squirrel, quail, and other game species abounded the valleys.

Wildlife populations declined with the increased human usurpation of undisturbed lands. Antebellum plantation-type farming necessitated clearing large acreages to grow cotton, peanuts, corn, and pastures. The draining of sloughs and other shallow water areas further diminished wildlife habitat. Waterfowl began to by-pass the

Chattahoochee Valley during annual migrations. The deer and turkey lessened for lack of habitat until they almost ceased to exist. Although agriculture long since has been abandoned on many of the steeper slopes that now have reverted to erratic stands of pine, mixed hardwoods, and other natural cover, the lands once rich in virgin timber, clear-flowing streams, and shallow water areas are sadly bereft of both game and wildlife habitat.

Industrial development and human needs make impossible a replica of the past; however, opportunities now exist, through the development and management of the land and water resources, to replenish the lower Chattahoochee Valley with waterfowl and other wildlife.

THE PENDULUM SWINGS. The Bureau of Sport Fisheries and Wildlife will reforest or otherwise rehabilitate eroded refuge lands to protect the watershed and improve wildlife habitat.



THE PRESENT



HABITAT WITH HUNGER. Although the lake affords cover and resting areas for waterfowl, food plants cannot withstand the deep and fluctuating reservoir waters.

During the late 1950's and early 1960's, the Army Corps of Engineers constructed the Walter F. George Lock and Dam, creating a 45,000 acre reservoir or lake. Surging waters of the new reservoir flooded thousands of acres that previously produced cotton, corn, peanuts, and pasture. Waterfowl deluged the flooded fields where food was readily available from crops and wild plants produced prior to the filling of the reservoir. Waterfowling gained status since hunter success was phenomenal as compared to previous years. Chattahoochee Valley citizens expressed an avid interest and mustered strong support for the establishment of a National Wildlife Refuge on the Walter F. George Reservoir.

Pursuant to the Fish and Wildlife Coordination Act, the Federal Government—through the Corps of Engineers—purchased additional project lands to enhance fish and wildlife habitat. Subsequently these and other project lands totaling 11,160

acres were licensed to the Bureau of Sport Fisheries and Wildlife for the establishment of the Eufaula National Wildlife Refuge. The Bureau commenced active management of Eufaula Refuge on June 6, 1964; however, formal dedication of the refuge was postponed until October 14, 1964, at which time the transfer of all refuge lands and waters was officially consummated.

Following its initial flooding, the reservoir has produced only a negligible amount of waterfowl food; and as anticipated, the number of waterfowl has decreased proportionately with the available food supply. Although at the present time the refuge furnishes cover and resting areas for waterfowl, the food supply is totally inadequate for maintaining successful hunting populations. Development of quality habitat on the refuge is a prerequisite for the attainment of envisioned benefits from the wildlife resource.

PLANS FOR THE FUTURE

Eufaula Refuge possesses the biological and physical characteristics necessary to become a National Wildlife Refuge of major importance. When developed, the refuge will hold large concentrations of ducks and geese with compatible populations of other wild animals and birds. Waterfowl hunting, upland game hunting, fishing, picnicking, and other recreational activities will be included in the refuge management programs. The overflow of wildlife from the refuge onto near-by privately owned lands will expand hunting opportunities and other wildlife-oriented activities. The local community will host a new industry, and individuals will enjoy a place in which to escape the confines of the normal day.



TOMORROW'S EUFAULA. Developed habitat and its proper management will assure harvestable populations of ducks and Canada geese on Eufaula Refuge.



REFUGE OBJECTIVES

The National Wildlife Refuge System is dedicated to developing and perpetuating a national program of wildlife conservation and rehabilitation. The Eufaula National Wildlife Refuge, as an integral part of this system, maintains the following objectives:

1. To develop the land and water resources of the refuge so as to provide adequate migration and wintering habitat for a large number of waterfowl.
2. To restore the Canada goose migration down the Chattahoochee Valley.
3. To distribute migratory bird populations for greater public enjoyment.
4. To improve production habitat for wood ducks.
5. To protect and perpetuate migratory birds, particularly waterfowl and wading birds.
6. To preserve and maintain upland and big game species and furbearers indigenous to the south Alabama-Georgia area.



TRYSTING PLACE. Potentials on Eufaula Refuge favor the development of habitat for mallards and other puddle ducks.



