

EUFAULA NATIONAL WILDLIFE REFUGE
Eufaula, Alabama

NARRATIVE REPORT
1972

United States Department of the Interior
Bureau of Sport Fisheries and Wildlife

NARRATIVE REPORT

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Permanent Personnel

Refuge Manager - Jimmie L. Tisdale (EOD 1/2/72 -)
Assistant Refuge Manager - J. Frederick Milton, Jr. (EOD 2/8/71 - 10/24/72)
Assistant Refuge Manager - Sharon L. Sauer (EOD 6/21/71 - 9/6/72)
Assistant Refuge Manager - Sharon L. Pilcher (EOD 12/4/72 -)
Biological Technician - A. H. Saville (EOD 4/12/65 -)
Laborer - Tom C. Wilson (EOD 10/13/70 -)
Clerk - Frances A. Parrish (EOD 8/31/64 -)

Temporary Personnel

Student Trainee - John R. Bowers (EOD 6/8/72 - 9/15/72)
(EOD 12/11/72 - 12/29/72)
Youth Opportunity Corps - Willie E. Morris (6/12/72 - 6/28/72)
Youth Opportunity Corps - Harry Wilborn (6/12/72 - 6/28/72)
Youth Opportunity Corps - Samuel L. Wynn (6/12/72 - 7/21/72)
Youth Opportunity Corps - Zell Peterson, Jr. (6/12/72 - 7/21/72)
Youth Opportunity Corps - Seymour Streater (6/12/72 - 7/26/72)
Youth Opportunity Corps - Theotis H. Bowens (6/12/72 - 7/27/72)
Youth Opportunity Corps - Ronnie L. Conner (6/26/72 - 8/4/72)
Youth Opportunity Corps - Paul Peterson (7/5/72 - 7/17/72)
Youth Opportunity Corps - Robert A. Bowens (7/10/72 - 8/16/72)
Youth Opportunity Corps - Ray C. Massie (7/10/72 - 8/17/72)
Youth Opportunity Corps - William Jackson, Jr. (7/10/72 - 8/14/72)
Youth Opportunity Corps - Willie Edd Jackson (7/17/72 - 8/18/72)
Youth Opportunity Corps - Fred Wheeler (7/17/72 - 8/18/72)
Youth Opportunity Corps - Mel Forte, Jr. (7/18/72 - 8/18/72)
Youth Opportunity Corps - Rufus Dennis (7/19/72 - 8/18/72)

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NARRATIVE REPORT
EUFAULA NATIONAL WILDLIFE REFUGE
EUFAULA, ALABAMA
CALENDAR YEAR 1972

I. GENERAL

A. Weather Conditions

The weather has been extremely warm through the year. Monthly highs reached 80° in all but two months - February and December - and in each of these we recorded highs of 79°. The highest temperature of the year was 100° and it occurred on September 17, while the lowest, 14°, was recorded on January 17. The yearly average lows and highs were 58° and 78°, respectively. There were 329 frost free days in 1972. The last frost was on March 11 and the first frost occurred on November 18.

While we exceeded the normal annual rainfall by 1.02 inches, only 4 months exceeded or equaled the norm. Only one of these was during the growing season. A localized drought from July through September left us with a minus 5.65 inches of rain. We made up for this with a plus 6.42 inches in December; however, this came after the need for water had for the most part passed.

The temperature and rain measurements were taken daily at the refuge office at 7:30 a.m.

TABLE 1. 1972 WEATHER REPORT

	Precipitation			Departure	Temperatures	
	<u>This Month</u>	<u>Normal</u>	<u>*No. Days</u>		<u>Max.</u>	<u>Min.</u>
Jan	6.61	4.06	15	+ 2.55	80	14
Feb	4.04	4.63	12	- .59	79	20
Mar	3.86	6.01	13	- 2.15	83	28
Apr	1.12	4.59	2	- 3.47	91	33
May	3.45	3.50	13	- .05	86	45
June	6.90	3.68	6	+ 3.22	96	44
July	4.12	5.87	8	- 1.75	98	59
Aug	1.53	4.64	6	- 3.11	97	61
Sep	1.98	2.77	4	- .79	100	51
Oct	1.72	1.77	6	- .05	90	36
Nov	3.38	2.59	8	+ .79	85	28
Dec	<u>10.98</u>	<u>4.56</u>	<u>10</u>	<u>+ 6.42</u>	<u>79</u>	<u>22</u>
Extremes						
Total	49.69	48.67	103	+ 1.02	100	14

*No. days with measurable rainfall

A. Habitat Conditions

1. Water

The year began wet but soon dried out. January's rainfall was 2.55 inches above normal, but February, March, April and May's rainfall totaled 6.26 inches below normal.

The Bradley Impoundment was fully flooded at the start of the year. Draining by gravity was begun on February 4 and continued until March 27 when pumping became necessary. This was the first year in which complete dewatering was accomplished. The low lake levels required 3 weeks of pumping to refill the impoundment to the desired winter levels.

The Upland Impoundment was also full at the start of the year. Drawdown began on March 6 and was accomplished in 2 weeks. Again because of the drought, extensive pumping was required to fill the unit to winter levels.

The Houston Impoundment was dewatered by gravity starting on March 6; final dewatering was accomplished by pumping on July 26. Water was let in from the lake, but due to the record low water levels in the lake, pumping was also required to reach the desired levels.

The Goose Pen Unit required a large amount of pumped water in order to maintain water at desired levels during the summer.

The Molnar Unit was partially dewatered on March 9 by removal of a large beaver dam. The final dewatering was done by the drought about August 15. The unit was rewatered by 6.8 inches of rain on December 6.

Overall, the low lake levels and drought aided in the maintaining of dewatered areas and lush growth along the margins. Much effort was spent in getting the water back into the impoundments at the start of the wintering waterfowl use period.

2. Food and Cover

The 1971 agricultural carry-over was more than sufficient to carry the refuge through the spring migration. Although some fields were heavily utilized others were barely touched by the end of the season. These fields and the natural foods carried the resident waterfowl on into the summer.

With the complete dewatering of the Bradley Unit for the first time, the amount of natural food produced was enormous. The dewatered areas were completely wrapped up in smartweeds (Polygonum pensylvanicum and P. hydropiper) and all manner of natural foods and weeds. Cover was excellent throughout and quite dense in areas.

The low lake levels during the summer allowed several areas outside the impoundments to produce excellent stands of smartweed. The Kennedy and Davis-Clark areas had extremely rank stands, most being over head-tall, and very dense. The use of these stands will depend on the lake levels, as a low lake will leave these foods dry on the mud flats.

The *Sphenoclea zeylandica* completely took over the main pool of the Houston Impoundment after the aerially seeded millet failed to germinate. This plant has been heavily utilized by the divers as it is usually covered with 6 to 8 feet of water.

The upland areas were also in excellent condition as to food and cover. In fact, there was no shortage of food or cover anywhere on the refuge.

TABLE 2. 1972 RECORDED WATER LEVELS - WALTER F. GEORGE RESERVOIR

<u>Month</u>	<u>High</u>	<u>Low</u>	<u>Variation (ft)</u>
Jan	187.31	184.40	2.91
Feb	186.63	184.83	1.80
Mar	186.70	184.83	2.43
Apr	185.98	184.28	1.70
May	189.53	185.73	3.80
June	190.00	186.73	3.27
July	189.79	188.43	1.36
Aug	189.66	187.45	2.21
Sep	187.56	186.44	1.12
Oct	187.85	186.09	1.76
Nov	187.20	185.96	1.24
Dec	187.86	184.23	3.63

The above 8:00 a.m. readings were taken at the Walter F. George Lock and Dam, approximately 29 miles downstream from Eufaula Refuge. To get readings at refuge boathouse, add 1.5 feet to correct for hydraulic gradient.

II. WILDLIFE

A. Migratory Birds

1. Waterfowl

Calendar year 1972 produced the second lowest total duck use days in the refuge existence. This was caused by an extremely mild winter in the mid-west. The migration simply did not reach mid-Alabama with any force of numbers. This years total use days of 2,276,000 is 3,000 below last years, and only 96,000 above the refuge low of 1969.

Our peak duck population of 23,800 is well below the 1971 peak of 33,225, as well as the 1970 peak of 42,482. The resident goose flock peaked at 232 after an exceptionally good nesting year. The coots, always having a good year, peaked at 7,000.

Wood duck production was up again this year. With 2,000 eggs laid and 1,150 hatched, we believe we fledged 50% , or 575. While we gained only 25 birds fledged over last year, the starlings managed to destroy 5% more than their last years quota. Approximately 15% of the eggs laid were stopped short of hatching by the activity of these birds. No reliable means of preventing such losses has been found. 1972

As previously stated, the geese had a banner year for production. The lake was not able to rise at its normal time, thus the eggs in nests normally flooded were allowed to hatch. The drought really did the geese a service. Due to the thick growth along the margins of the lake a reliable count was impossible as we could not spot nests from the air or ground, so we claimed only 25 birds fledged. However, an actual count of our flock on December 4 showed us that 55 had been added this year. We did find one adult that had been killed and the nest destroyed by a predator. In view of our increase over previous years, it would seem that predators destroyed fewer nests than in previous years. As our flock continues to spread out over the lake, the only reliable method of censusing will be a winter flock count.

The 1972 banding program could be described in one word: POOR. The small populations coupled with plenty of food and cover resulted in little success. Our final figures are as follows:

Mallards	27
Black Duck	1
Wood Duck	13
Ring-Neck	<u>2</u>
Total	43

2. Water Birds, Marsh Birds, and Shorebirds

With the drought, the lake's shoreline was quite variable all summer. Thus habitat normally found only on the refuge during the summer months was available over the entire area. With so much habitat to choose from, the refuge suffered for use days as the birds failed to concentrate here.

The ibis were heavily concentrated on the refuge last year but were noticeably absent this year. The flocks of last year coming in to roost were replaced this year by cattle egrets. Only 4 ibis were sighted this year compared to 250 last year. The slack was more than taken up by the cattle egrets who seemed to really take over this area.

3. Doves and Pigeons

The mild winter and long, calm spring combined to aid the mourning dove in his nesting success. We estimate 6,000 doves were using the refuge during the peak summer months. The air was ringing with doves calling all morning and evening, all season long. Our dove quota of 800 was reached and surpassed in 29 trapping days. By comparison we needed the entire time last year to make our quota. We averaged 33 birds a day, but on several days we ran the traps only once and then turned them over. Of the 943 birds banded only 76 were AHYs, and only 25 of the newly banded birds were retrapped. This shows the tremendous population we had as well as the reproduction success. By our previous records, during a good reproduction year banding runs 75% HYs and 25% AHYs and a bad year usually runs 50-50. This year it was 91% to 9%. Now that is some production !

B. Upland Game Birds

Quail production was on par with last year and the population remained at 600. Wild turkey sightings are becoming more frequent but most are still believed to be transient through the refuge. No nesting was reported although sightings in the Molnar Bottoms and along the North Fork of Cowikee Creek have increased.

C. Big Game Animals

The refuge deer herd remained about the same with a slight increase. The number of does with twin fawns seems to indicate that the herd is in good health. The sightings of deer by the visiting public has increased but they still refuse to show themselves when we have large groups touring the refuge.

D. Fur Animals, Predators, Rodents, and Other Mammals

Beavers, as usual, disrupted attempts to dewater the various subimpoundments, but overall were not quite as bothersome as they have previously been. Their numbers seem to have leveled off in the impoundments but continue to rise in the lake.

Rodents have increased somewhat due to the mild winter and abundant food. Predators also showed a slight increase to take care of the rodents.

The Auburn University Vertebrate Zoology Class again ran several small mammal transects on the Houston Tract. They reported that the populations were about the same as last year and the types of mammals taken remain in the same ratio. No new species were added to the list by the Class.

E. Hawks, Eagles, Owls, Crows, Raven, and Magpies

In spite of the warm weather, we picked up good numbers of migrant raptors. While their numbers were lower than normal, their presence is quite noticeable. It is unusual to go through the Houston Tract and not see several marsh hawks, sparrow hawks, red-tails, and/or red-shouldered hawks. A sharp-shinned hawk was the only unusual sighting. No falcons or bald eagles were sighted by refuge personnel, but several were reported by fishermen.

On January 23, a wounded golden eagle was received by Game Management Agent (AIC) C. H. Richardson from officers of the Alabama Game and Fish Commission. The eagle had been shot by a bird hunter and we immediately took him to a Eufaula veterinarian for treatment. We decided later to take him to the Auburn University Veterinary Department for further treatment. The Veterinary Department cares for the Auburn mascot, also a golden eagle.

Twenty pieces of number 8 shot were found in the eagle's body and he was found to have a broken wingbone and a large gash along the neck. He remained at Auburn until February 2 when he was returned to the refuge.

The eagle was placed in a duck trap with a perch for the remainder of his recuperation period. At first he was force-fed a prepared raptorial supplement but he quickly changed and would eat anything that was thrown into his cage.

