

LONG LAKE WETLAND MANAGEMENT DISTRICT

MOFFIT, NORTH DAKOTA

ANNUAL NARRATIVE REPORT

Calendar Year 1984

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U.S. DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
NATIONAL WILDLIFE REFUGE SYSTEM

INTRODUCTION

Long Lake Wetland Management District is located in South central North Dakota and includes Burleigh, Emmons, and Kidder Counties. The WMD is managed by personnel at Long Lake NWR at Moffit, N.D. Although the personnel are the same, the WMD is managed separately from the refuge, and refuge activities are not included in this narrative.

The WMD consists of sixty-five Waterfowl Production Areas (WPA's) totaling 16,729 acres, Slade NWR (3,000 acres), Florence Lake NWR (1,788 acres), six easement refuges (5,787 acres), and 937 individual wetland easements protecting 93,568 acres. Approximately one-third of the WPA acreage is wetland; the remaining two-thirds of the acreage is upland, primarily native prairie, tame grass, and dense nesting cover managed for nesting waterfowl. The WPA's are open to hunting, trapping, and public use. The refuges are generally closed to the public.

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4 10 8 9 7 5

PERSONNEL

1. John Foster, Complex Manager, Arrowwood NWR, GM-13 PFT
2. Phillip Arnold, Complex Asst. Manager, Arrowwood NWR, GS-11 PFT
3. Gloria Kosse, Complex Administrative Clerk, Arrowwood NWR, GS-7 PFT
4. Mike McEnroe, Refuge Manager, Long Lake NWR, GS-11 PFT
5. Gary Erickson, Biological Technician, Long Lake NWR, GS-7 PFT
(Trans. 7/23)
6. Mike Goos, Biological Technician, Long Lake NWR, (EOD 10/15/84)
GS-5 PFT (Not Pictured)
7. Alvin Hottman, Tractor Operator, Long Lake NWR, WG-6 PFT
8. Gerald Heiser, Biological Aid, Long Lake NWR, 4/17-12/21, GS-4
Temporary
9. Lee Albright, SCA Volunteer, Long Lake NWR, 4/15-7/13
10. Alice Hanley, SCA Volunteer, Long Lake NWR, 7/9-10/5

(Staff Photo by L. Albright 7/13/84)

Reviews and Approvals

Submitted By:

Date

John R. Foster

7/8/85

Reviewed By:

Date

Maurice L. Plant 7/17/85
Regional Office Date

A. HIGHLIGHTS

Three whooping cranes spent approximately 2-3 weeks on the Walther-Weiszhaar WPA in Emmons County in October-November.

A meeting with the ND State Water Commission resulted in a public hearing and attempt to cancel two water permits at Slade NWR.

Ducks Unlimited moved into North Dakota and the Long Lake WMD has proposed five projects to DU for construction.

The WMD had two Student Conservation Association Volunteers in 1984; both did excellent work and were an asset to the WMD.

Minor botulism outbreaks on two WPA's and two privately-owned wetlands claimed 283 ducks and shorebirds.

B. CLIMATIC CONDITIONS

Weather conditions were recorded at the headquarters of Long Lake NWR, Moffit, North Dakota.

The winter of 1983-84 was very mild and remained open. Resident mammal and avian species went into spring in good condition. What winter run-off there was occurred in February and March and was lost as it gradually soaked into the soil.

A late spring blizzard occurred the last weekend in April and provided good soil moisture and filled wetland basins. This storm, however, proved very destructive to early nesters and local livestock producers. Several hundred cows and calves were lost in this area.

Early seeded crops got off to a good start and additional showers in June provided a good small grain harvest in the southern half of the WMD. Row crop seeding was delayed due to showers and put in late. July and August brought warm temperatures in the northern half of the district and very little moisture. Row crops in the northern part of the district suffered in the dry heat and corn and sunflower crops there were generally below average.

September and October were variable months with 90 degree readings on September 28 and a major snowstorm the next day. Early October temperatures were often in the 70's and the last week brought record setting low temperatures and another major snowstorm.

November and December were near normal and at the end of the year six inches of snow were on the ground and below zero

temperatures were frequent.

Precipitation at the refuge for the year was 17.1 inches, slightly above average (16 inches). However informal reports from the northern portion of the WMD indicated a June precipitation total of about 2 inches. Precipitation totals for the northern portion of the WMD were likely 4 inches below normal. Water levels going into 1985 are poor and some winter snow or spring rain for run-off would be welcomed.

1984 Weather Conditions at Long Lake NWR.

| <u>Month</u> | <u>High Temperature</u> | <u>Low Temperature</u> | <u>Precipitation (Inches)</u> |
|--------------|-------------------------|------------------------|-------------------------------|
| January | 43 | -32 | 0.31 |
| February | 54 | -15 | 0.18 |
| March | 53 | -15 | 1.23 |
| April | 71 | 21 | 3.23 |
| May | 88 | 21 | 0.53 |
| June | 87 | 41 | 7.14 |
| July | 94 | 45 | 0.43 |
| August | 100 | 46 | 1.50 |
| September | 90 | 23 | 0.90 |
| October | 80 | 5 | 1.29 |
| November | 60 | 3 | 0.32 |
| December | 50 | -23 | <u>0.10</u> |
| | | | 17.16 |

C. LAND ACQUISITION

1. Fee Title

Presently there are 16,729 fee title acres in 65 WPA's and 4,500 fee title acres in the seven refuges (excluding Long Lake NWR) in the district.

Fee title acquisition continues to be at a standstill in North Dakota although WMD staff continues to receive offers from willing sellers. There exists a small amount of hope for the future that the FWS will reactivate the Small Wetland Acquisition Program.

2. Easements

The FWS has 937 easement contacts prohibiting draining, filling, burning, or levelling on 93,568 acres of private wetlands in the three county district. There are six easement refuges in the district comprising 5,755 acres. The FWS is short of its easement acreage goals in all three counties.