EUFAULA RESIDENTS. Construction of nesting boxes and provision of ample rearing habitat will increase wood duck brood production and local populations.

7. To provide public recreational opportunities which are compatible with optimum wildlife population levels and habitat needs.
8. To provide public hunting opportunities for both waterfowl and upland game.
9. To provide farming opportunities to local farmers by allowing sharecropping to the greatest extent compatible with waterfowl requirements.
10. To provide opportunities for birdwatchers, photographers, picnickers, and other nature enthusiasts to enjoy the natural resources of the refuge.
11. To restore proper land use in accordance with soil capabilities and wildlife habitat needs.
12. To further the advance of conservation-education by application of multiple land use concepts.
13. To aid the respective States and other Government agencies in improving and perpetuating the fishery resource in the Walter F. George Reservoir.

WILDLIFE MANAGEMENT GOALS

The widespread surrender of waterfowl habitat to industry, agriculture, and other human pursuits has compelled ducks and geese to concentrate on the remaining habitat. The establishment of wintering populations of ducks and geese, along with representative numbers of other migratory birds on Eufaula National Wildlife Refuge, will improve the distribution of the National waterfowl resource for public enjoyment of wildlife-oriented recreation.

Eufaula Refuge, lying astride the administrative boundary between the Atlantic and Mississippi Flyways, possesses both land and water management potentials to render a wealth of habitat for Canada geese and most species of ducks that travel both Flyways, as well as for numerous other wildlife that normally reside around large bodies of interior waters.

Management goals relate the biological and physical potentials of the refuge to current and projected wildlife and recreation needs while serving as guidelines for development and management planning.



AT JOURNEY'S END. To perpetuate the resource and maintain local wintering populations, waterfowl must find protected feeding and resting areas.

STRICTLY STAG. Wood ducks, a favorite species during the hunting season, provide year-round enjoyment on the refuge to bird watchers, sightseers, and other outdoor enthusiasts.



Ducks

Although in recent years wild ducks in small numbers have traveled along the Chattahoochee River, they have offered meager opportunities for hunting or other recreational activities. To accomplish a more equitable distribution of the National waterfowl resource, the Bureau will develop and manage habitat on the Eufaula Refuge to encourage annual wintertime populations of from 40,000 to 50,000 ducks aggregating from a variety of species. Wood ducks will receive special attention in order to increase the breeding population to 250 or more pairs.



MALLARDS

Marsh and Water Birds

Marsh and water birds include herons, egrets, cormorants, ibises, sandpipers, snipes, and a number of other fowl species associated with water and wetlands. Many of these interesting birds will visit Eufaula Refuge during all seasons of the year and offer thrilling moments to nature lovers. Management practices for marsh and water birds will encourage the establishment of local rookeries or breeding colonies by several of these species.



Canada Geese

The Canadian nesting grounds retain the capacity for supporting an increased Canada goose breeding population, while an inadequate and poor quality wintering habitat limits the Canada goose populations along the Chattahoochee River. An adequate supply of quality foods on the wintering grounds will return Canadas to their northern breeding grounds in an optimum breeding condition. In order to improve the National resource and provide hunting opportunities, management and development programs at Eufaula will provide habitat capable of supporting peak populations of 10,000 to 20,000 Canada geese during the late fall and winter months.



CANADA GEESE

Mourning Doves

Doves make moderate use of refuge habitat for nesting and rearing their young. The refuge's dove population increases during the migration and wintering period to feed on the grain fields and other croplands. Refuge development and management measures will provide improved nesting conditions and year-round habitat sufficient to perpetuate an increased local population and support a harvestable population during the migration and wintering seasons.



MOURNING DOVE



BOBWHITES

Upland and Big Game

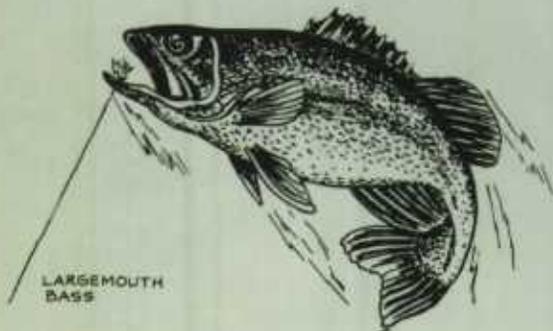
Bobwhites, wild turkeys, cottontail rabbits, fox and gray squirrels, and white-tailed deer inhabit the Eufaula area. These species will receive considerable benefits from refuge management practices. The overall refuge management goals for upland and big game encourage a population level of each species for optimum utilization of available habitat.