On March 10 the eagle was released into the Goose Pen. He was unable to fly as he was not able to exercise in the cage and had also lost some flight feathers. We continued feeding and exercising him until May 1, when he took leave of the Goose Pen. We hope he made it.

On September 28 a sighting of a golden eagle was made in the Cowikee Creek area.

F. Other Birds

The refuge blackbird roost is static at approximately 150,000 birds.

G. Fish

A generalized fish kill occurred on the lake in April and early May. The cause was an outbreak of a warm water bacteria and all species and age classes of fish were affected. The bacteria is normally associated with the lake and the gradual warming of the water usually allows resistance to build up in the fish populations. The unusually low water levels this year allowed for rapid warming of the lake and the fish were unable to build up resistance to the bacteria.

Fishing success has been lower this year due both to the low water levels and the loss of breeding stock brought about by the fish kill.

H. Reptiles

We received 2 alligators from the Alabama Game and Fish Commission in February and 30 from Savannah Refuge in June. They all seem to be doing well and are sighted often on warm days as they sun. No evidence of reproduction has as yet been found.

I. Disease

None

III. PHYSICAL DEVELOPMENT AND MAINTENANCE

A. Physical Development

1. Construction

A small primitive camp area was laid out near the refuge office for the use of Scouts and other groups that wish to spend the night on the refuge. It consists of one main campsite and four satellite circles. Each of the areas has its own campfire ring, firewood, and tent sites.

One thousand five hundred and fifty feet of 6' chain link fence with two 20 foot gates were installed around most of the shop area. This was done in order to reduce the possibility of visitor trespass during weekends when the refuge is open.

A small dike was built across an old drainage ditch directly above the goose pen. This created a small 4-acre green tree reservoir between two corn fields that has received good waterfowl use. The area can be flooded by the goose pen pumping unit.

2. Rehabilitation

Concrete culverts were placed in three badly washed areas of the refuge roads to lessen damage due to heavy rains.

The Headquarters parking lot was upgraded by the addition of 1,000 feet of concrete curbing and approximately 100 tons of gravel. The flagpole was also surrounded with a curb.

The entrance road to the refuge office was widened to 70 feet and a stone base constructed for a refuge sign. The road was graveled with 200 tons of rock and a new gate installed. Rip-rap was also placed at both ends of the culvert under the entrance road.

One thousand eight hundred and sixty-five tons of rip-rap were placed on the Houston dike to stop the erosion caused by wind sweep. The waves travel about 1½ miles over open lake before hitting the south end of the dike. The problem had become quite bad, threatening to cut the dike if not corrected. The dike was reloped by a D-4 dozer and a small ditch cut at the bottom of the slope. The rip-rap was delivered in 5-yard dump trucks, dumped on top of the dike and pushed off onto the slope by a D-6 dozer. We then set a mow-line along the top of the slope by hand.

While the above process sounds like it would require much placing of rocks by hand, it really didn't. Although the slope looks as if we had hand-placed all of it, we actually did none of it by hand.

The Bradley dike also received rip-rap this year. It was placed in the same manner as the above and came to 255 tons of two-man rocks.

Several acres of land along the future auto route were harrowed, fertilized, seeded and mulched. This was done in order to stop erosion and make the drive more pleasing to the eye.

Limestone gravel was placed along the Bradley dike road on some problem areas. This gravel, 186 tons, was dumped on the low areas and spread with a D-6. The job took about three days and has cured several areas on the road which had held water in the past.

The old garbage dump was buried, and planted to fall peas. A new area was prepared away from all present and planned public use areas. The new dump is a sanitary-fill type operation.

3. Maintenance

The transmission of the D-6 dozer was rebuilt.

Two M-38's, one with a PTO, was obtained from surplus property. One has been painted; the other remains O. D. color. These were obtained to up-grade the equipment on the Georgia side of the refuge.

All normal preventive maintenance of the equipment was carried out by refuge personnel.

All roads were kept in top condition by refuge equipment and personnel.

B. Plantings

1. Aquatic and Marsh Plants - None

2. Trees and Shrubs

Thirty-nine trees were transplanted from the refuge woods to the office area. The trees were representative of those found on the refuge: Southern Magnolia, Holly, Southern Red Oak, Water Oak, Laurel Oak, Pin Oak, Cotton-wood, and Silver Maple. Another group of 75, primarily oaks, were planted in three rows between the office and shop area.

Fifty shrubs taken from refuge lands leased for the State Park were transplanted into the parking lot median and around the flag-pole. Five others were placed around the shop building.

Twelve peach trees, also from the State Park area, were planted behind the office. Ten wild azaleas and several mountain laurel were also placed around the office building.

Clyde Stewart, Mississippi Valley District Forester, assisted in the planting of 30,000 long-leaf pine seedlings in understocked and harvested areas of the refuge. Due to the long dry spell after planting, the survival rate was only about 5%.

3. Upland Herbaceous Plants - None

4. Cultivated Crops

A mid-summer drought which occurred during the seed bearing time reduced yields on all crops. Some of the soybean fields failed to produce any seed.

The corn averaged 55 bushels per acre on the Alabama side of the refuge, while that on the Georgia side averaged only 45 bushels per acre. The soybean harvest has not been completed so average yields have not been figured.

Our first peanut field produced 2,600 pounds per acre in spite of the lack of water. The field attracted large numbers of doves and produced several goose use-days.

Crops grown and yields produced are shown on NR-8.

C. Collection and Receipts

1. Seed and Other Propagules

Eufaula Refuge transferred 1,085 bushels of corn in 1972 to various refuges in Region 4. One hundred ten bushels of wheat were also transferred.

2. Specimen

An adult male Canada goose was picked up by fishermen and taken to Florence Marina. The bird was suffering from a broken neck and died shortly after refuge personnel picked him up. We hope to have him mounted for display in the office.

D. Control of Vegetation and Insects

Black Willow (Salix nigra) continue to be a problem along the ditches in the Houston Bottoms. Approximately one-half mile of ditch

bank was cleared of willows by the Neighborhood Youth Corps employees this summer. While it will not solve the problem it will set it back several years. Effective water control eliminated the lotus (Nelumbo lutea) problem from all the bottoms except the ditches which held water. No spraying was necessary as lack of water resulted in excellent control. Several fields that had been fallow were disced to set back plant succession and to allow them to be aerially seeded with millet late in the summer.

Pesticides and herbicides used on the refuge by cooperative farmers and refuge personnel are shown on NR-12.

E. Planned Burning - None

F. Fires

One fire was reported this year. It apparently started from a cigarette thrown from a car onto the shoulder of the road. The area burned had just been harvested so no loss of economic importance occurred. The fire was controlled by refuge personnel and a D-6 dozer.

IV. RESOURCE MANAGEMENT

A. Grazing

Two hundred and fifty-six acres of pasture land provided 1,536 AUM's during 1972. This area was covered under the provisions of 4 cooperative farming agreements. As in the past, aerially seeded Japanese millet was received as partial payment for the grazing. Four acres were also planted in Japanese millet in the Houston Bottoms.

In addition, the cooperators mowed and fertilized the pasture as directed or as needed.

B. Haying: None

C. Fur Harvest: None

D. Timber Removal:

The two timber harvesting permits issued in 1971 were closed out in the beginning of 1972 and both permittees were refunded their performance bonds. No new permits were issued.

E. Commercial Fishing

The refuge is superimposed on lands owned by the U. S. Army Corps of Engineers and we have no control over fishing by commercial fishermen. Commercial fishing is regulated by state laws.

F. Other Uses

With the dropping of the fee for dove hunts, the only collections made were for duck hunts. Two hundred and sixty-four duck hunters paid \$792 in to the Land and Water Conservation fund. The fee was \$3 per hunter or \$6 per blind.

V. FIELD INVESTIGATION OR APPLIED RESEARCH

A. Studies Completed on Eufaula Refuge

The following studies conducted on Eufaula Refuge by Auburn University students have been completed and are on file in the refuge office:

1. As partial fulfillment of the requirements for his Master's Degree, Charles O. Wright did a study entitled, "Small Mammal Populations in Old Field Habitats on the Eufaula National Wildlife Refuge".

2. As partial fulfillment of the requirements for his Doctorate Degree, Richard A. Roper did a study entitled, "The Application of Biotelemetry to Field Studies of the Cotton Rat".

3. As partial fulfillment of the requirements for her Master's Degree, Celia F. Bass did a study entitled, "A Small Mammal Population Study on the Eufaula National Wildlife Refuge".

4. As partial fulfillment of the requirements for his Doctorate Degree, William Paul Barnard did a study entitled, "Coccidiosis of the Cotton Rat, Sigmodon hispidus, in Eastern Alabama."

VI. PUBLIC RELATIONS

A. Recreational Uses

Total recreational use of Eufaula Refuge was almost the same this year as last year. Fishing was the only activity which experienced a decrease in numbers participating, but what was lost there was more than picked up in increases in conducted auto and bus tours, environmental education and wildlife observation.

Much effort has been put forth in order to encourage the public to use and enjoy the refuge in a great variety of activities. Such things as opening the refuge to quail dog training, opening it up all daylight hours seven days a week to wildlife observation, and constructing a primitive campground have all added to serving as many individual tastes as can be accommodated without destroying our primary objective.

B. Refuge Visitors

<u>Date</u>	<u>Name</u>	<u>Address</u>	<u>Purpose</u>
JANUARY			
4	John S. Wise, Jr.	Ala. Dept. of Conservation Eufaula, Ala	Visit
6	Fred Dawson	Ft. Rucker, Ala	Helicopter Flight- Waterfowl Survey
8	Dr. & Mrs. J. L. Dusi	Auburn, Ala	Chattahoochee Valley Nat. History Club Bird Count
12	Mrs. Dan Searcy	Glen Burnie, Md	Visit
12	S. L. Wineland	Pelican Island Refuge, Fla	Surplus Property
12	John D. Eadie	USGMA, Tifton, Ga	Surplus Property
18	Philip Van Dyck	BSF&W, Atlanta, Ga	Soil & Moisture Program
18	Lee Fulton	Noxubee Refuge, Miss	Pick up corn
19	Cpt. J. B. Barbaree	Ala. Dept. of Conservation Union Springs, Ala	Visit
19	Sam Jones	Ala. Dept. of Conservation Eufaula, Ala	Visit
21	Brooke Meanley	Patuxent WL Research Center Laurel, Md	Visit

<u>Date</u>	<u>Name</u>	<u>Address</u>	<u>Purpose</u>
24	Leo Martin	USCMA, Jackson, Miss	Pick up Jeep & Freezer
24	C. H. Richardson	USCMA, Montgomery, Ala	Visit
28	C. D. Conway	Corps of Engineers Eufaula, Ala	Reported Garbage Dumping on Refuge

FEBRUARY

1	Jim Grenbiak	Auburn University Auburn, Ala	Walter F. George Shoreline Survey
1	Danny Rew	Auburn University Auburn, Ala	Walter F. George Shoreline Survey
1	Mr. & Mrs. R. L. Thompson	BSF&W, Tallahassee, Fla	Surplus Property
2	John S. Wise, Jr.	Ala. Dept. of Conservation Eufaula, Ala	Visit
3	Lloyd E. Lewis	Corps of Engineers Mobile, Ala	Refuge Boundary
3	Jerry Shorter	Corps of Engineers Eufaula, Ala	Refuge Boundary
3	Hubert L. Harrison	Corps of Engineers Eufaula, Ala	Refuge Boundary
3	Olin M. Taylor, Jr.	Corps of Engineers Ft. Gaines, Ga	Refuge Boundary
3	George Klein	Corps of Engineers Mobile, Ala	Compliance Inspection
3	Charlie Winters	Corps of Engineers Ft. Gaines, Ga	Compliance Inspection
3	R. R. Rudolph	BSF&W, Atlanta, Ga	Refuge Boundary
3	Ed Ezell	Ala. Dept. of Conservation Clayton, Ala	Delivery & Release of Alligators

<u>Date</u>	<u>Name</u>	<u>Address</u>	<u>16</u> <u>Purpose</u>
3	Sam Jones	Ala. Dept. of Conservation Eufaula, Ala	Delivery & Release of Alligators
6	Senator James S. Clark	Eufaula, Ala	Tour- Discussed Public Use Development
10	L. V. Meese	Corps of Engineers Mobile, Ala	Visit
17	John S. Wise, Jr.	Ala. Dept. of Conservation Eufaula, Ala	Discuss Timber Management Plans
17	Neb Bowen	Okefenokee Refuge, Ga	Surplus Property
22	Dr. J. L. Dusi	Auburn Univ, Auburn, Ala	Mammology Class
23	Jim Bartee	Delta Refuge, La	Surplus Property
23	Jim Williams	Loxahatchee Refuge, Fla	Surplus Property
23	Richard Bolt	Loxahatchee Refuge, Fla	Surplus Property
29	Wade B. Perry, Jr.	U. S. District Attorney Montgomery, Ala	Foy Trespass Case
29	C. H. Richardson	USCMA, Montgomery, Ala	Foy Trespass Case
29	D. Broward Segrest	U. S. District Attorney Montgomery, Ala	Foy Trespass Case