During 1984 three requests from landowners interested in

wetland easements were received. These were evaluated and two were forwarded to Realty for possible easement acquisition.

D. PLANNING

In 1984, Ducks Unlimited, started its first United States Habitat Field Office in Bismarck, ND. We have met several times with DU staff and have submitted 5 projects to them for consideration; construction of nesting islands on the Thacker, Personuis, Guthmiller and Sisco-Fallgatter WPA's, and a wetland development project on the Oswald WPA. Construction and engineering will start on these projects in 1985.

3. Public Participation

Long Lake staff met with the Burleigh, Emmons, and Kidder County Commissioners during their March meetings and presented the Annual shared Revenue payments. During July each of these counties was sent a letter describing our noxious weed control efforts.

4. Compliance with Environmental Mandates

Several meetings and one field review were attended concerning an Emmons County road project through the Schiermeister WPA. The road is scheduled for construction in 1985 and will pass through the WPA.

5. Research and Investigations

As part of a research study, Northern Prairie Wildlife Research Center staff took Robel readings on fields that we were nest dragging. They provided the WMD with the Robel readings for fields on three WPA's and Slade NWR, and we provided our nest dragging data to them.

Refuge personnel conducted waterfowl counts on a stream survey for the Habitat Resources - Bismarck Office. Two sample areas in southern Emmons County were counted in mid-May.

E. ADMINISTRATION

1. Personnel

Long Lake NWR and WMD are staffed with three permanent full-time employees; a refuge manager, a biological technician, and a tractor operator. In addition, Gerald Heiser was hired as a temporary biological aid (4/17-12/21) and Lee Albright (4/15-7/13) and Alice Hanley (7/9-10/5) were volunteers. As a result of the volunteer program, the NWR and the WMD were in the best work force situation they have been in for 3 years.

| | <u>PFT</u> | <u>PFT</u> | <u>TEMPORARY</u> | <u>YACC</u> | <u>SCA VOLUNTEER</u> |
|------|------------|------------|------------------|-------------|--------------------------|
| 1980 | 1 | 2 | 2 | 1 | 0 |
| 1981 | 1 | 2 | 1 | 2 | 0 |
| 1982 | 3 | 0 | 1 | 1 | 0 |
| 1983 | 3 | 0 | 1 | 0 | 0 |
| 1984 | 3 | 0 | 1 | 0 | 2 |

During FY84 Mike McEnroe received Fire Management training and was awarded his ten year length of service pin. Alvin Hottman received Heavy Equipment Operators training and renewed his Pesticide Users Certificate. Gary Erickson attended a one-week law enforcement refresher course. All three of the above personnel also received defensive drivers training this year. Mike Goos received a \$500 Special Achievement Award for his work on arctic fox control on Rat Island in the Aleutian islands of Alaska.

2. Funding

Funding for Long Lake NWR is included in the budget for the Arrowwood Complex. The complex includes Arrowwood NWR and WMD, Valley city WMD, and Long Lake NWR and WMD.

The Complex's OM budget for the past five years has been as follows:

| | |
|------|-----------|
| FY84 | \$547,000 |
| FY83 | \$536,000 |
| FY82 | \$368,000 |
| FY81 | \$346,000 |
| FY80 | \$322,000 |

For further breakdown of funding, refer to the Arrowwood NWR narrative report.

3. Safety

Staff members attended complex safety meetings and Gary Erickson and Mike McEnroe served on the Arrowwood Complex Safety Committee.

During tree planting operations this summer, Mike McEnroe injured his knee while unloading seedlings. The injury stretched ligaments, and required several trips to the doctor and the standard accident reports.

4. Technical Assistance

In March, Mike McEnroe attended a meeting with Bureau of Reclamation, FWS-HR Field Office, and ND Game and Fish Department staff to discuss upland cover and land management practices for project features and wildlife mitigation areas for the Bureau's Garrison Diversion Unit.

F. HABITAT MANAGEMENT

1. General

The WMD consists of 65 WPA's, two satellite refuges, six easement refuges, and 937 easement contracts. The WPA's and Slade and Florence Lake NWR's are managed primarily for waterfowl production. Upland game, white-tailed deer, furbearers, and many non-game species also benefit from the wetlands, native and tame grass, DNC, and croplands found in the district.

The WPA acreage consists of approximately 34% wetlands, 35% native grass, 14% tame grass, 12% DNC, 4% cropland, and 1% woodlands or miscellaneous cover types. No water control structures exist on the WPA's. We have created small wetlands on several tracts by constructing small dams or plugging old drainage ditches. These wetlands provide additional pair habitat.

Native grasslands in the WMD are managed by prescribed burning. Tame grasses are managed by periodic scarification, by trading a cooperator hay for the labor. DNC stands are managed by discing/dragging, or prescribed burning. Decadent tame grass stands are also broken out and cropped for several years and then seeded to DNC.

Most of the crop acreage in the WMD is involved in a DNC rotation, although some of the larger WPA's such as Crimmins and Basaraba, have crops planted by cooperators for food plots.

2. Wetlands

Wetlands throughout the district were in good shape during the spring and early summer following the late April blizzard and the June rains. Late summer was warm and only Emmons County received adequate precipitation. Going into 1985 wetlands in the southern portion of the district are in fair to good shape. Wetlands in the northern portion need a lot of runoff.

We did not create or re-establish any wetlands on WPA's this year with ditch plugs or dams. The wetland developed on the Basaraba WPA by the Burleigh County Highway Department as a

result of road repair, developed aquatic vegetation in its first year.



Borrow pit wetland on Basaraba WPA, created by Burleigh County Highway Department in October 1983, filled in spring 1984. Aquatic vegetation, primarily cattail, began growing in first year. (7-12-84, MM).