Furbearers

Fur-bearing animals indigenous to the south Alabama-Georgia areas include the beaver, otter, raccoon, opossum, red fox, mink, bobcat, and several other species now seldom seen. Management goals provide for individual populations at levels compatible with other wildlife species and their habitat requirements but in sufficient numbers for frequent observation by sightseers.



RACCOON



LARGEMOUTH
BASS

Fish

Waters of the Walter F. George Reservoir abound with such fish as large mouth, red eyed, white, and spotted bass; blue-gills; crappie; and cat-fish. Good catches result from bank fishing, trolling, casting, and trotline fishing. Refuge management encourages fishing activities in most refuge waters within the reservoir.

RECREATIONAL AIMS

Nature-oriented recreation holds a priority almost equal to that of the primary objectives of the refuge: proper utilization of the migratory bird resource while conserving this resource for future generations to enjoy. Bureau objectives stress equitable distribution of waterfowl and other wildlife and the provision for public enjoyment of these resources on National Wildlife Refuges. Envisioned recreational use on the Eufaula Refuge will account for 250,000 days of hunting, fishing, picnicking, sightseeing, and other nature-oriented activities.

Waterfowl Hunting

Eufaula not only will provide for public hunting of waterfowl, but it will help promote waterfowling on nearby private lands. Successful hunting opportunities depend almost entirely upon the attainment of waterfowl objectives through adequate development and proper management of the refuge. Population levels on the refuge will govern—to a large degree—the number of birds

harvested during any one season in the Eufaula area.

Upland Game and Dove Hunting

Habitat conditions and population levels will determine the recommended annual harvest of doves, quail, rabbits, and squirrels by public hunting on the refuge. Hunting opportunities for one or more of these species will be offered during periods when hunting activities are least damaging to the refuge's waterfowl populations.

Fishing

Refuge waters of the Walter F. George Reservoir offer excellent fishing opportunities. Boat launching facilities and access to the reservoir over refuge lands demonstrate another phase of multiple-use of the Eufaula Refuge. All reservoir waters of the refuge will remain open for fishing on a year-round basis except in areas where a serious conflict exists between waterfowl management and the fishing program.



THE HARVEST. Hunting is one of many enjoyable activities derived from wildlife and fishery resources.

Sightseeing, Nature Study, and Photography

Ducks, geese, other wildlife, and various natural scenes attract tourists and a large number of other individuals or groups. With U. S. Highway 431 and State Highway 165 bisecting on the western side of the refuge and with the waterfowl developments adjoining these highways, sightseeing activities will increase on the refuge proportionately to the attainment of objectives. Strategically located observation towers, photography blinds, and nature trails through representative sections of refuge woodlands, waterfowl habitat, and other scenic areas will afford opportunities for "close-up" study and photographing of plants and wildlife in their natural habitats.

Picnicking

A day on the refuge may be incomplete without a picnic. The Wylaunee Creek portion of the refuge is zoned for this activity, and picnicking facilities hold an important place in the refuge's development program.

Conservation-Education

The visiting public demonstrates a keen interest in the refuge's wildlife management programs. Enhancing this interest will be photographic and narrative exhibits of important wildlife species and major development and management pro-



HOUSING OF BUREAU AIMS. A refuge nature center will display photographic and narrative exhibits of important wildlife species, Bureau objectives, and major development and management programs, while providing conservation-education services.

grams displayed in a suitable nature center. The refuge's conservation-education program also includes guided tours for various civic and youth groups, information for local newspapers on fish and wildlife activities, slide talks and lectures to interested groups, and demonstrations of proper land use for wildlife coordinated with the economic benefits to the community.