MARCH

10	John S. Wise, Jr.	Ala. Dept. of Conservation Eufaula, Ala	Timber Appraisal
31	Ken Butts	BSF&W, Atlanta, Ga	Public Use Planning

APRIL

11	James W. Hudson	U. S. Marshall, Montgomery, Ala	Violation Case
11	Dr. J. L. Dusi	Auburn Univ, Auburn, Ala	Ornithology Class
28	Fred J. Dickson	Corps of Engineers Atlanta, Ga	Visit

<u>Date</u>	<u>Name</u>	<u>Address</u>	<u>Purpose</u>
<u>MAY</u>			
16	Leon Rhodes	Tennessee Refuge, Tenn	Surplus Property
18	S. L. Wineland	Pelican Island Refuge, Fla	Picked Up Jeep
<u>JUNE</u>			
5	Ed Gingles	Soil Con. Service, Clayton, Ala	Visit
15	Rick Noseworthy	Savannah Refuge, Ga	Delivered Alligators
21	William T. Manasco	Ala. Water Imp. Comm. Prattville, Ala	State Park Sewage Disposal Proposal
21	Sam Marley	Poly-Engineering Dothan, Ala	State Park Sewage Disposal Proposal
21	Frank A. McLean	Dept. of Conservation Montgomery, Ala	State Park Sewage Disposal Proposal
21	Ron Holley	Ala. Water Imp. Comm. Montgomery, Ala	State Park Sewage Disposal Proposal
21	Howard A. Dovre	Poly-Engineering Dothan, Ala	State Park Sewage Disposal Proposal
23	Mr. & Mrs. Neb Bowen	Okefenokee Refuge, Ga	Picked Up Engine
<u>JULY</u>			
10	Dennis Holland	Back Bay Refuge, Va	Surplus Property
13	Norma Genoble	BSF&W, Atlanta, Ga	General Inspection
13	Walt Stieglitz	BSF&W, Atlanta, Ga	General Inspection
19	Dan Searcy	USGMA, Anna, Illinois	Visit
<u>SEPTEMBER</u>			
1	John D. Eadie	USGMA, Tifton, Ga	Visit
21	Lloyd E. Lewis	Corps of Engineers Mobile, Ala	Routine Visit
21	Jerry Shorter	Corps of Engineers Eufaula, Ala	Routine Visit

<u>Date</u>	<u>Name</u>	<u>Address</u>	<u>Purpose</u>
<u>OCTOBER</u>			
3	Glenn A. Carowan, Jr.	J.N. "Ding" Darling Refuge, Fla	Surplus Property
4	Donald W. Seagraves	Corps of Engineers Mobile, Ala	Toured Refuge
17	Frank A McLean	Dept. of Conservation Montgomery, Ala	State Park
19	R. R. Rudolph	BSF&W, Atlanta, Ga	State Park
10	Sam Marley	Ply- Engineering Dothan, Ala	State Park
30	Dr. J. L. Dusi	Auburn Univ, Auburn, Ala	Ornithology Class
31	Dr. J. L. Dusi	Auburn Univ, Auburn, Ala	Ornithology Class
<u>NOVEMBER</u>			
15	Sam O. Drake, Jr.	Piedmont Refuge, Ga	Picked Up Corn
19	Dr. T. M. Pullen	Auburn Univ, Auburn, Ala	Auburn Univ. Class
23	Tom E. Berchem	St. Marks Refuge, Fla	Picked Up Corn
23	W. H. Lawhorn	St. Marks Refuge, Fla	Picked Up Corn
23	C. H. Richardson	USGMA, Montgomery, Ala	Visit
27	Ed Gingles	Soil Conserv. Service Clayton, Ala	Discuss Waterfowl Management Practices
27	Bob Waters	SCS, State Biologist Auburn, Ala	Discuss Waterfowl Management Practices
27	Lamar Robinette	SCS, Area Biologist Ozark, Ala	Discuss Waterfowl Management Practices
28	Ted Terrel	Auburn Univ, Auburn, Ala	Wildlife Mgmt. Class

<u>Date</u>	<u>Name</u>	<u>Address</u>	<u>Purpose</u>
<u>DECEMBER</u>			
5	Francis Mahon	Corps of Engineers Thomaston, Ga	Toured Refuge
12	A. S. Lee	Corps of Engineers Mobile, Ala	Compliance Inspection

C. Refuge Participation

Last year we experimented with what we called a month of Sunday open houses. Since we had such good success with it that year we decided to try it again this year. The refuge was open January 23 and 30, and February 6 and 13, from 1:00 PM until dark. A different wildlife film was shown each Sunday and then a self-guided auto tour was available for those who wished to drive around the refuge.

This year we did not have the success with the open houses that we had had the year before. Our news coverage was not anywhere near what we had the first year, and the weather was not with us either. It rained on two of the open houses which really decreased the numbers this time while it had not seemed to hurt us the year before. We had a total of 329 people show up for the four open houses which was rather low compared with the 1,100 we had in 1971.

We went to the private school in Eufaula in the early part of the year to encourage them to bring their classes out to the refuge for a visit since they had never been out before. The effort proved to be worthwhile and grades 1 through 8 were brought out to the refuge. Material was given to each teacher for use in the classroom before coming out and then each class was given a tour of the refuge and was shown a film. The 7th and 8th graders were lucky enough to come on a day on which we had captive alligators and a wounded golden eagle which really made an impression on the two groups.

March 10 was Eagle Release Day at Eufaula. We decided to make the most of it and sent news releases to newspapers, schools and television stations in the surrounding area announcing the day and inviting everyone to come out and watch the releasing of the golden eagle which had been wounded near Union Springs in January. The newspapers printed the release, 250 people showed up for the event, a Columbus TV station sent a cameraman to cover the event and it was shown on the 6 and 11 o'clock news that night. We were very happy with the turn-out we had, but our eagle did not cooperate and fly. He had received sufficient food but not sufficient exercise in the cage in which he had been recuperating and he did not fly away until May 1.

We decided to get the Eufaula and surrounding area schools thinking about us again so just before National Wildlife Week we sent them all a letter saying that we would like to come and talk with them during that week. Twelve classes took advantage of our offer and we spoke to 569 children, resulting in 869 activity hours. We presented a slide program which was a combination of our own thinking and slides and the regional office's slide program "The Right To Exist". The response from all classes was terrific and the experience was very rewarding. We also used our concoction for some of the adult groups we had during that same time and their response to it was also encouraging.

We seemed to be on everybody's list for television appearances. We did twelve television shows during the course of the year. Thank goodness, 7 of them were recorded all in one day. It's a lot easier to get through them that way than if we had to do one a month.

September 23 was National Hunting and Fishing Day, but it was also the day we began leaving the refuge open all daylight hours seven days a week. We had completed enclosing the shop area so that we could close it off from public access and we had placed auto tour route signs along the roads in order to guide the public through the refuge without causing traffic problems. We held an open house that day--showed a film and gave a cannon net trapping demonstration--but very few people showed up. This was not too discouraging however, since many cars have been observed since then and the refuge is getting used much more by the general public than ever before.

This October 1 we began allowing quail dog training and conditioning on certain areas of the refuge. No permits are required, but firearms are not allowed except for blank pistols. So far all have been very orderly and a fair amount of use has been seen. Since October 1, 111 visits have been made for quail dog training and approximately 222 hours spent by those visitors. The end date on this activity is February 28, 1973.

The following is a list of most of the public relations activities in which refuge personnel were involved.

<u>Date</u>	<u>Group</u>	<u>Address</u>	<u>Participation</u>
<u>JANUARY</u>			
8	Chattahoochee Valley Natural History Club	Chattahoochee Valley	Annual Bird Count
21	TV Morning Show	WTVY, Dothan, Ala	15- minute Show on Refuge Activities. Milton & Sauer

<u>Date</u>	<u>Group</u>	<u>Address</u>	<u>Participation</u>
23	Open House at Refuge	Eufaula, Ala	Tour and Movie "A Way Of Life"
25	Muscogee Civitan Club	Columbus, Ga	Slide Program by refuge manager
25	Azalea Garden Club	Eufaula, Ala	Tape Program "Man, Land, and Wildlife" by S. Sauer
28	4th-6th Grades	Abbeville, Ala	Movie "Wildlife Babies, Tour of Refuge and Trail. S. Sauer
30	Open House at Refuge	Eufaula, Ala	Tour and Movie "Monument in the Mangroves
31	1st & 2nd Grades Lakeside School	Eufaula, Ala	Tour of Refuge and Movie "Wildlife Babies". S. Sauer
<u>FEBRUARY</u>			
1	3rd & 4th Grades Lakeside School	Eufaula, Ala	Tour of Refuge and Movie "Monument in the Mangroves". S. Sauer
2	5th & 6th Grades Lakeside School	Eufaula, Ala	Tour of Refuge and Movie "The Gifts". S. Sauer
6	Open House at Refuge	Eufaula Refuge	Tour and Movie "Out of the North"
8	4th-6th Grades	Abbeville, Ala	Tour of Refuge, Saw Wounded Eagle and Alligators. S. Sauer
9	7th & 8th Grades Lakeside School	Eufaula, Ala	Tour of Refuge, Saw Wounded Eagle and Alligators and Saw Movie "A Way of Life". F. Milton
10	Eufaula High School	Eufaula, Ala	Toured and Saw Golden Eagle
13	Open House at Refuge	Eufaula Refuge	Tour and Movie "A Way Of Life"

<u>Date</u>	<u>Group</u>	<u>Address</u>	<u>Participation</u>
14	Lions Club Auxiliary	Eufaula, Ala	Slide-tape Program "Going, Going . ." and Discussion. S. Sauer
17	Izaak Walton League	Twin Springs, Ala	Discussion of Refuge Activities. Manager Tisdale
22	Mammalogy Class	Auburn Univ, Ala	Mammalogy Field Trip
22	Kindergarten Class Van Buren School	Eufaula, Ala	Tour, Saw Golden Eagle and Movie "So Little Time". S. Sauer
24	Van Buren School	Eufaula, Ala	" " "
26	Animal Behavior Class	Tuskegee Institute, Ala	Tour and Study of Waterfowl Behavior. S. Sauer
26	4-H Club	Ft. Gaines, Ga	Tour of Refuge and Trail S. Sauer
27	Ft. Benning Officers Wives Environmental Workshop	Ft. Benning, Ga	Tour and Slide Presentation S. Sauer

MARCH

10	General Public	Surrounding Area	Golden Eagle Release
10	Douglas School	Columbus, Ga	Tour, Eagle Release, Picnic on Trail and Slide Presentation. S. Sauer
13	Vocational Agriculture Class	Eufaula, Ala	Tour of Refuge
15	Viewers of Channel 4	Dothan, Ala	Discussion of National WL Refuge System and Slides of Eufaula Refuge. Manager Tisdale
22	Van Buren Kindergarten	Eufaula, Ala	Slide Presentation "Right To Exist". S. Sauer
23	3rd Grade Western Heights	Eufaula, Ala	Slide Presentation and Discussion of "Right to Exist". S. Sauer

<u>Date</u>	<u>Group</u>	<u>Address</u>	<u>Participation</u>
24	4th Grade Western Heights	Eufaula, Ala	Slide Presentation and Discussion of "Right to Exist". S. Sauer
27	5th Grade Western Heights	Eufaula, Ala	" " "
29	Georgetown High School Civics Class	Georgetown, Ga	Slide Presentation and Discussion of "Right to Exist". F. Milton
29	Chattahoochee Valley Sportsman Club	Columbus, Ga	Discussion of Refuge Program and Film "No Place on Earth". Manager Tisdale

APRIL

3	Wildlife Mgmt. Class	Auburn Univ, Ala	Tour and Discussion of Farming Program. Manager Tisdale
4	Slade Kindergarten	Eufaula, Ala	Tour, Picnic and Film "Mass- Produced Woodies". S. Sauer
7	Middle School Science Club	Eufaula, Ala	Tour of Refuge. S. Sauer
7 & 8	Birmingham Audubon Society	Birmingham, Ala	Bird Watching and Tour of Refuge. A. Saville
11	DAR Chapter of Barbour County	Eufaula, Ala	Slide Program "Right to Exist". F. Milton
11	Ornithology Class	Auburn Univ, Ala	Bird Count
21	Columbus Civitan Club	Columbus, Ga	Slide Program "The Right To Exist". Manager Tisdale
24	Van Buren Kindergarten	Eufaula, Ala	Film "Headwaters," Golden Eagle Release Film and Small Opossum. S. Sauer

MAY

5	Middle School Science Club	Eufaula, Ala	Tour of Refuge and Trail. S. Sauer
17	8th Grade Middle School	Eufaula, Ala	Tour of Refuge. F. Milton