3. Forests

The 4.4 acre tree planting on the Walther WPA was cultivated by the Linton Sportsman Club again this year. A ten-acre area on the Kurtz WPA was hayed and broken this year by the Hazelton Wildlife Club in preparation for a tree planting in 1986.

4. Croplands

Cooperators farmed parts of seven WPA's in the district. The WMD share of the crop was left for wildlife except on the Adams WPA where the cooperator received the full share for the preparation of the field for DNC planting. The cooperator on Bertsch/Morrison and Guthmiller WPA's spring planted DNC with an oat cover crop on those WPA's.

FARMING UNITS IN LONG LAKE WMD - 1984

| WPA | Acreage in Farming Unit | Cooperator Share | WMD Share |
|------------------|-------------------------|------------------|-----------|
| Adams | 53.0 | 53.0 1) | 0 |
| Basaraba | 140.9 | 140.9 2) | 0 |
| Bertsch/Morrison | 56.0 | 56.0 | 56.0 3) |
| Crimmins | 108.0 | 78.0 4) | 30.0 |
| Guthmiller | 53.5 | 53.5 | 53.5 3) |
| Schiermeister | 27.0 | 20.3 | 6.7 |
| Victor | 45.0 | 30.0 | 15.0 |

- 1) Old brome grass field, being farmed prior to DNC seeding in 1986.
- 2) Cooperator got entire share to compensate for 1983 fall tillage on 130 acres of WPA seeded to DNC in 1984.
- 3) Cooperator harvested oats as nurse crop with DNC seeded in 1984.
- 4) Includes 18.0 acres of oats/DNC seeded by Cooperator in 1984.

5. Grasslands

Grasslands in the WMD were in good shape in 1984. Due to the dry conditions in the northern portion of the WMD, there were some hay requests. Even with the hay requests we received, we were not able to find cooperators for all the grassland management we wanted to do.

A 21-acre alfalfa-brome field on the Kurtz WPA was disced/dragged in the spring as payment for hay received in 1983. The alfalfa response to the discing was excellent.

6. Other Habitats

Plans were finalized in 1984 for construction of a one-acre nesting island on the Almer WPA. The island will be placed in a 25-acre saline type V wetland. Construction will take place in the winter of 84-85 and the fill will be placed on the ice.

Twenty goose nesting baskets on eight WPA's were checked and filled with straw in the spring. No geese had used the baskets, but six were successfully used by mallards. Four new baskets were put out on the YMCA (1), Adams (1), and Crimmins (2) WPA's during the summer.

8. Haying

With the large distances in the WMD, using cooperators to do grassland management work seems to work the best. Three fields of old brome-tame grass; Mayer (50 acres), Sisco-Fallgatter (53 acres), and Basaraba (40 acres); were hayed. These fields will be cropped in 1985-86, and seeded to DNC or native grass in 1987.

Three fields of DNC with weak legume stands, were hayed and will be disced/dragged in the spring of 1985; Bechold (43 acres), Basaraba (45 acres), and Almer (55 acres). Three fields of DNC; Goldsmith (63 acres), Bechold (45 acres), Crimmins (14 acres); were hayed and will be interseeded with alfalfa and sweet clover in 1985.

Three fields of tame grass at Crimmins (78 acres) were hayed in 1984, to be summer fallowed for DNC seeding in 1985. The cooperator did not summer fallow the fields after cutting the hay. One 20-acre field on the Vogel WPA was hayed; the cooperator in return mowed the road ditches on the WPA and paid a reduced rate of \$5.00/acre.

All haying in the WMD was done after July 15, after the nesting season. In no case was more than one third of the upland acreage treated. Due to the spring and summer rains, upland cover on private land around the WPA's was in fair to good shape. We treated 506 acres on nine WPA's that we could not have done without the use of cooperators.

9. Fire Management

Several WPA's were scheduled for prescribed burns, but uncooperative spring weather cancelled all plans. There were no wildfires in the WMD this year.

10. Pest Control

Leafy spurge was sprayed on Thacker, Bechold, Guthmiller, Personius, Schiermeister, and Gaub/Hoots WPA's with a mixture of Tordon/2-4-D this year. The largest patch is a three acre area on Gaub/Hoots and the other patches are less than one acre. Letters were sent to each of the County Commissions in the WMD informing them of our efforts.

A small area of wild mustard was mowed on the Basaraba WPA to decrease competition with a 1984 DNC planting.

11. Water Rights

See the Slade NWR section.

13. WPA Easement Monitoring

Ground checks for the 1983 fall flights were conducted in early spring of 1984 in all three counties. Only one ditch, a 6-inch wide back hoe trench, in Kidder County, was a violation. That ditch was closed in May.

A second owner of Emmons County easement 38X, called in September requesting a field review before he hired a contractor to "fill some holes" on an easement. The field review indicated that each of the "holes" was a type I or 3 wetland. He offered to preserve a dugout if he could fill the other 5 wetlands. His offer was declined, and we will watch the area in the future.

One easement violation, 186X-Emmons County, was resolved in the fall of 1984. This ditch, first discovered in 1978, took two court appearances to resolve, but was finally filled in November 1984.



Satisfaction! Landowner of easement 186X, Emmons county pushing the ditch shut on a 6-year old easement violation (11-7-84, MM).

Aerial flights on all easements were flown in November of 1984. Approximately 35 easements will have to be ground checked.

G. WILDLIFE

1. Wildlife Diversity

The refuges, WPA's, and WPA easements although managed primarily for waterfowl production furnished good habitat for upland game, big game, and other wildlife. Virtually all of the resident mammal species found in North Dakota and the 209 avian species recorded at Long Lake NWR are likely found in the three county WMD.

Except for waterfowl pair counts most of the wildlife observations and records in the WMD are incidental to other work.