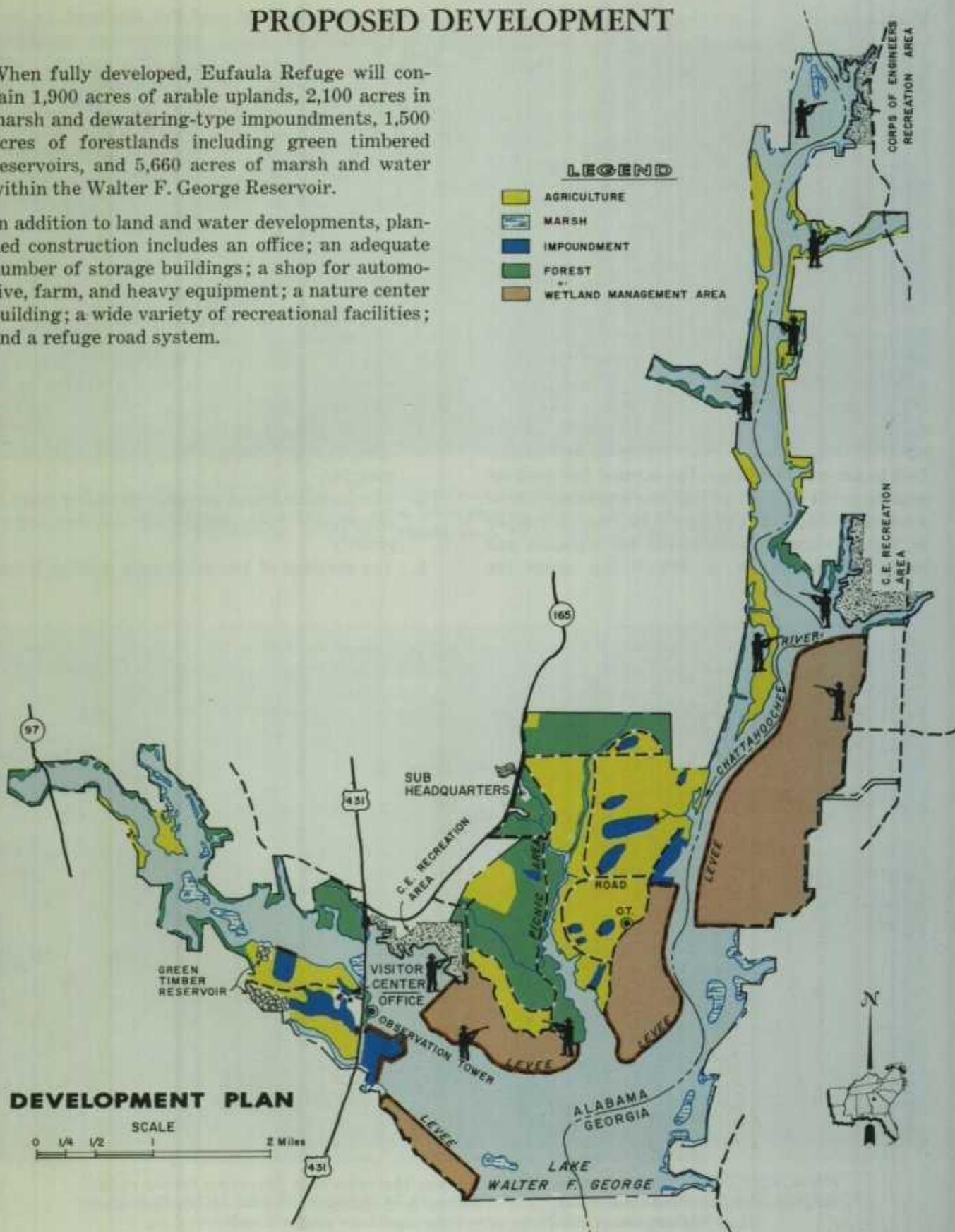
A DAY APART. An occasional day of fishing, hunting, picnicking with the family, and sightseeing on Eufaula Refuge will help assuage life's pressures.



PROPOSED DEVELOPMENT

When fully developed, Eufaula Refuge will contain 1,900 acres of arable uplands, 2,100 acres in marsh and dewatering-type impoundments, 1,500 acres of forestlands including green timbered reservoirs, and 5,660 acres of marsh and water within the Walter F. George Reservoir.

In addition to land and water developments, planned construction includes an office; an adequate number of storage buildings; a shop for automotive, farm, and heavy equipment; a nature center building; a wide variety of recreational facilities; and a refuge road system.