<u>Date</u>	<u>Group</u>	<u>Address</u>	<u>Participation</u>
17	First Methodist Church	Eufaula, Ala	Discussion of Refuge Activities. Manager Tisdale
<u>JUNE</u>			
17	Adjustment Center	Eufaula, Ala	Discussion of Endangered Wildlife and films "The American Bald Eagle" and "So Little Time". S. Sauer
27	Kiwanis Club	Eufaula, Ala	Discussion of Refuge Program and Movie "The Great Swamp". Manager Tisdale
28	Viewers of "Today in Ga. Forestry"	WYEA TV #38 Columbus, Ga	Five 8-minute Programs Discussing Refuge System and Programs. Manager Tisdale and F. Milton
<u>JULY</u>			
6	Rotary Club	Eufaula, Ala	Discussion of Refuge Activities Manager Tisdale
15	Adjustment Center	Eufaula, Ala	Tour and Participation in Banding. S. Sauer
25	Ornithology Class	Auburn Univ, Ala	Mammal Survey and Bird Count
25	Lions Club	Eufaula, Ala	Talk and Movie "The Great Swamp". Manager Tisdale
29	Columbus Girls Club	Columbus, Ga	Tour of Refuge, Trail, Camp-ground and helped band doves. S. Sauer
<u>AUGUST</u>			
14	Kiwanis Club	Eufaula, Ala	Discussion of Refuge Plans for Public in Future Years. Manager Tisdale
17	Eufaula Jayceettes	Eufaula, Ala	Slide Program and Discussion on "Nature's Communities Versus Man's Community Concept". S. Sauer

<u>Date</u>	<u>Group</u>	<u>Address</u>	<u>Participation</u>
<u>SEPTEMBER</u>			
23	National Hunting & Fishing Day Open House at Refuge	Eufaula Refuge	Tour of Refuge, Cannon Net Trapping Demonstration and Film "A Way of Life"
<u>OCTOBER</u>			
14	Viewers of "Sportsmans' Lodge"	Channel 3 Columbus, Ga	Discussion of Refuge with Ridley Bell. Manager Tisdale
17	Rotary Club	Cuthbert, Ga	Refuge slide program. Manager Tisdale
20&25	Headstart Program Students	Eufaula, Ala	Tour and Movie "No Place on Earth". F. Milton
25	Chattahoochee Valley Sportsman Club	Eufaula, Ala	Discussion of Hunting Programs. Manager Tisdale
31	Vertebrate Zoology Class	Auburn Univ, Ala	Small Mammal Transects and Bird Identification
<u>NOVEMBER</u>			
2	Civitan Club	Eufaula, Ala	Refuge Slide and Discussion Program. Manager Tisdale
3	Middle School Science Club	Eufaula, Ala	Refuge Slide and Discussion Program. F. Milton
8	Rotary Club	Dawson, Ga	Refuge Slide Program. Manager Tisdale
14	Clay County Chapter of FFA	Clayton, Ala	Slide and Discussion Program. F. Milton
14	Lions Club	Clayton, Ala	Refuge Slide and Discussion Program. Manager Tisdale
15	Biology Club	Georgia Southwestern College, Americus, Ga	Refuge Slide and Discussion Program. Manager Tisdale
19	Wildlife Class	Auburn Univ, Ala	Waterfowl Identification
19	Chattahoochee Valley Natural History Society	Columbus, Ga	Talk for Installation Meeting. Manager Tisdale and A. Saville

<u>Date</u>	<u>Group</u>	<u>Address</u>	<u>Participation</u>
28	Wildlife Management Class	Auburn Univ, Ala	Discussion of Management Practices on Refuge. Manager Tisdale
<u>DECEMBER</u>			
1	Middle School Science Club	Eufaula, Ala	Tour of Refuge. F. Milton

D. Hunting

1. Waterfowl

This year we conducted the third season of waterfowl hunts on the Georgia side of the refuge. The area involved was the same as last year--620 acres of the Bradley Unit and 150 acres of the Beaver Pond Unit.

In preparation for the hunts we managed to pump almost all of the water out of the Bradley Unit during the summer months. One month before the hunts the area was almost completely dry and contained some of the best growth of natural waterfowl foods ever found in that area.

The weather had helped us dry the impoundment, but now it presented us with a definite problem--getting water back into the area. We had received below normal rainfall during July, August, September, and October--a total of 5.70 inches of rain below the normal for that period. Since we did not have rainfall to fill the impoundment we began to pump water into the unit from the low level of the Walter F. George Reservoir on October 24.

Our pumping system turned out to be not one of the best and seemed to be broken down almost the same amount of time as its pumping time. Three weeks of off and on pumping managed to bring us up to optimum pool level for hunts, however, and all seemed well on its way to the perfect hunt situation we had been hoping for since beginning duck hunts here in 1970.

The informing of the public, the receiving of applications, and the drawing of reservations were all handled in the same manner as in the past. This year we received 246 requests to hunt, but of course only had 160 openings. The 86 hunters not drawn were sent information as to how they could participate in the hunts on a stand-by basis.

In the middle of November the twenty blinds, accommodating two hunters each, were constructed in those locations most suitable for hunting waterfowl. The boats were placed where needed and the check station assembled. All seemed to be ready for the hunting season.

The hunts were held on each Saturday morning throughout the Georgia hunting season-December 2, 9, 16, 23 and 30 and January 6, 13 and 20. On the night of December 5 the refuge was bombarded by 6.80 inches of rain and during the daylight hours of December 6 by .47 inches. What followed was the moving of blinds and emptying of sunken boats. The blinds had to be moved on two different occasions during the season and then should have been moved even to higher ground, but nothing higher was available. We had approximately 18 inches too much water and the blinds were inaccessible most of the season to anyone who had less than chest-high waders. The need for a water control structure with a gate on both ends to prevent it from breaking is definitely needed so that the water level in this unit can be managed efficiently. Right now the water control structure cannot be opened because the pressure would blow off the gate and allow the water level to drop to an undesirable low level. Attempts to put a double gate on the structure are being considered now for the near future.

This year our number of participating hunters dropped from 303 last year to 264 this year. What actually dropped, however, was the number of stand-by hunters present. Last year 100 hunters participated on a stand-by basis and this year only 63 did. On this basis we have decided to continue our blind reservation system.

From our 264 hunters \$792.00 were collected and these hunters brought to bag 301 birds. The average per hunter this year went up from .82 last year to 1.14 this year. We attribute that difference to increased waterfowl food available and also to a smaller number of hunters. We are considering reducing the number of blinds so that one man cannot ruin the hunting for all by being a sky buster. We feel that if we spread the hunters out a little more the influence one blind has over another will not be as great.

The following two tables show the results of each hunt and the total take of each species for the season.

TABLE 3. 1972 WATERFOWL HUNTS

<u>Date</u>	<u>No. Hunters</u>	<u>Kill</u>	<u>Hunter/Kill Ratio</u>
12/ 2	40	85	2.12
12/ 9	40	41	1.05
12/16	28	29	1.03
12/23	32	17	.53
12/30	30	34	1.13
1 / 6	40	14	.35
1 /13	28	26	.93
1 /20	26	55	2.11
Total	264	301	1.14 (average)

TABLE 4. 1972 WATERFOWL SPECIES KILLED

<u>Species</u>	<u>Number Killed</u>
Wood Duck	94
Mallard	44
Green-winged Teal	43
Coot	35
Shoveler	31
Ring-necked Duck	29
Hooded Merganser	9
Black Duck	8
Baldpate	4
Gadwall	3
Pintail	1
Total	301

The total waterfowl population does not seem to have had any great effect on the hunting success. We peaked at approximately 25,000 ducks-only 2,000 more than last year and we feel the availability of waterfowl food on the Georgia side had more of an effect on the increase in the Hunter/Kill Ratio than the increase in waterfowl numbers. This 25,000 is still way below the numbers present in 1970-71 and yet the hunters killed only 6 short of that number killed in 1970-71. Along with the increase in food available, we feel the decrease from 15 hunts (2 a week) to 8 hunts (one a week) has also had its effect. Hunter/Kill Ratio per hunt is on the whole much better in the years which had only 8 hunts than in the year of 15 hunts. We are going to continue having only one hunt a week since the area seems to need the 6 days in between in order for ducks to start using the area again.

Last year we ran into difficulty obtaining boats for the hunts. This year we solved the problem by picking up 16 boats from surplus. Hunts are more enjoyable now that this problem has been solved. We certainly needed those boats this year since the over abundance of rain made the impoundment so deep.

On the whole the hunts this year seem to be an improvement over the two seasons before. Each year we seem to get a little closer to our goal of giving the public what they want. A few minor adjustments in blind locations, a double gated water control structure, and a reciprocal agreement which would be honored by both Alabama and Georgia and we will be as close as is humanly possible.

2. Dove

Dove hunts were held for the seventh year on Eufaula Refuge. Two changes were involved in this year's hunts. No fee was charged and the first three hunts of the first season were eliminated. Hunts were held each Saturday during both seasons. Eight hunts were conducted, five during the first season and three during the second. The following table shows the results of the hunts.

TABLE 5. 1972 MOURNING DOVE HUNTS

<u>Date</u>	<u>No. Hunters</u>	<u>Brought to Bag</u>	<u>Crippled & Lost</u>	<u>Birds Per Hunter</u>
10/14	59	199	63	3.4
10/21	53	146	43	2.8
10/28	34	61	14	1.8
11/04	40	25	7	.6
11/11	<u>12</u>	<u>30</u>	<u>8</u>	<u>2.5</u>
* Totals	198	461	135	2.3
12/23	45	161	27	3.6
12/30	50	35	8	.7
01/06	<u>22</u>	<u>11</u>	<u>2</u>	<u>.5</u>
**Totals	117	207	35	1.7

* First Season

** Second Season

The season's kill is not indicative of the large number of birds present as the birds per hunter was 1.0 bird below a "normal good year". The number of hunters participating reached a new high, although the number of hunts was lowered. This can be attributed to a closing of land to public hunting and the dropping of the fee.

TABLE 6. COMPARISON OF MOURNING DOVE HUNTS

<u>Year</u>	<u>No. Hunts</u>	<u>No. Hunters</u>	<u>No. Bagged</u>	<u>Birds/Hunter</u>
1966	5	200	843	4.2
1967	5	86	49	.6
1968	8	210	757	3.6
1969	9	146	94	.6
1970	10	237	711	3.0
1971	11	204	301	1.5
1972	8	315	668	2.1

We feel that the policy of waiting until all corn is harvested should be continued. The hunting area is larger and more hunters can be handled each hunt to make up for the loss of the first three hunts. The first three hunts traditionally have not been very successful and their elimination only enhances the quality of the remaining hunts.

E. Violations

1. Date: 3/6/72
 Name: Clyde (NMN) Craddick
 Address: Eufaula, Alabama
 Location of
 Violation: Refuge Molnar Unit
 Officer: A. H. Saville
 Disposition: 72 Hours Detention

2. Date: 3/31/72
 Address: Warner Robins, Ga
 Name: Steve Michael Allen
 Ferman Alton Tillery
 Location of Violation: Wylaunee Creek Area
 Officer: A. H. Saville
 Violation: Illegally Camping on Refuge
 Disposition: Not Prosecuted

3. Date: 4/11/72
 Name: Raymond (NMN) Elmore
 Address: Dothan, Alabama
 Officer: J. L. Tisdale
 Location of
 Violation: Davis-Clark Tract
 Violation: Littering (The litter was discovered by routine patrol and the person involved identified by letters and other items.)
 Disposition: Case Dismissed (This case was made at the request of the District Attorney. While it was dismissed, he has requested that we still make cases of this nature.)

4. Date: 10/5/72

Name: Charles Richard Sewell

Address: Clayton, Alabama

Name: Robert Marvin Beaty

Address: Clayton, Alabama

Name: William Freckerick Foster

Address: Dothan, Alabama

Location of Violation: T. E. West Property Adjacent to Refuge Line

Officer: F. Milton and A. H. Saville

Violation: Hunting doves over bait

Disposition: Case Dismissed

F. Safety

Safety meetings were held monthly at the refuge office. Material applicable to our area was discussed and suggestions were adopted from the various print-outs received from the Regional Office and other safety sources.

All employees of Eufaula Refuge completed the National Safety Council Self-Instruction Defensive Driving Course during the monthly safety meeting in December. This was to complement the Basic Course taken at Ft. Benning, Georgia, last year. In addition to this course, slide series entitled "Rehearsal for an Accident" and "A Matter of Speed", totaling 3½ hours, were spent in "refresher" defensive driver training.

As of December 31, 1972, 819 days have passed since the refuge had its last lost-time accident.

VII. OTHER ITEMS

A. Items of Interest1. Persomnel

Jimmie L. Tisdale transferred as Refuge Manager to Eufaula from Holla Bend on January 2, 1972. He had previously served on Cross Creeks and Tennessee Refuges prior to his tour at Holla Bend.

Sharon L. Sauer resigned effective September 1, 1972 and was married to Randy Pilcher in Olmstead Falls, Ohio, on September 23. Three months later her husband was transferred back into the area and she applied for reinstatement. She returned to work at her old position on a part-time basis on December 4, one day before the hiring freeze began again.