2. Endangered and/or Threatened Species

There were 18 sightings of golden eagles and 10 sightings of bald eagles made in the WMD this year.

Two whooping cranes were seen near McKenzie, ND by Long Lake personnel and there were five additional sightings made by hunters near Long Lake NWR.

On October 29, we received a report from NDGFD personnel that three whoopers (2 adults, 1 young) had been using the Walther/Weiszhaar/Rohrich WPA in Emmons County for two weeks. NDGFD personnel said they thought the cranes had departed during an October 27-28 snow storm. On October 31, we heard the cranes were still in the area. McEnroe and NDGFD Waterfowl Biologist Mike Johnson went to the WPA late in the afternoon of the 31st to look for colored identification bands on the cranes. During the observation, we noticed that one crane had a broken wing. Weather predictions for that night were for 40 mph winds, cold (zero degrees) and snow. With the help of two other wildlife biologists, we tried unsuccessfully to run down and catch the injured crane. We sat on crane-babysitting detail for the next two days and late in the afternoon of November 2, with the help of a helicopter and two crane experts from Idaho, the crane was captured. He was treated and sent to the National Zoological Park and then to Patuxent Wildlife Research Center where he died on January 7, 1985.



Wendy Brown, University of Idaho, with injured Whooping crane, captured November 2, 1984, on the Weiszhaur WPA, Emmons County (11-2-84, GH).

In discussions with local residents around the WPA, the cranes were first observed on the WPA on October 18. Veterinary analysis indicated the wing fracture was probably caused by collision with a wire or fence. The wound was not caused by a gunshot. (More on crane in Feedback Section).

3. Waterfowl

Waterfowl began migrating into the WMD in Mid-March and by March 24 migration was in full swing. Early nesting efforts were interrupted by the April blizzard, but the moisture provided by the storm combined with June rains filled wetland basins and provided good breeding habitat.



Blue-winged teal are the most abundant breeding duck species in the WMD (5-2-84, LA).

We did six 4-square mile Cowardin pair counts in 1984 rather than the quarter section pair counts. The 4-square mile counts included portions of four WPA's, but can not be expanded to provide an estimate of waterfowl pairs, either on the WPA's or within the three County WMD.

Duckling production was estimated from the 4-square mile counts, observed water conditions, and land use, using NPWRC's mallard production model. Duckling production is estimated for fee lands, easement lands, and private lands in the three county WMD (See following table).

Estimated Duckling Production
Long Lake Wetland Management District, 1984

| <u>Species</u> | <u>FWS-Fee</u> | <u>FWS-easement</u> | <u>Private</u> |
|----------------|----------------|---------------------|----------------|
| Mallard | 688 | 1,112 | 10,517 |
| Shoveler | 772 | 1,690 | 10,750 |
| Pintail | 673 | 634 | 14,716 |
| BWT | 2,855 | 4,389 | 46,118 |
| Gadwall | 924 | 1,294 | 20,001 |

The model did not handle other duck species, and did not provide a breakdown of whether the "ducklings produced" were on refuges or WPA's or which parts of the WMD did better than others. We have left the era of "paper ducks" and moved into the "computer duck" era. One other draw back of the 4-square mile pair counts, in addition to being more time consuming, is that we do not visit the WPA's on the pair counts. With the quarter section counts, we visited 31 sample quarters in the WMD, in the spring and had a chance to note waterfowl and wildlife use, wetland and upland conditions, and any maintenance problems or work that should be done. That opportunity did not happen with the 4-square mile counts.

Nest dragging was conducted on four WPA's, Slade NWR, and Florence Lake NWR. Results from the WPA's are listed below and results from each of the refuges as discussed under each refuges' section.

Results of 1984 Nest Dragging- Long Lake WMD-WPA's

| <u>Tract</u> | <u>Acres</u> | <u>Number of Nests</u> | <u>Apparent Percent Success</u> | <u>Mayfield Percent Success</u> | <u>Cover Type</u> |
|--------------|--------------|------------------------|---------------------------------|---------------------------------|-------------------|
| YMCA | 11 | 13 | 46.1% | 28.9% | Seeded Native |
| Lang | 60 | 8 | 50.0% | 21.2% | Tame |
| Basaraba | 125 | 23 | 10.0% | 3.0% | Tame, DNC |
| Crimmins (N) | 100 | 30 | 20.0% | 5.1% | DNC, Native |
| Crimmins (S) | 132 | 7 | 42.8% | 15.1% | Native |
| | 428 | 81 | 26.0% | 10.1% | |

Blue-winged teal, gadwalls, and mallards in order were the most abundant nesting waterfowl found. The 10 percent Mayfield success is down from the 32 percent Mayfield observed in 1983. Paulette Scherr, Bismarck-HR, assisted on the nest dragging.



Pintail brood hatching. Nest success in the Wetland Management District was down considerably from 1983, 10% compared to 33% (6-20-84, LA).

During fall migration the WMD refuges and several of the WPA's were utilized by geese, mostly Canadas. Walther WPA held several thousand mallards for three weeks in late October. The WMD had peak populations of 15,750 geese, 18,110 ducks and 10,225 coots. A snow storm combined with near zero temperatures the last week of October caused a majority of birds to leave the area. A few die hard mallards and Canadas remained through most of November and the last birds left from Slade NWR the third week of December.

4. Marsh and Waterbirds

Long Lake staff commonly observed black-crowned night herons, great blue herons, white pelicans, American bitterns, common egrets, double crested cormorants, western grebes, eared grebes, and pied-billed grebes, on WPA's in the WMD.

During fall migration several hundred whistling swans were observed on Kidder County WPA's and several thousand were in the county.

Sandhill cranes began to arrive in the WMD the last week of August and numbers continued to build into October. Bechold and Sisco-Fallgatter both had peak populations of over 1,000 sandhills.