Wetlands

The primary purposes of the Walter F. George Reservoir necessitate high water levels during the spring and summer months and low water levels during the waterfowl wintering season. These conditions prevent production of waterfowl food plants on the adjacent wetlands. In order to attain refuge objectives, 2,100 acres of wetlands will be developed into manageable units capable of providing the main food supply for 50,000 ducks during the waterfowl wintering season and offering suitable nesting and rearing habitat for wood ducks.

Development will include water control structures and dikes across depressions and along the reservoir shoreline to form rather large subimpoundments. Each unit will consist of a network of sloughs and other lands of various elevations ranging from elevation 190 feet plus one to two feet to several feet below the normal full pool operating level (190' m.s.l.) of the reservoir. These wetland management units will be managed either as stable water impoundments for aquatics and moist-soil plants, or as dewatering areas for

agronomic crops and mud-flat seedings, or in a combination of these management practices. Plans call for dividing three of the major units into compartments in order to facilitate water manipulation or rotation of management practices. Each compartment or unit can be flooded to elevation 190' m.s.l. by gravity from reservoir water as late as November 15 each year, and dewatered to elevation 185' m.s.l. in early spring before reservoir waters are raised to full pool operating level. Development of wetland management units will require:

1. The construction of approximately 30 miles of dikes or levees equipped with properly designed water control structures.
2. The construction of a drainage system sufficient to dewater or flood each wetland management unit.
3. The application of lime and fertilizer on 1,000 acres that are suitable for inclusion in farming rotation.
4. The installation of portable pumping units to supplement both dewatering and flooding by gravity.
5. The erection of 150 wood duck nesting boxes.



PROGRESSION. Construction of dikes along the reservoir shoreline forms rather large subimpoundments consisting of a network of sloughs in addition to other lands of various elevations above normal lake water levels.



FOOD FOR WATERFOWL. Certain soils within the planned wetland management units are suitable for growing corn or soybeans, while the lower lands favor the production of moist soil plants, such as millet and smartweeds.



AUTUMN ASSEMBLY. Controlled gravity flooding from reservoir water facilitates waterfowl utilization of crops grown in wetland management units.



AN ABODE FOR WATERFOWL. Impoundments within the refuge agricultural lands attract Canada geese and provide rearing habitat for wood ducks.

Impoundments

In addition to the permanent water areas within the wetland management units, planned development includes a minimum of ten stable water impoundments that total 300 or more acres. The impoundment sites, located within the agricultural lands and along both sides of U.S. Highway 431, range in size from a few acres to 50 acres or more. The impoundments will enhance Canada goose management, provide nesting and rearing habitat for wood ducks, and produce a variety of food for ducks. Required development entails the construction of a relatively short dike and a water control structure for each impoundment, the introduction of waterfowl food plants in all suitable areas, installation of well and pump, and the erection of 25 wood duck nesting boxes.

Marsh and Water

The reservoir portion of the refuge and the relatively small areas of adjacent marshes provide valuable resting and protective areas for waterfowl. Dead timber areas of the reservoir attract wood ducks and colonial birds, and supply cover and seclusion for other waterfowl. Development involves the construction and placement of 100 wood duck nesting boxes.



Upland Agricultural Lands

Management of the 1,900 acres of upland agricultural lands will be directed toward providing the main food supply for the 10,000 and more Canada geese anticipated to winter on the refuge. These lands also will furnish supplemental food for field-feeding ducks. Agricultural crops suitable for refuge land conditions and waterfowl foods include corn, grain sorghum, soybeans, millets, small grains, and pasture grasses and legumes.

Current land conditions present a lack of basic plant nutrients and organic matter. Soil acidity is excessive, and drainage ditches are clogged with silt and debris. Corrective measures entail clearing trees and brush from 60 acres and liming, fertilizing, providing adequate drainage systems, planting green manure crops, and turning crop residue on 1,900 acres of cropland.

Forestlands

Although croplands and—to a lesser extent—wetlands furnish food and cover for rabbits, quail, turkeys, and deer, the 1,500 acres of forestlands provide the principal habitat for refuge populations of upland game species. In addition, refuge forestlands produce mast and other waterfowl foods. Refuge objectives for forestlands necessitate interplanting of trees on poorly stocked areas, thinning other areas where natural regeneration produced over-stocked stands, selective cutting to improve stand composition for wildlife and timber production, and construction of two green timber reservoirs to facilitate waterfowl utilization.