John Bowers completed his third year in the Student Trainee program on Eufaula this year. Starting on June 8 and returning to school on September 15, John spent much of his time supervising the Neighborhood Youth Corps employees and banding doves. John will graduate this June from Auburn University, Auburn, Alabama.

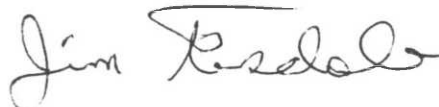
2. Credits

Appreciation is extended to Assistant Managers J. Frederick Milton, Jr., Sharon L. Pilcher and Clerk Frances Parrish for compiling this narrative report.

B. Photographs

Refuge photographs follow on the next page.

Submitted by:



Jimmie L. Tisdale
Refuge Manager

February 28, 1973

Approved:



New widened entrance with sign, gravel and slope mulched.



Building sign base from excess rip-rap.



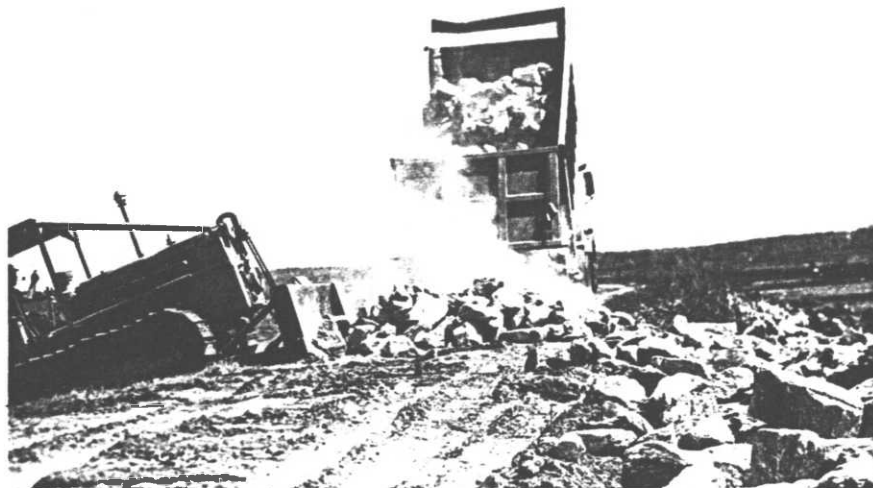
Newly completed dike of the green tree reservoir
east of the goose pen.



Same place after adding water.



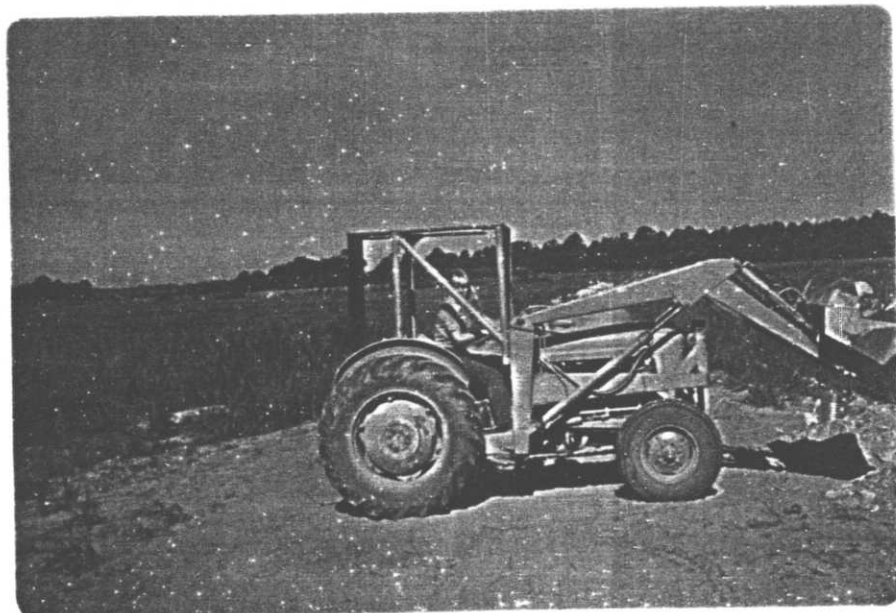
Effects of wind sweep - South Houston. When dike was built it had a 4:1 slope.



Rip-rap was brought by dump truck and placed by dozer.



Finished job with hand placed row-line.



A cross-dike in Bradley Unit also required rip-rap.
It was placed by front-end loader.



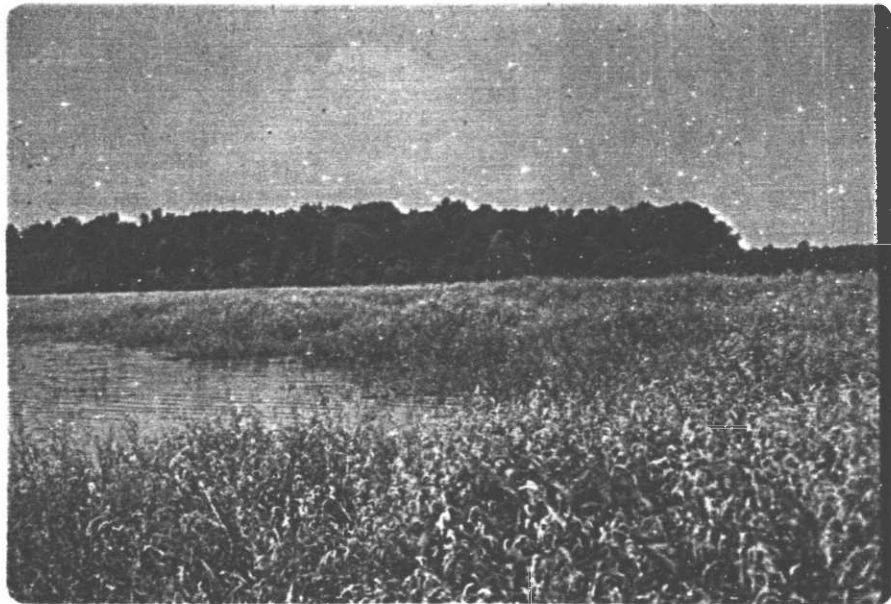
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Before willow control - Houston Bottoms.



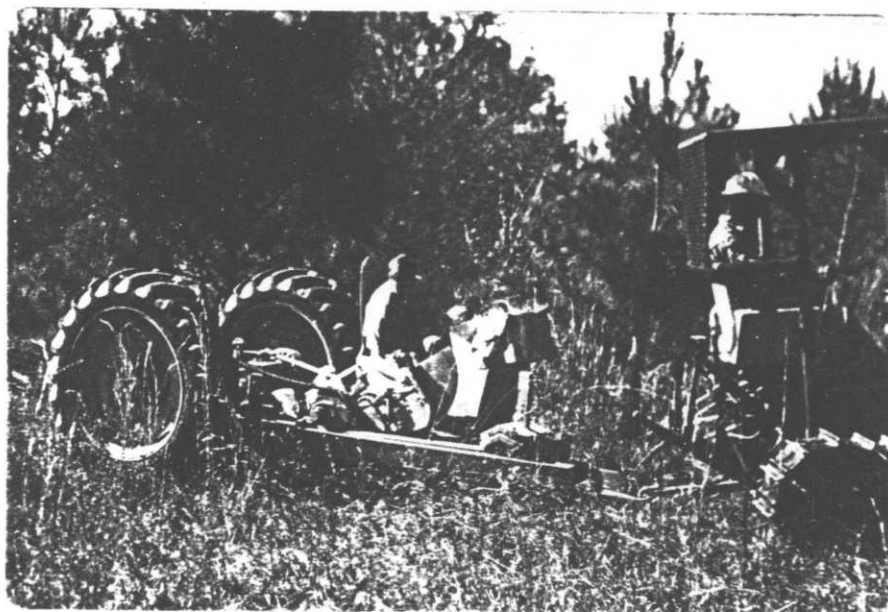
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After - They'll be back, but several seasons of good natural food production should be assured.



Part of the NYC group restoring a galled hillside.
They also worked on willow control.



Smartweeds seemed to take over the marsh areas of
the lake as the drought kept water levels down all
summer.



New tree planter (new to us) in process of restocking areas to long-leaf.



With the drought claiming about 95% of the plantings, its doubtful if we can stay ahead of the beavers.



With the low lake levels in early summer, our geese nearly reached their potential reproductive success. Sixty are thought to have been brought to flight stage.



While water was not a serious "predator" of nests this year, other predators were still at work.



After being shot by a quail hunter, this immature Golden Eagle was turned over to refuge personnel.



After a trip to Auburn School of Veterinary Medicine, the eagle was returned to the refuge with his broken wing taped to his body.



Looking much better, feeling better also, he's ready for release into the goose pen to get back into shape.



Part of the 250 people on hand for his release.



Sharon's eager army beginning the nature trail.



Real cool nature trail you've got here.



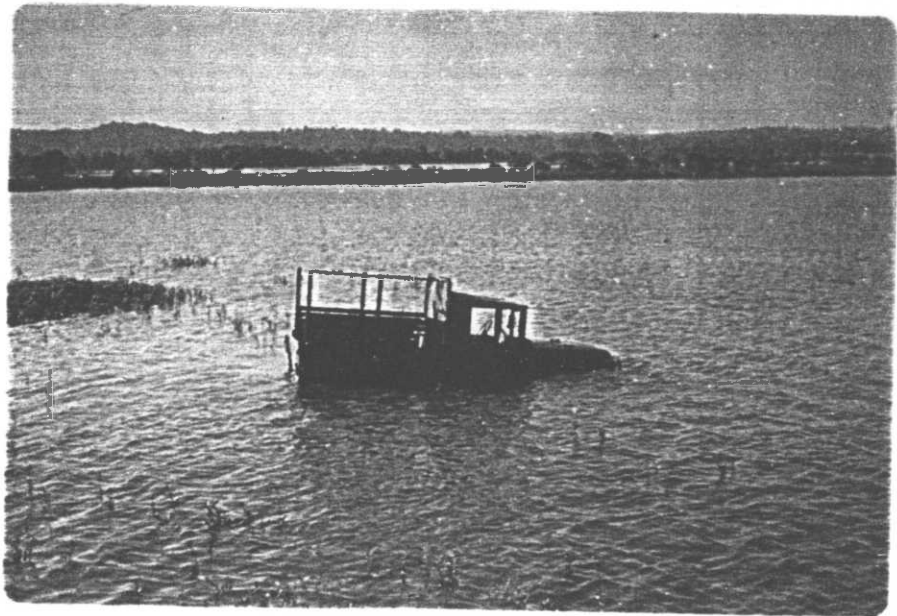
"Well, it's not supposed to occur here--but."
Dr. Dusi and one of his Auburn University
Classes.



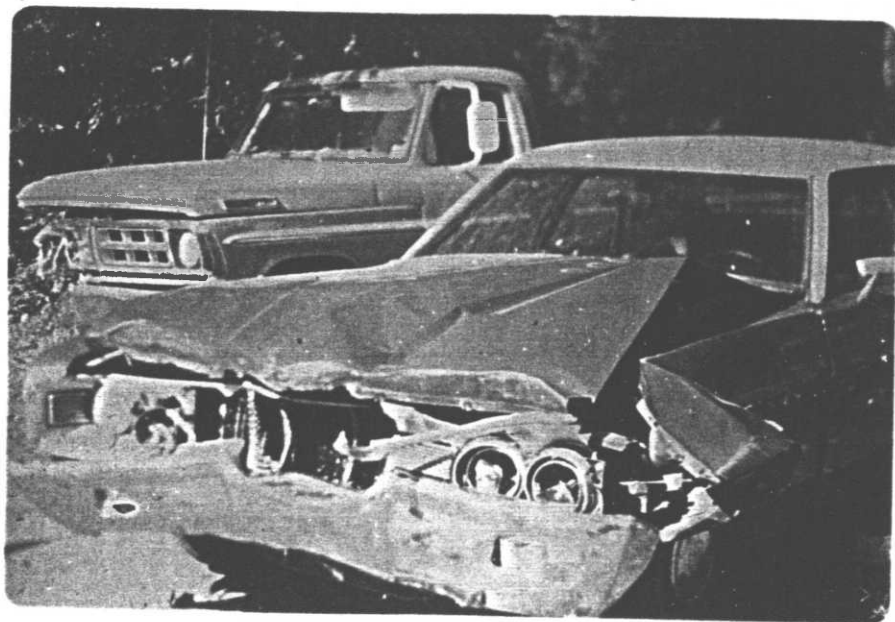
1
Somebody got lucky !



1
We'll be lucky if they all come back. The
usual "land rush" - 2nd season dove hunts.



Someone's idea of fun on the 4th of July. No damage done due to the Army's waterproof system.



Ouch ! 1800 dollars worth.

INSTRUCTIONS

All tabulated information should be based on the best available techniques for obtaining these data. Estimates having no foundation in fact must be omitted. Refuge grand totals for all categories should be provided in the spaces below the last unit tabulation. Additional forms should be used if the number of units reported upon exceeds the capacity of one page. This report embraces the preceding 12-month period, NOT the fiscal or calendar year, and is submitted annually with the May-August Narrative Report.