5. Shorebirds, Gulls, Terns, and Allied Species

No formal censuses of these species are conducted. The most common summer-long species are the killdeer, American avocet, Wilson's phalarope, ring-billed gull, and Franklin's gull, Sandpiper and yellowlegs are abundant during spring and fall migration.

6. Raptors

Marsh hawks are the most abundant raptor in the WMD. Red-tailed, Swainsons, and ferruginous hawks are common and nest in the area. American kestrels and rough-legged hawks are seen during migration. Prairie falcons, peregrine falcons, and gyrfalcons are uncommon observations. Short-eared and burrowing owls are seen in the spring through fall and great horned owls are year long residents. There was a seemingly large number of rough-legged hawks in the WMD during the October migration.



Young great horned owl on the Foell WPA, Emmons County (5-4-84, LA).

7. Other Migratory Birds

Long Lake staff completed one of the two dove counts, the other was rained out. Results indicated a 12% decrease in the number of total calls.

8. Game Mammals

The most common game mammal in the WMD is the white-tailed deer. Deer live on or extensively utilize WPA's and refuges in the district. No problems with depredation or starvation were reported, although deer numbers were high as a result of our third consecutive mild winter. More deer licenses were issued for this area than ever before. However, after the opening weekend, deer hunting pressure was light in the WMD. Going into 1985, the deer herd is in good shape.

10. Other Resident Wildlife

Ring-necked pheasants, sharp-tailed grouse, gray partridge, white-tailed jackrabbits, mink, muskrats, raccoon, striped skunks, coyotes, fox and badgers, are common in the WMD.

Sharp-tailed grouse are found on most WPA's and refuges in the district. Pheasant have expanded their population during the mild winter on most of the WPA's located in Burleigh and Emmons county and in some of the Kidder county areas.

11. Fishery Resources

The only fishery in the WMD are a few carp found in some of the dams on the Schiermeister WPA-Sunburst NWR area.

14. Scientific Collection

Long Lake staff participated in gathering information from sandhill cranes harvested in the Long Lake NWR area. Measurements and weight were taken and the information provided to the N.D. Game and Fish Dept. Staff also conducted a mourning dove call count, the mid-winter eagle survey, 4-square mile waterfowl counts, and waterfowl nest surveys.

15. Animal Control

Long Lake staff did not do any nest predator trapping on WPA's this year. Private trappers were active on WPA's and permittee trappers were selected for Florence Lake and Slade NWR's.

16. Banding and Marking

All banding took place on Long Lake NWR this year and results are listed in the Long Lake NWR narrative.

17. Disease Prevention and Control

There were botulism outbreaks on two WPA's this year, Silvernagel (57 birds) and YMCA (6 birds). Two private marshes north of Long Lake NWR were also checked and 220 birds picked up.

H. PUBLIC USE

1. General

Long Lake WMD receives the majority of its public use during the fall hunting and trapping seasons. Some visitation occurs for hiking, picnicking, and photography during the rest of the year.

Long Lake staff was active in educational opportunities in 1984 and gave:

- a. 9 talks/slide shows to local wildlife and civic groups (Moffit, Hazelton, Bismarck, Driscoll, Dawson, Jamestown, Valley City and Strasburg).
- b. 2 tours to Linton School and 4 groups of 7th graders from Emmons County.
- c. 3 Duck ID Workshops at Napoleon and Bismarck.
- d. 4 National Wildlife Week Presentations (one in Steele and three held in Linton).

In addition numerous requests for information were handled and several small groups of visitors were spoken to.

2. Outdoor Classrooms - Students

Refuge manager McEnroe gave presentations to three groups of Kidder county students at Slade NWR during an SCS sponsored tour.

8. Hunting

Hunting activity on FWS lands in the WMD was heavy this year for deer and pheasants and moderate for waterfowl, other upland game, and predators. WPA's in Burleigh and Emmons counties were especially busy. During December five separate parties were observed pheasant hunting on the Walther WPA at one time. Most WPA's are hunted from September through December and sporadic visits through March from fox and coyote hunters.

9. Fishing

No fishing activity occurs in the district.

10. Trapping

Most WPA's are trapped, usually by muskrat trappers. Slade NWR and Florence Lake NWR each had a permittee trapper.

11. Wildlife Observations

Virtually all the lands in the WMD are used by the public for observing wildlife. Although no formal trails or facilities are available, nearby roads or trails are used by local residents for evening drives to observe wildlife.

15. Off-Road Vehicling

None of the WPA's or refuges in this WMD are open to off-road vehicling but there was some trespass by vehicles and snowmobiles. Vehicle use restrictions have been posted on all areas.

17. Law Enforcement

With the transfer of Gary Erickson to Tewaukon, there was only one person with LE authority left at Long Lake NWR/WMD. LE duties divided between partrolling Long Lake and NWR and the WMD.

During the late September through December seasons for waterfowl, upland game and deer, no violation notices were issued.

21. Volunteer Program

This year, 1984, the first year that Long Lake has used the Student Conservation Association to provide volunteers for refuge and WMD work. We had two 13-week volunteers this summer. Lee Albright (April 15-July 7) and Alice Hanley (July 9-October 7). Both volunteers were well qualified, did excellent work and were an asset to the NWR/WMD. Work performed included grouse counts, duck pair and brood counts, farming, tree planting, maintenance, grassland evaluation, photography, banding, and botulism cleanup. The SCA administrative people were very much on top of their program and were able to answer any questions and solve any problems whenever we called. We plan to select two more volunteers in 1985.

I. EQUIPMENT AND FACILITIES

3. Major Maintenance

Old fences were removed and junk piles cleaned up on Basaraba and Crimmins WPA's.