FOOD FOR FOWL AND PROFIT. Heavily fertilized fields produce an abundance of waterfowl food and yield substantial monetary profits to farming cooperators.

Recreation

The planned public use program on Eufaula Refuge clearly demonstrates a correlation of compatible recreational activities with primary wildlife objectives which will render maximum benefits to the community and nation. The refuge designates two units for public hunting of waterfowl and offers certain other areas for public hunting of upland game species including mourning doves. Three major access points to refuge waters, each located on lands retained by the Corps of Engineers, afford entrance to the refuge for fishing and other uses on reservoir waters. Plans call for a major recreation area in a wooded section west of Wylaunee Creek and a nature center near U.S. Highway 431, the latter with its

setting encompassed by a variety of potentially excellent waterfowl habitat. Required development includes:

1. Nature center building
2. Nature trails
3. Display pool
4. Causeway from U. S. Highway 431 to nature center building
5. Hunter access roads and parking
6. Picnic tables and grills
7. Picnic shelters
8. Boat launching ramp
9. Rest-rooms
10. Water supply
11. Observation towers
12. Photography blinds

BEAUTY A NATIONAL RESOURCE. Refuge woodlands' close proximity to lake waters increases their value for wildlife.



Facilities for Operations

The cultivation and maintenance of waterfowl food crops, manipulation of water levels in wetland management units, management of timberlands, protection of wildlife, correlation of public recreational activities with other refuge programs, and other refuge operational activities necessitate the following developments:

1. Office building

2. Shop and service building
3. Two equipment storage buildings
4. Paint and oil house
5. Seed, grain, and fertilizer building
6. Boat house
7. Twenty-six miles of roads
8. Thirteen entrance and information signs
9. Sixty miles of boundary posting
10. Six miles of fences



BENEFITS

Development and management of the Eufaula Refuge will contribute to the preservation of the National migratory bird resource, afford a more equitable distribution of waterfowl and other wildlife for public enjoyment, and enhance the local economy. Management of the refuge will return both tangible and intangible benefits to the community and its economy.

1. Hunting opportunities for waterfowl, doves, and upland game will be offered on the refuge.
2. Hunter success on private lands will improve as a result of waterfowl populations on the refuge.
3. The estimated annual value of the refuge to hunters and users of the refuge's recreational facilities amounts to \$125,000, based on average rates charged for such facilities and

privileges. These groups also will spend substantial sums of money for food, lodging, and miscellaneous goods and services—thus enhancing business economy.

4. An estimated development cost of \$1 million will be expended locally for labor, equipment, and materials.
5. Annual operations and maintenance costs amounting to approximately \$100,000 will be expended locally for supplies, personnel salaries, equipment, and materials.
6. The refuge cooperative farming program will yield an estimated \$100,000 annually in gross receipts to local farmers. The purchase of fertilizer, seed, equipment, and labor necessary for the farming program will add additional money to the local economy.

ESTIMATED DEVELOPMENT COST

Water Facilities	\$ 400,000
Biological Development	120,000
Buildings	150,000
Fencing and Posting	15,000
Roads	100,000
Structures and Utilities	40,000
Recreational Development	175,000
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TOTAL	\$1,000,000

ESTIMATED ANNUAL OPERATIONS COST

Maintenance	\$27,000
Management	33,000
Protection	7,000
Recreation	7,000
Population Management	10,000
Conservation Education	3,000
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SUB TOTAL	87,000
Soil and Moisture Conservation	10,000
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TOTAL	\$97,000



Created in 1849, the Department of the Interior – America's Department of Natural Resources – is concerned with the management, conservation, and development of the Nation's water, fish, wildlife, mineral, forest, and park and recreational resources. It also has major responsibilities for Indian and Territorial affairs.

As the Nation's principal conservation agency, the Department works to assure that nonrenewable resources are developed and used wisely, that park and recreational resources are conserved for the future, and that renewable resources make their full contribution to the progress, prosperity, and security of the United States – now and in the future.

This administrative plan proposed and prepared by the Bureau of Sport Fisheries and Wildlife's Southeastern Region, Atlanta, Georgia, supports and furthers the high objectives of the Department of the Interior for the wise development, management and use of the lands, waters and resources of the National Wildlife Refuge System.

Walter A. Gresh

Walter A. Gresh
Regional Director