- (1) Area or Unit: A geographical unit which, because of size, terrain characteristics, habitat type and current or anticipated management practices, may be considered an entity apart from other areas in the refuge census pattern. The combined estimated acreages of all units should equal the total refuge area. A detailed map and accompanying verbal description of the habitat types of each unit should be forwarded with the initial report for each refuge, and thereafter need only be submitted to report changes in unit boundaries or their descriptions.
- (2) Habitat: Crops include all cultivated croplands such as cereals and green forage, planted food patches and agricultural row crops; upland is all uncultivated terrain lying above the plant communities requiring seasonal submergence or a completely saturated soil condition a part of each year, and includes lands whose temporary marsh extends from the upland community to, but not including, the water type and consists of the relatively stable marginal or shallow-growing emergent vegetation type, including wet meadow and deep marsh; and in the water category are all other water areas inundated most or all of the growing season and extending from the deeper edge of the marsh zone to strictly open-water, embracing such habitat as shallow playa lakes, deep lakes and reservoirs, true shrub and tree swamps, open flowing water and maritime bays, sounds and estuaries. Acreage estimates for all four types should be computed and kept as accurate as possible through reference to available maps supplemented by periodic field observations. The sum of these estimates should equal the area of the entire unit.
- (3) Use-days: Use-days is computed by multiplying weekly waterfowl population figures by seven, and should agree with information reported on Form NR-1.
- (4) Breeding Population: An estimate of the total breeding population of each category of birds for each area or unit.
- (5) Production: Estimated total number of young raised to flight age.

3-1750b
Form NR-1B
(Rev. Nov. 1957)

UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE
WATERFOWL UTILIZATION OF REFUGE HABITAT

Refuge Dufaula

For 12-month period ending August 31, 19 72

Reported by Jimmie L. Tisdale

Title Refuge Manager

(1) Area or Unit Designation	(2) Habitat		(3) Use-days	(4) Breeding Population	(5) Production
	Type	Acreage			
BRADLEY BOTTOMS	Crops	274	Ducks	700,000	200
	Upland	0	Geese	7,500	12
	Marsh	1,071	Swans	0	2
	Water	465	Coots	75,000	
	Total	1,810	Total	782,500	
UPPER CHATTANOOCHEE	Crops	240	Ducks	25,000	125
	Upland	154	Geese	10,000	14
	Marsh	397	Swans	0	6
	Water	1,228	Coots	12,000	
	Total	2,019	Total	47,000	
GRAND TOTAL	Crops	1,949	Ducks	2,159,500	1,050
	Upland	1,804	Geese	58,250	90
	Marsh	2,727	Swans	28	590
	Water	4,680	Coots	247,500	60
	Total	11,160	Total	2,465,278	
	Crops		Ducks		
	Upland		Geese		
	Marsh		Swans		
	Water		Coots		
	Total		Total		
	Crops		Ducks		
	Upland		Geese		
	Marsh		Swans		
	Water		Coots		
	Total		Total		
	Crops		Ducks		
	Upland		Geese		
	Marsh		Swans		
	Water		Coots		
	Total		Total		
	Crops		Ducks		
	Upland		Geese		
	Marsh		Swans		
	Water		Coots		
	Total		Total		

(over)

INSTRUCTIONS

All tabulated information should be based on the best available techniques for obtaining these data. Estimates having no foundation in fact must be omitted. Refuge grand totals for all categories should be provided in the spaces below the last unit tabulation. Additional forms should be used if the number of units reported upon exceeds the capacity of one page. This report embraces the preceding 12-month period, NOT the fiscal or calendar year, and is submitted annually with the May-August Narrative Report.

- (1) Area or Unit: A geographical unit which, because of size, terrain characteristics, habitat type and current or anticipated management practices, may be considered an entity apart from other areas in the refuge census pattern. The combined estimated acreages of all units should equal the total refuge area. A detailed map and accompanying verbal description of the habitat types of each unit should be forwarded with the initial report for each refuge, and thereafter need only be submitted to report changes in unit boundaries or their descriptions.
- (2) Habitat: Crops include all cultivated croplands such as cereals and green forage, planted food patches and agricultural row crops; upland is all uncultivated terrain lying above the plant communities requiring seasonal submergence or a completely saturated soil condition a part of each year, and includes lands whose temporary marsh extends from the upland community to, but not including, the water type and consists of the relatively stable marginal or shallow-growing emergent vegetation type, including wet meadow and deep marsh; and in the water category are all other water areas inundated most or all of the growing season and extending from the deeper edge of the marsh zone to strictly open-water, embracing such habitat as shallow playa lakes, deep lakes and reservoirs, true shrub and tree swamps, open flowing water and maritime bays, sounds and estuaries. Acreage estimates for all four types should be computed and kept as accurate as possible through reference to available maps supplemented by periodic field observations. The sum of these estimates should equal the area of the entire unit.
- (3) Use-days: Use-days is computed by multiplying weekly waterfowl population figures by seven, and should agree with information reported on Form NR-1.
- (4) Breeding Population: An estimate of the total breeding population of each category of birds for each area or unit.
- (5) Production: Estimated total number of young raised to flight age.

WATERFOWL HUNTER KILL SURVEYRefuge Eufaula National Wildlife RefugeYear ~~1960~~ 1972

(1) Weeks of Hunting	(2) No. Hunters Checked	(3) Hunter Hours	(4) Waterfowl Species and Nos. of Each Bagged	(5) Total Bagged	(6) Crippling Loss	(7) Total Kill	(8) Est. No. of Hunters	(9) Est. Total Kill
8 Weeks (8 Hunts - Each Satur- day of regular hunting season)	264	1,056	Wood Duck	94	52	353	264	353
			Mallard	14				
			Green-winged Teal	13				
			Coot	35				
			Shoveler	31				
			Ring-necked Duck	29				
			Hooded Merganser	9				
			Black Duck	8				
			Baldpate	4				
			Gadwall	3				
			Pintail	1				
			Total	301				

(over)

INSTRUCTIONS

- (1) The first week of hunting begins with opening day and ends at the close of hunting 6 days later. Successive weeks follow the same pattern.
- (2) The goal is to survey a minimum of 25 percent of refuge hunters each week and to record data only from those who have completed their day's hunting. This information should be collected during each day of the week and in each area hunted in relative proportion to the hunter effort expended. When the 25 percent goal cannot be achieved, particular care should be taken to collect representative data.
- (3) Record the total number of hours the hunters spent hunting on the refuge.
- (4) List waterfowl species in decreasing order of numbers bagged. Sample entry: Mallard (61), Pintail (36), Redhead (16), Gadwall (11), Widgeon (6), Coot (4), Canada Goose (3), Green-winged Teal (1).
- (5) Record total numbers of waterfowl bagged.
- (6) Record total numbers of waterfowl reported knocked down but not recovered.
- (7) Total of Columns 5 and 6.
- (8) Estimate the total number of hunters who hunted on the refuge during the week, including hunters checked (Column 2).
- (9) Kill sample projected to 100 percent. $\text{Column 9} = \frac{\text{Column 8}}{\text{Column 2}} \times \text{Column 7}.$

DISEASE

Refuge EUFULA Year 19 72

Botulism

Lead Poisoning or other Disease

Period of outbreak _____

Period of heaviest losses _____

Losses:

	Actual Count	Estimated
(a) Waterfowl	_____	_____
(b) Shorebirds	_____	_____
(c) Other	_____	_____

Number Hospitalized	No. Recovered	% Recovered
(a) Waterfowl	_____	_____
(b) Shorebirds	_____	_____
(c) Other	_____	_____

Areas affected (location and approximate acreage) _____

Water conditions (average depth of water in sickness areas, reflooding of exposed flats, etc.) _____

Condition of vegetation and invertebrate life _____

Remarks Negative Report

Kind of disease _____

Species affected _____

Number Affected Species	Actual Count	Estimated
_____	_____	_____
_____	_____	_____
_____	_____	_____

Number Recovered _____

Number lost _____

Source of infection _____

Water conditions _____

Food conditions _____

Remarks Negative Report

NONAGRICULTURAL COLLECTIONS, RECEIPTS, AND PLANTINGS⁽¹⁾

Refuge EUPAULIA

Year 19 72

Species	Collections and Receipts (Seeds, rootstocks, trees, shrubs)						Plantings (Marsh - Aquatic - Upland)						
	Amount (Lbs., bus., etc.)	(2) C or R	Date	Method or Source	Cost	(3) Total Amount on Hand	Location of Area Planted	Rate of Seeding or Planting	Amount Planted (Acres or Yards of Shoreline)	Amount and Nature of Propagules	Date	Survival	Cause of Loss
Long-leaf Pine							Houston Tract Davis Tract	700 per Acre	43 Acres	30,000 Seedlings	3/72	5%	Drought

- (1) Report agronomic farm crops on Form NR-8
(2) C = Collections and R = Receipts
(3) Use "C" to denote surplus

Total acreage planted:

Marsh and aquatic _____
Hedgerows, cover patches _____
Food strips, food patches _____
Forest plantings 43

Remarks: _____

3-1758

Form NR-1

(Rev. Jan. 1956)

Fish and Wildlife Service

Division of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

1972

Russell - Barbour

Alabama

Refuge Eufaula National Wildlife RefugeCounty Stewart - QuitmanState Georgia

Cultivated Crops Grown	Permittee's Share Harvested		Government's Share or Return				Total Acreage Planted	Green Manure, Cover and Water- fowl Browsing Crops Type and Kind	Total Acreage
	Acres	Bu./Tons	Harvested		Unharvested				
			Acres	Bu./Tons	Acres	Bu./Tons			
Corn	483.5	25,555 Bu	20	1,100 Bu	58	2,961.5	561.5	60 acres Japanese Millet aerially seeded for browse	60
Soybeans	361	5,610 Bu					361		
Japanese Millet					30		30		
Dove Proso Millet	20	Unharvested			20	5 Bu	40		
Milo					30	300 Bu	30		
Wheat	151.2	3,024 Bu	16.8	336 Bu			168		
Peanuts	50	70 Tons					50		
Pasture	256.5	386 "					256.5		
								Fallow Ag. Land	0

No. of Permittees: Agricultural Operations 9 Haying operations 0 Grazing Operations 0

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	GRAZING	Number Animals	AUM'S	Cash Revenue	ACREAGE
None	None	None	None	1. Cattle	* 128	1,536	None	256.5
				2. Other	None	None	None	None
				1. Total Refuge Acreage Under Cultivation				
Hay - Wild	None	None	None	2. Acreage Cultivated as Service Operation			0	

*Based on Cooperative Farming Agreements with actual pasture acreage shown under cultivated crops.

3-1758

Form NR-0

(Rev. Jan. 1956)

Fish and Wildlife Service Division of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

1973

Refuge EufaulaCounty BarbourState Alabama

Cultivated Crops Grown	Permittee's Share Harvested		Government's Share or Return				Total Acreage Planted	Green Manure, Cover and Water- fowl Browsing Crops Type and Kind	Total Acreage
	Acres	Bu./Tons	Harvested		Unharvested				
			Acres	Bu./Tons	Acres	Bu./Tons			
Corn	404.5	22,000 Bu	20	1,100 Bu	33	1,816.5 Bu	457.5	60 acres Japanese Millet a rielly seeded for browse	60
Soybeans	261	2,610 Bu	0		0		261		
Japanese Millet					30		30		
Dove Proso Millet	20				20		40		
Milo					30		30		
Wheat	151.2	3,024 Bu	16.8	336 Bu			168		
Peanuts	50	70 Tons					50		
Pasture	78	101 Tons					78		
								Fallow Ag. Land	0

No. of Permittees: Agricultural Operations 6 Haying operations 0 Grazing Operations 0

Hay - Improved • (Specify Kind)	Tons Harvested	Acres	Cash Revenue	GRAZING	Number Animals	AUM'S	Cash Revenue	ACREAGE
None	None	None	None	1. Cattle	39	468	None	78
				2. Other	None	None	None	None
				1. Total Refuge Acreage Under Cultivation				1,114.5
Hay - Wild	None	None	None	2. Acreage Cultivated as Service Operation				0

(Rev. Jan. 1956)

1972

State Georgia

No. of Permittees:	Agricultural Operations	Haying operations	Grazing Operations

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	GRAZING	Number Animals	AUM'S	Cash Revenue	ACREAGE		
None	None	None	None	1. Cattle	74	888	None	118.5		
				2. Other	None	None	None	None		
										352.5
				1. Total Refuge Acreage Under Cultivation						
Hay - Wild	None	None	None					0		
				2. Acreage Cultivated as Service Operation						

3-1758

Form NR-

(Rev. Jan. 1956)

Fish and Wildlife Service Division of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

1972

Refuge Eufaula National Wildlife RefugeCounty RussellState Alabama

Cultivated Crops Grown	Permittee's Share Harvested		Government's Share or Return				Total Acreage Planted	Green Manure, Cover and Water- fowl Browsing Crops Type and Kind	Total Acreage
	Acres	Bu./Tons	Harvested		Unharvested				
			Acres	Bu./Tons	Acres	Bu./Tons			
Pasture	30	39 Tons					30		
								Fallow Ag. Land	0

No. of Permittees: Agricultural Operations 1 Haying operations 0 Grazing Operations 0

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	GRAZING	Number Animals	AUM'S	Cash Revenue	ACREAGE
None	None	None	None	1. Cattle	15	180	None	30
				2. Other	None	None	None	None
				1. Total Refuge Acreage Under Cultivation				
Hay - Wild	None	None	None	2. Acreage Cultivated as Service Operation				None

3-1758

Form NR-1

(Rev. Jan. 1956)

Fish and Wildlife Service Division of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

1972

Refuge Puafua National Wildlife RefugeCounty QuitmanState Georgia

Cultivated Crops Grown	Permittee's Share Harvested		Government's Share or Return				Total Acreage Planted	Green Manure, Cover and Water- fowl Browsing Crops Type and Kind	Total Acreage
			<u>Harvested</u>		<u>Unharvested</u>				
	Acres	Bu./Tons	Acres	Bu./Tons	Acres	Bu./Tons			
No Cropland Management Practices Conducted									
								Fallow Ag. Land	

No. of Permittees: Agricultural Operations _____ Haying operations _____ Grazing Operations _____

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	GRAZING	Number Animals	AUM'S	Cash Revenue	ACREAGE
				1. Cattle				
				2. Other				
				1. Total Refuge Acreage Under Cultivation				
Hay - Wild				2. Acreage Cultivated as Service Operation				

DIRECTIONS FOR PREPARING FORM NR-8
CULTIVATED CROPS - HAYING - GRAZING

Report Form NR-8 should be prepared on a calendar-year basis for all crops which were planted during the calendar year and for haying and grazing operations carried on during the same period.