4. Equipment Utilization and Replacement

We have had replacement pickups on order since September 1983 (17 months) and the latest word is they may be here in July of 1985. Our pickups are in very poor and undependable shape.

As part of a fire management funding package, we received a Western Fire Equipment 500 gallon tank and pump system in late 1983. Although it is not portable, it is extremely versatile and an excellent outfit.

We purchased a new grain auger to replace the old auger, which failed the station safety inspection, and a new sickle bar mower. Jerry Wolsky, at Arrowwood NWR, reconditioned two used jeeps from NPWRC for use in our nest dragging operations. We added a little carburetor and brake work and new front axle and they worked out well, much better than 2X4 or 4X4 pickups for nest dragging.

In November, we received a new mobile radio with State Radio frequencies. This provided better communications with State Game and Fish Department wardens and the Senior Resident Agent.

6. Energy Conservation

The local electric cooperative conducted energy audits at the office-headquarters and two residences. We will be replacing and/or adding some doors, windows and insulation to conserve on heating costs.

J. OTHER ITEMS

1. Cooperative Programs

The staff recorded information on all upland game broods seen in the WMD and on Long Lake NWR. The data (number, age, and location) on about 75 pheasant, grouse and partridge broods were sent to the North Dakota Game and Fish Department.

WMD staff collected information on the sandhill cranes taken by hunters in the Long Lake area. The age, sex, weight, and physical measurements of cranes were sent to the North Dakota Game and Fish Department to assess the sandhill crane harvest.

The cooperative program with the SCS Plant Materials Center continues. Thirty-eight acres on the Small WPA have been or are scheduled to be planted to block tree plantings. The Seventh Day Adventist WPA has six acres involved in the same program. The tree planting there will be expanded by 5 acres in 1985.

3. Credits

This narrative report was written by Mike Goos and Mike McEnroe. Mary Liberda, Arrowwood NWR typed and assembled the report. Photo credits are given.

SLADE NATIONAL WILDLIFE REFUGE

Kidder County, North Dakota

A. GENERAL INFORMATION

Slade National Wildlife Refuge is located in southcentral North Dakota. This 3,000 acre refuge was formerly a private hunting preserve owned by the late George T. Slade, a Northern Pacific railroad executive. After he died in 1940, his heirs donated the area to the Fish and Wildlife Service for establishment as a refuge. Slade NWR is part of the Arrowwood Complex and has been managed by Long Lake NWR personnel since 1978 when it became an unmanned station.

B. CLIMATIC CONDITIONS

See Long Lake WMD Narrative, Section B.

C. HABITAT MANAGEMENT

There are approximately 975 acres of wetlands, mostly type 5's on Slade. The major lakes and impoundments held water all year long; the seasonal and temporary wetlands dried up in the spring.

On January 3, 1984, Gary Erickson and Mike McEnroe met with North Dakota State Water Commission (SWC) staff to discuss management options and potential amendments to the two State water permits we have at Slade. As a result of the meeting, the SWC concluded that the Services' two permits were invalid and that we had no water rights at Slade.

On January 30, the SWC sent the Service a stipulation and waiver to cancel any water right that we had at Slade. The Regional Office responded to the SWC in March that the Service would not waive or cancel its water rights at Slade. The SWC notified the Service that there would be a forfeiture hearing on the permits on May 22. Prior to the hearing, we had field reviews at Slade for the Complex Manager, Regional Solicitor, and Regional Hydrologist. For part of the anticipated testimony and evidence for the forfeiture hearing, we summarized all the narratives since 1941, for wildlife, hunting, trapping, and recreational use.

At the May 22, forfeiture hearing Assistant Regional Solicitor Margot Zallen, Regional Hydrologist Bob Green, Complex Manager John R. Foster, and Mike McEnroe provided

testimony. To date (April 1985) the SWC has not made a decision on our water rights. We have since taken SWC personnel on a field review of the marshes and structures at Slade NWR, and they have reviewed our water level records.

In 1984, two cooperators farmed 328 acres on Slade NWR. Their share was 234 acres; the refuge share was 38 acres of sunflowers and corn and 56 acres of small grain, including 19 acres harvested and stored in the the refuge bin.

Two stock dams constructed in the fall of 1983 were seeded with a mixture of tame and native grasses. The dams did not hold water in 1984.

Leafy spurge was sprayed in June with a 2,4-D/Tordon mixture. In all there are about 25 acres of spurge on Slade in about 40-50 locations. It has the worst noxious weed problem we have in the Wetland District.

We issued one hay permit, for 21 acres on the recreation area and the roadsides to a local cooperator.

D. WILDLIFE

The only formal wildlife surveys at Slade are the giant Canada goose surveys. The goose nesting structures were censused in May; 13 pair were counted using the 38 structures. In addition, 4 other pairs and 2 single geese were observed on refuge lakes. Nest checks in summer indicated that at least 13 nests hatched a minimum of 21 goslings. In addition, three mallard clutches hatched from the structures. The structures were also repaired in the summer. There are thirty-nine nesting structures on Slade at the present.

On June 18, broods of geese were observed and on July 25, 16 goslings in a "creche" were observed with 18 adult geese.

Duck counts were not conducted, but 30 duck broods were observed during other work in July. Waterfowl numbers started to build up in September and the observations are summarized in the following table.

Waterfowl Observations at Slade NWR, Fall 1984

| <u>Date</u> | <u>Ducks</u> | <u>Geese</u> | <u>Coots</u> |
|-------------|------------------|--------------|--------------|
| 9/13 | 450 ducks | 255 Canadas | 700 |
| 10/7 | 758 mallards | 524 Canadas | 4225 |
| | 507 shovelers | | |
| | 267 canvasbacks | | |
| | 1200 other ducks | | |

| | | |
|-------|--------------|--------------|
| 11/8 | 500 mallards | 9500 Canadas |
| | | 500 Snows |
| 11/29 | 400 mallards | |
| 12/13 | 150 mallards | 10 Canadas |

Nest dragging in the WMD in 1984 included 3 fields at Slade. The totals included 13 nests on 177 acres, with a Mayfield success of 52.6 percent. Nesting ducks included 8 blue-winged teal, 3 gadwall, 1 pintail, and 1 shoveler. Nesting success is very good at Slade, but the nest density, 1 nest/13.6 acres is very low, probably the result of the large proportion of type 5 wetlands, and the low number of temporary and seasonal wetlands at Slade.

Results of Nest Dragging - Slade NWR - 1984

| <u>Field</u> | <u>Acres</u> | <u>Nests</u> | <u>Hatched</u> | <u>Destroyed</u> |
|--------------|--------------|--------------|----------------|------------------|
| 1 | 112 | 7* | 4 | 2 |
| 2 | 23 | 4 | 4 | 0 |
| 3 | <u>42</u> | <u>2</u> | <u>1</u> | <u>1</u> |
| | 177 | 13 | 9 | 3 |

*Field 1 includes one nest which was not relocated.

In addition to waterfowl, informal observations of other species are recorded. A high count of 53 white-tailed deer was observed on May 1. The refuge deer herd is estimated to average about 30 animals. Upland gamebirds are common and the populations are estimated to include 50 sharp-tailed grouse, 50 Hungarian partridge, and 30 pheasants.

E. PUBLIC USE

Gary Erickson gave a wildlife tour to 48 - 5th and 6th grade students and their teachers in May. Mike McEnroe gave wildlife talks to about 40 - 7th grade students during the September Kidder County SCS conservation tour.

Eight persons applied for the Slade trapping permit. The permittee caught 152 muskrats, 8 skunk, 4 mink, 1 fox, and 1 raccoon during the trapping season.

F. Other

A big "thank-you" goes to Billie Yantzer, Bismarck-HR, for all her assistance in typing and transmitting our data and draft testimony for the Slade Water Permit hearings to the Regional Office.

FLORENCE LAKE NATIONAL WILDLIFE REFUGE
Burleigh County, North Dakota

1984 Annual Narrative Report

Florence Lake NWR is a 1,788 acre refuge, 1,468 acres in fee title and 320 acres under refuge easements, about 45 miles north of Long Lake NWR. Land use on the fee portion of the refuge includes 936 acres of native grass, 114 acres of tame grass, 77 acres of DNC, 109 acres of cropland and 295 acres of wetland, primarily type 5, and 16 acres of woodlands. The easement portion contains about 315 acres of cropland and 5 acres of type 1 and 3 wetlands.

The farming plan this year called for 96 acres of wheat and 13 acres of corn. The refuge share was 13 acres of corn left standing, and 14.7 acres of wheat including 4.5 acres baled. The cooperater also cultivated the 10 acre 1984 tree planting twice during the summer. Hot dry weather during July and August may have hurt the planting.

Sharp-tailed grouse, white-tailed deer, Hungarian partridge, and coyotes are often observed on the refuge. On November 8, five eagles (3 golden and 2 bald) were observed on the refuge. A ferruginous hawk nested on the refuge this summer. There were no deer depredation or starvation problems during 1984. Most likely it was the mild winter that eased the deer problem.

A permittee trapper was selected by lottery for the 1984 season. The trapper took three mink, two raccoon, one skunk, and three coyotes on the refuge.

An 80-acre native prairie tract was nest dragged this year. Due to mechanical problems the entire tract was not dragged on the June drag. Seven nests were found and four hatched. This computed to a 57.1% apparent nest success or a 28% Mayfield success.

During early October there were 2,000 Canada geese, 30 swan and 2,000 ducks on the refuge. Traditionally waterfowl numbers build during October until freeze up.

Law enforcement efforts during waterfowl and deer hunting seasons resulted in no citations in this area.

CANFIELD LAKE NATIONAL WILDLIFE REFUGE
Burleigh County, North Dakota

1984 Annual Narrative Report

Canfield Lake NWR is a 313 acre easement refuge (3 acres in fee title) located about 35 miles northwest of Long Lake NWR, Moffit, North Dakota. The easement grants the Fish and Wildlife Service perpetual flooding and refuge rights. The refuge rights include restriction on hunting, trapping and unauthorized entry. Canfield Lake is a 215 acre, type 5 wetland that provides habitat for migrating waterfowl.

Two hundred Canada geese were observed on the refuge on September 30, 1984.

APPERT LAKE NATIONAL WILDLIFE REFUGE
Emmons County, North Dakota

1984 Annual Narrative Report

Appert Lake NWR, about 15 miles south of Long Lake NWR, is a 908 acre easement refuge acquired in 1935. Two WPA's, the Kurtz (168 acres) and Schatz (88 acres) were acquired in 1978 from within the refuge.

Previous owners constructed a dam on a tributary to Long Lake Creek and created an impoundment of about 118 acres of open water and marsh. The edge of the impoundment has a good stand of cottonwood and willow. In March, the dam site was inspected by Regional Office Engineering personnel. A final report has not been received, but the preliminary recommendations were to remove some of the trees and shrubs from the dam and to add some rock rip-rap to the emergency spillway.

There is a lot of local interest in Appert Lake NWR. Although the surrounding private lands are relatively poor habitat, the locals appreciate the refuge and the sanctuary it provides, primarily for deer and upland game birds. The impoundment held about 150 mallards and pintails in October this fall.

Combined tree plantings of 15 acres are scheduled for 1987 on the two WPA's. The neighboring landowners will cultivate the trees which will be provided by the N.D. Game and Fish Department. The tree plantings should provide additional winter cover and hold additional snow for spring run-off.