Separate reports shall be furnished for Refuge lands in each county when a refuge is located in more than one county or State.

Cultivated Crops Grown - List all crops planted, grown and harvested on the refuge during the reporting period regardless of purpose. Crops in kind which have been planted by more than one permittee or this Service shall be combined for reporting purposes.

Permittee's Share - Only the number of acres utilized by the permittee for his own benefit should be shown under the Acres column, and only the number of bushels of farm crops harvested by the permittee for himself should be shown under the Bushels Harvested column. Report all crops harvested in bushels or fractions thereof except such crops as silage, watermelons, cotton, tobacco, and hay, which should be reported in tons or fractions thereof.

Government's Share or Return - Harvested - Show the acreage and number of bushels harvested for the Government of crops produced by permittees or refuge personnel. Unharvested - Show the exact acreage and the estimated number of bushels of grain available for wildlife. If grazing is made available to waterfowl through the planting of grain, cover, green manure, grazing or hay crops, estimate the tonnage of green food produced or utilized and report under Bushels Unharvested column.

Total Acreage Planted - Report all acreage planted, including crop failures.

Green Manure, Cover and Waterfowl Grazing Crops - Specify the acreage, kind and purpose of the crop. These crops and the acreage may be duplicated under cultivated crops if planted during the year, or a duplication may occur under hay if the crop results from a perennial planting.

Hay - Improved - List separately the kinds of improved hay grown. Annual plantings should also be reported under Cultivated Crops, and perennial hay should be listed in the same manner at time of planting.

Total Refuge Acreage Under Cultivation - Report Total land area devoted to agricultural purposes during the year.

REFUGE GRAIN REPORT

Refuge Eufaula

Months of January through December, 1972

(1) VARIETY*	(2) ON HAND BEGINNING OF PERIOD	(3) RECEIVED DURING PERIOD	(4) TOTAL	(5) GRAIN DISPOSED OF				(6) ON HAND END OF PERIOD	(7) PROPOSED OR SUITABLE USE*		
				Transferred	Seeded	Fed	Total		Seed	Feed	Surplus
CORN, Yellow Dent	900	1,200	2,100	475		625	1,100	1,000			1,000
WHEAT, Durum	475	336	811			811	811	0			0

(8) Indicate shipping or collection points Eufaula, Alabama

(9) Grain is stored at Refuge Grain Bins

(10) Remarks Corn transferred to Okefenokee, Piedmont and St. Marks National Wildlife Refuges

*See instructions on back.

REFUGE GRAIN REPORT

This report should cover all grain on hand, received, or disposed of, during the period covered by this narrative report.

Report all grain in bushels. For the purpose of this report the following approximate weights of grain shall be considered equivalent to a bushel: Corn (shelled)—55 lb., corn (ear)—70 lb., wheat—60 lb., barley—50 lb., rye—55 lb., oats—30 lb., soy beans—60 lb., millet—50 lb., cowpeas—60 lb., and mixed—50 lb. In computing volume of granaries, multiply the cubic contents (cu. ft.) by 0.8 bushels.

- (1) List each type of grain separately and specifically, as flint corn, yellow dent corn, square deal hybrid corn, garnet wheat, red May wheat, durum wheat, spring wheat, proso millet, combine milo, new era cowpeas, mikado soy beans, etc. Mere listing as corn, wheat, and soybeans will not suffice, as specific details are necessary in considering transfer of seed supplies to other refuges. Include only domestic grains; aquatic and other seeds will be listed on NR-9.
- (3) Report all grain received during period from all sources, such as transfer, share cropping, or harvest from food patches.
- (4) A total of columns 2 and 3.
- (6) Column 4 less column 5.
- (7) This is a proposed break-down by varieties of grain listed in column 6. Indicate if grain is suitable for seeding new crops.
- (8) Nearest railroad station for shipping and receiving.
- (9) Where stored on refuge: "Headquarters granary," etc.
- (10) Indicate here the source of grain shipped in, destination of grain transferred, data on condition of grain, unusual uses proposed.

TIMBER REMOVAL

Refuge EUFULA

Year ~~1971~~ 1972

Permittee	Permit No.	Unit or Location	Acreage	No. of Units Expressed in B. F., ties, etc.	Rate of Charge	Total Income	Reservations and/or Diameter Limits	Species Cut
<p>The two timber harvesting permits issued in 1971 were closed out in the beginning of 1972.</p> <p>No new permits were issued.</p>								

Total acreage cut over.....

Total income.....

No. of units removed B. F.

Method of slash disposal

Cords.....

Ties.....

3-1979 (NR-12)
(9/63)

Bureau of Sport Fisheries and Wildlife

Refuge

Eufaula

ANNUAL REPORT OF PESTICIDE APPLICATION

Proposal Number

1-72

Reporting Year

1972

INSTRUCTIONS: Wildlife Refuges Manual, secs. 3252d, 3394b and 3395.

Date(s) of Application	List of Target Pest(s)	Location of Area Treated	Total Acres Treated	Chemical(s) Used	Total Amount of Chemical Applied	Application Rate	Carrier and Rate	Method of Application
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
March, August, November	Corn Weevil	Grain Storage Bins	N/A	Malathion Dust	15 lbs. of 5% dust	0.6 lbs. a.i./1000 bu	Flour	Mixed with Grain

10. Summary of results (continue on reverse side, if necessary)

Satisfactory results received.

ANNUAL REPORT OF PESTICIDE APPLICATION

Proposal Number

3-72

Reporting Year

1972

INSTRUCTIONS: Wildlife Refuges Manual, secs. 3252d, 3394b and 3395.

Date(s) of Application	List of Target Pest(s)	Location of Area Treated	Total Acres Treated	Chemical(s) Used	Total Amount of Chemical Applied	Application Rate	Carrier and Rate	Method of Application
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
April & May	Annual grasses, cocklebur, morning glory, coffee weed, pigweed and ragweed	Houston Tract Houston Bottoms Molnar Bottoms Bradley Bottoms	719	Atrazine	2,517 lbs.	3½ lbs a.i./A	Water 20 gals/A	Boom Type Sprayer

10. Summary of results (continue on reverse side, if necessary)

Satisfactory results with no adverse reactions detected.

ANNUAL REPORT OF PESTICIDE APPLICATION

Proposal Number
6-72

Reporting Year
1972

INSTRUCTIONS: Wildlife Refuges Manual, secs. 3252d, 3394b and 3395.

Date(s) of Application	List of Target Pest(s)	Location of Area Treated	Total Acres Treated	Chemical(s) Used	Total Amount of Chemical Applied	Application Rate	Carrier and Rate	Method of Application
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
April	Annual grasses, morning glory, cocklebur, Florida pusley, other broadleaf weed species	Houston Tract, Davis-Clark Tract, Bradley Bottoms	500	Treflan	625 lbs.	1½ lb a.i./A	Water 15 gals per Acre	Boom Sprayer

10. Summary of results (continue on reverse side, if necessary)

Satisfactory results with no adverse effects detected.

ANNUAL REPORT OF PESTICIDE APPLICATION

Proposal Number

7-72

Reporting Year

1972

INSTRUCTIONS: Wildlife Refuges Manual, secs. 3252d, 3394b and 3395.

Date(s) of Application	List of Target Pest(s)	Location of Area Treated	Total Acres Treated	Chemical(s) Used	Total Amount of Chemical Applied	Application Rate	Carrier and Rate	Method of Application
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
August	Cocklebur & Pigweed	Scattered fields throughout the refuge	500	2,4,D, dichloro-phenoxyacetic acid, Amine	Unknown	Only tall weeds rub the wax bar	Wax Bar	Tractor Wax Bar

10. Summary of results (continue on reverse side, if necessary)

Satisfactory results with no adverse reactions detected.

3-1979 (NR-12)
(9/63)

Bureau of Sport Fisheries and Wildlife

Refuge

Eufaula Refuge

ANNUAL REPORT OF PESTICIDE APPLICATION

Proposal Number

Reporting Year

10-72

1972

INSTRUCTIONS: Wildlife Refuges Manual, secs. 3252d, 3394b and 3395.

Date(s) of Application	List of Target Pest(s)	Location of Area Treated	Total Acres Treated	Chemical(s) Used	Total Amount of Chemical Applied	Application Rate	Carrier and Rate	Method of Application
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
May & June	Coffee Weed	Houston Tract Bradley Tract	250	Amiben (3-amino-2, 5-dichlorobenzoic acid)	250 lbs.	1 lb. a.i./A	Water 8 gal/A	Band Spray behind planter

10. Summary of results (continue on reverse side, if necessary)

Satisfactory results received with no adverse effects.

3-1979 (NR-12)
(9/63)

Bureau of Sport Fisheries and Wildlife

Refuge

ufaule Refuge

ANNUAL REPORT OF PESTICIDE APPLICATION

Proposal Number

11-72

Reporting Year

1972

INSTRUCTIONS: Wildlife Refuges Manual, secs. 3252d, 3394b and 3395.

Date(s) of Application	List of Target Pest(s)	Location of Area Treated	Total Acres Treated	Chemical(s) Used	Total Amount of Chemical Applied	Application Rate	Carrier and Rate	Method of Application
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
April	Broad leaf weeds, particularly cocklebur	Houston Tract Bradley Bottoms	250	Lorox - Linuron (3-3,4-dichloro- phenyl) 1- methoxy - 1- methylurea	375 lbs	1.5 a.i./A	Water 55 gals per acre	Boom Sprayer

10. Summary of results (continue on reverse side, if necessary)

Satisfactory results - no adverse effects.

ANNUAL REPORT OF PESTICIDE APPLICATION

Proposal Number

Reporting Year

13-72

1972

INSTRUCTIONS: Wildlife Refuges Manual, secs. 3252d, 3394b and 3395.

Date(s) of Application	List of Target Pest(s)	Location of Area Treated	Total Acres Treated	Chemical(s) Used	Total Amount of Chemical Applied	Application Rate	Carrier and Rate	Method of Application
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Sept & Nov	Fire Ants	Around office and shop	N/A	Mirex	2 pounds	.3% granular bait	Mixed when purchased 1 Table-spoon per mound	Manual

10. Summary of results (continue on reverse side, if necessary)

Satisfactory results and no adverse effects detected.

3-1979 (NR-12)
(9/63)

Bureau of Sport Fisheries and Wildlife

Refuge
Eufaula

ANNUAL REPORT OF PESTICIDE APPLICATION

Proposal Number
14-72

Reporting Year
1972

INSTRUCTIONS: Wildlife Refuges Manual, secs. 3252d, 3394b and 3395.

Date(s) of Application	List of Target Pest(s)	Location of Area Treated	Total Acres Treated	Chemical(s) Used	Total Amount of Chemical Applied	Application Rate	Carrier and Rate	Method of Application
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
April	Annual grasses, nutgrass primarily	Houston Bottoms Bradley Bottoms	120	Sutan G-E Active Ingrid. S-ethyl di- isobutylthio- carbamate	360 lbs	3 lb a.i./A	Water 10 gal/A	Boom Sprayer

10. Summary of results (continue on reverse side, if necessary)

/ Satisfactory results - no adverse effects.

3-1979 (NR-12)
(9/63)

Bureau of Sport Fisheries and Wildlife

Refuge

Eufaula Refuge

ANNUAL REPORT OF PESTICIDE APPLICATION

Proposal Number

15-72

Reporting Year

1972

INSTRUCTIONS: Wildlife Refuges Manual, secs. 3252d, 3394b and 3395.