SPRINGWATER NATIONAL WILDLIFE REFUGE
Emmons County, North Dakota

1984 Annual Narrative Report

Springwater NWR is a 160 acre easement refuge about 30 miles south of Long Lake NWR. The refuge consists of an earthen/rubble dam and 5 to 8 acre impoundment on Clear Creek. The uplands are primarily alfalfa pasture in fair shape, and brush and trees along the creek. The easement rights include flooding, hunting, trapping and unauthorized entry.

During January a dam inspection by FWS engineering staff was reviewed by Complex Manager John Foster, and McEnroe. The dam appears to be in good shape. During the dam inspection a golden eagle was sighted near the refuge.

SUNBURST NATIONAL WILDLIFE REFUGE
Emmons County, North Dakota

1984 Annual Narrative Report

Sunburst NWR is a 328 acre easement refuge adjacent to the Schiermeister WPA (580 acres): Rights granted by the easement include flooding, hunting, trapping and unauthorized entry. The only water area on the refuge is a 27.5 acre impoundment.

There were no water problems at Sunburst NWR in 1984, as there had been in 1982 when an ice jam blocked the spillway and backed water into the feedlot of the adjacent landowner. The dam on Sunburst is scheduled for rehabilitation in 1985.

The refuge is utilized as a resting and loafing area for Canada geese. Due to the close proximity to the Missouri River geese move back and forth during feeding flights and the area will continue to hold birds late in the season. Two wood duck broods were observed during July.

The refuge and the adjacent WPA also provide important habitat for upland birds and white-tailed deer. During the winter of 1983-1984 there was a herd of 50-60 deer in the area.

A trapping permit was issued to a local citizen who had written permission from the landowner. He caught 21 muskrats on the refuge.

HUTCHINSON NATIONAL WILDLIFE REFUGE
Kidder County, North Dakota

1984 Annual Narrative Report

Hutchinson NWR is a 479 acre easement refuge in Kidder County, about 40 miles northeast of Long Lake NWR. The refuge consists of two wetlands, 14 and 267 acres in size, and 198 acres adjoining uplands. The Fish and Wildlife Service has flooding and refuge rights, restricting hunting, fishing, and unauthorized entry.

An informal survey was conducted at Hutchinson NWR on July 24. The wetlands were in good shape and the type V marsh had a wide fringe of emergents; 215 ducks, 10 pelican, 3 cormorants, 6 black terns, and many shorebirds were observed.

LAKE GEORGE NATIONAL WILDLIFE REFUGE
Kidder County, North Dakota

1984 Annual Narrative Report

Lake George NWR, established in 1935, includes 3,090 acres protected by flowage and refuge easement and 29 acres reserved from the public domain in 1939. Two type V lakes, 1,105 acres and 286 acres respectively, are the primary water areas on the refuge. These lakes provide habitat primarily during migration.

One of the principal landowners of the refuge is the Central Grasslands Experiment Station, North Dakota State University. They have a well managed restoration grazing program and the grasslands are in good shape. There may be the possibility for some cooperative efforts in the future at Lake George NWR.

The refuge is used as a resting and loafing area for waterfowl particularly during the fall. During late October the refuge will generally be utilized by two-to-five thousand Canada geese, several hundred snow geese, and several hundred ducks.

One trapping permit was issued for Lake George NWR in 1984, but the trapper did not trap the area.

K. FEEDBACK

The capture of the whooping crane became (section G.2) somewhat of a "bureaucratic fiasco." NDGFD, FWS-LE, and Long Lake personnel notified their respective offices of the injured crane on the night of October 31, after our unsuccessful attempt to capture the crane. NDGFD and LE arranged for a helicopter to catch the crane on the morning of November 1; Arrowwood NWR sent people to assist; Long Lake contacted a veterinarian to be on site, and FWS Bismarck Field Office staff were ready to assist. Everything was all set up for an attempt to capture the crane.

Then the Regional Office got involved. Everyone was told to go home and wait for an "expert" to get to North Dakota. Field office personnel were told they could not go to the site even to just observe the crane. Two personnel were assigned crane babysitting duty, "Don't do anything, but don't let the crane die"). The experts are coming, sometime, maybe!

On the morning of November 2, we were again told, "the experts are coming." On the afternoon of November 2, the word was the experts will be there that day. We were supposed to wait with the capture until they arrived, but if we did not approve of their plans, we were to proceed on our own.

At 4:00 pm, the experts arrived by helicopter and personnel from Arrowwood, and Long Lake NWR, NDGFD, FWS Bismarck Field Office, and the Emmons County Sheriffs Office agreed on the same capture plan that was set 2 days earlier; use the helicopter to drop off 4 people with fish nets and then haze the crane toward them.

It took about ten minutes to catch the crane, it went like clock work. The capture team included four people from NDGFD, University of Idaho, and a vet in private practice. The FWS honor was saved; if the crane had been killed or injured in capture; there were no FWS people involved, and the experts were there.

As far as the crane was concerned, he was captured just like we had planned it, only with a bureaucratic delay of about 30 hours. The experts, Rod Drewien and Wendy Brown wondered why they had to be there; their work got delayed three days while they came to North Dakota. They said they could have told us what to do over the phone. They were the "scapegoats", if something went wrong, they were on the scene.

The injuries to the crane included: a compound fracture of the "wrist area" of the wing. But the prognosis was for an expected recovery and release at Aransas NWR. However, during a change of dressing at Patuxent Wildlife Research Center on December 15, he ran into a fence. He could not get up and died three weeks later on January 7.



The crane crew; (L to R) Dave Kraft, SRA; Gary Pearson, Veterinarian; Rod Drewren, Univ. of Idaho; Mike McEnroe, Long Lake NWR; Ed Bry, NDGFD; Wendy Brown, Univ. of Idaho; Alvin Hottman, Long Lake NWR; helicopter pilot, name unknown; Mike Johnson, NDGFD. (11-2-84, GH).