Date(s) of Application	List of Target Pest(s)	Location of Area Treated	Total Acres Treated	Chemical(s) Used	Total Amount of Chemical Applied	Application Rate	Carrier and Rate	Method of Application
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
May	Broad leaf plants	Houston Tract Houston Bottoms Molner Bottoms Bradley Bottoms	100 acres	Dyanap Active Ingrid. Sodium N-1 naphthyl- phthalamate, & Sodium 4,6, Dinitro-O-sec- butylphenate	600 lbs	1½ lbs. a.i./A	Water 10 gal/A	Boom Sprayer

10. Summary of results (continue on reverse side, if necessary)

Satisfactory results - no adverse effects.

ANNUAL REPORT OF PESTICIDE APPLICATION

Proposal Number

16-72

Reporting Year

1972

INSTRUCTIONS: Wildlife Refuges Manual, secs. 3252d, 3394b and 3395.

Date(s) of Application	List of Target Pest(s)	Location of Area Treated	Total Acres Treated	Chemical(s) Used	Total Amount of Chemical Applied	Application Rate	Carrier and Rate	Method of Application
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
April	Thrips, Leafhoppers	Houston Tract	50	Dinyston - A.I.: B ₂ O ₃ Diethyl S(2 (ethylthio) ethyl) phosphoro- dithioatel	55 lbs	1.2 a.i./A	Clay - Granular Form 1.2 a.i. per acre	2" under-ground

10. Summary of results (continue on reverse side, if necessary)

Satisfactory results - no adverse effects

3-1979 (NR-12)
(9/63)

Bureau of Sport Fisheries and Wildlife

Refuge

Eufaula Refuge

ANNUAL REPORT OF PESTICIDE APPLICATION

Proposal Number

Reporting Year

17-72

1972

INSTRUCTIONS: Wildlife Refuges Manual, secs. 3252d, 3394b and 3395.

Date(s) of Application	List of Target Pest(s)	Location of Area Treated	Total Acres Treated	Chemical(s) Used	Total Amount of Chemical Applied	Application Rate	Carrier and Rate	Method of Application
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
April	Annual grasses Broadleaf weeds	Houston Tract	50	Benefin (Balan) N-butyl-N-ethyl, a,a,a, trifluoro-2,6-di-nitro- ptoluidine	150 lbs	3 lbs a.i./A	Water 12 gal per acre	Boom Sprayer

10. Summary of results (continue on reverse side, if necessary)

Satisfactory results - no adverse effects

3-1979 (NR-12)
(9/63)

Bureau of Sport Fisheries and Wildlife

Refuge

Eufaula

ANNUAL REPORT OF PESTICIDE APPLICATION

Proposal Number

19-72

Reporting Year

1972

INSTRUCTIONS: Wildlife Refuges Manual, secs. 3252d, 3394b and 3395.

Date(s) of Application	List of Target Pest(s)	Location of Area Treated	Total Acres Treated	Chemical(s) Used	Total Amount of Chemical Applied	Application Rate	Carrier and Rate	Method of Application
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Mid June - thru early September	Fungus for leaf spot	Houston Tract	50	Bravo-W-75	60 lbs	1.2 a.i./A	Water 3-gal/A	Plane

10. Summary of results (continue on reverse side, if necessary)

Satisfactory results with no adverse effects

3-1979 (NR-12)
(9/63)

Bureau of Sport Fisheries and Wildlife

Refuge

EU FAULA

ANNUAL REPORT OF PESTICIDE APPLICATION

Proposal Number

21-72

Reporting Year

1972

INSTRUCTIONS: Wildlife Refuges Manual, secs. 3252d, 3394b and 3395.

Date(s) of Application	List of Target Pest(s)	Location of Area Treated	Total Acres Treated	Chemical(s) Used	Total Amount of Chemical Applied	Application Rate	Carrier and Rate	Method of Application
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
June & July	Annual weeds and Grasses	Houston Area Molnar Unit Davis Clark Unit Bradley Unit	300	Alkanolamine Salts (of the Ethanol and Isopropanol series) of Dinitro-o-sec-Butylphenol	2,100 lbs	7 lbs a.i./A	Water 30 gal per Acre	Spray

10. Summary of results (continue on reverse side, if necessary)

Satisfactory results with no adverse effects detected.

3-1979 (NR-12)
(9/63)

Bureau of Sport Fisheries and Wildlife

Refuge

EUFAULA

ANNUAL REPORT OF PESTICIDE APPLICATION

Proposal Number
2, 4, 5, 8, 12,
18, and 20

Reporting Year
1972

INSTRUCTIONS: Wildlife Refuges Manual, secs. 3252d, 3394b and 3395.

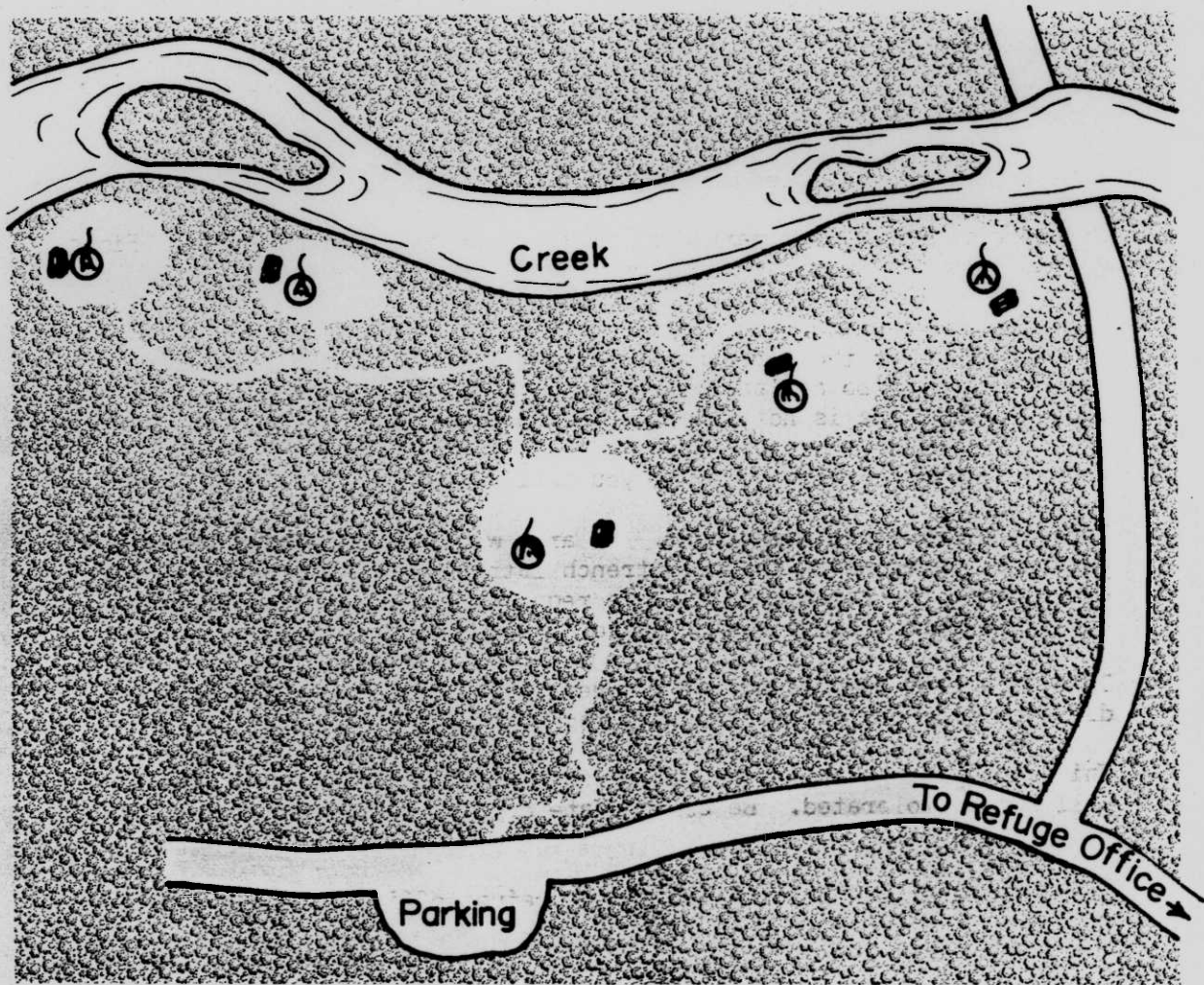
Date(s) of Application	List of Target Pest(s)	Location of Area Treated	Total Acres Treated	Chemical(s) Used	Total Amount of Chemical Applied	Application Rate	Carrier and Rate	Method of Application
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Chemical proposals 2, 4, 5, 8, 12, 18, and 20 were not used in 1972.								

10. Summary of results (continue on reverse side, if necessary)

"Awareness"

primitive campground

EUFULA NATIONAL WILDLIFE REFUGE



Fire Ring



Firewood



United States Department of the Interior
Fish and Wildlife Service
Bureau of Sport Fisheries and Wildlife

2297015WA

Camp Awareness is a wooded area that has been set aside as a special camp area for conservation-oriented groups wishing to learn and become more aware of the interrelationships between man, other animals, plants, and the earth. One item of great concern to our Nation at this time is pollution of our environment. It is hoped that people will learn to understand the significance of all life on earth and that we will all be more careful of our use of the earth's resources.

The campground is composed of about five acres along a small creek not far from the refuge office. It is set up like a scout camp in that it has a main headquarters camp plus four smaller camps branching out from the headquarters. The headquarters camp can accommodate approximately twenty persons and each smaller area about ten. The smaller areas are generally far enough away from the main camp so as to barely be seen but not so far as to make it difficult to get to a trouble spot in a hurry.

Below is a list of the rules and regulations for the use of Camp Awareness.

1. One fire ring has been marked off with rocks at each camp area. Fires will be limited to these rings only.
2. Firewood has been cut and stacked at each area. No cutting or gathering of firewood from the surrounding area will be tolerated. After a rainy period it would be advisable to bring some firewood with you since the wood at the sites is not covered.
3. We have provided the camp area; you must provide your own equipment.
4. This is a primitive campground. An area will be designated by refuge personnel as to where the slit trench latrines will be located. Each group using the campground will be required to prepare the trenches and cover and mark them up at the end of their stay.
5. This is a tent campground only. Everything must be carried a short distance from the parking area to the camp sites.
6. This is a place of observing all life and any destruction of the habitat will not be tolerated. Be considerate of all living things--plant, animal, and man.
7. Drinking water can be obtained at the refuge office from the outside spigots.
8. Refuge staff members will be available for tours of the refuge, campfire talks, discussions, and some field work. If a group would like a staff member present, two weeks advance notice would be appreciated.
9. Any group wishing to make use of the campground is asked to please contact the refuge office by writing Eufaula National Wildlife Refuge, Box 258, Eufaula, Alabama 36027 or calling 687-4065. Please call or write far enough in advance so that we can more easily reserve the days each group desires. Camping will be by reservation only, but the camp may be reserved for any time during the year.



United States Department of the Interior

FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE
Eufaula National Wildlife Refuge
Box 258
Eufaula, Alabama 36027

RECREATIONAL OPPORTUNITIES, 1972

Dove Hunting

Dove hunts will be held on designated areas of the Alabama side of the refuge from 12 noon until sunset on October 14, 21 and 28; November 4 and 11; December 23 and 30, 1972; and on January 6, 1973. Forty hunters per day will be allowed on a first come basis. No fee will be charged for permits. All State and Federal regulations covering the hunting of doves will apply.

Waterfowl Hunting

Public waterfowl hunts will be held on a 770 acre unit on the Georgia side of the refuge. Hunt days scheduled are December 2, 9, 16, 23 and 30, 1972 and January 6, 13 and 20, 1973. A Federal permit and Georgia license will be required. A \$6.00 fee per blind will be charged. Persons interested in participating in these hunts should submit on a post card the following information:

1. Name, address, and the name of a hunting companion with whom they wish to share a blind.
2. Preferred hunting date.
3. Alternate hunting dates in case preferred date is filled.

Only one application for each hunting party will be allowed. Applications should be mailed to Eufaula National Wildlife Refuge, Box 258, Eufaula, Alabama 36027.

Quail Dog Training

Quail dogs may be trained or conditioned over designated areas of the refuge from October 1, 1972 - February 28, 1973. No permit will be required. Firearms will not be permitted but trainer may use a blank pistol.

Wildlife Observations

Eufaula Refuge will be open 7 days a week during daylight hours and visitors are welcome. Any group interested in a guided tour should contact the Refuge Manager, Box 258, Eufaula, Alabama 36027.

Fishing

Eufaula Refuge encompasses 7,827 acres of the Walter F. George Reservoir which is open to fishing the year round.

Additional information on all activities may be obtained by contacting the Refuge Manager, Box 258, Eufaula, Alabama, 36027 - Phone 205-687-4065.